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AND

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A CHRONICLE OF THE HOMESTEAD, POULTRY-YARD, APIARY, & DOVECOTE.

CONDUCTED BY

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TO OUR READERS.

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On a day early in the present century a little lad, son of a poor mechanic, was sitting on a bank in the small plot called a garden in an obscure street of London. He had "a fine rosy-checked Apple [we now use his own words], and as I cut it I observed the pips inside, and wondered what they were for. I asked, and was told that from them the Apple trees came. The desire to know was raised. I obtained a place in an orchard, and felt delight in watching the developments of nature. Then I aspired to learn about plants less familiar." He became part of the household of a nurseryman of strong religious convictions, and here was led to devote himself to missionary labours. He passed to the islands of the Pacific. He erected a residence.

"A garden was cleared and enclosed. A group of stately Chestnut trees that grew on the banks of the stream were left, as well as several Bread-fruit trees, to shade and adorn the homestead. Place was found for the newly-introduced plants and flowers, in addition to the most useful or beautiful indigenous productions of the soil. Orange trees were planted in front of the house, and a Citron hedge enclosed the whole. The writer, though scarcely five years old when removed from this home of his childhood, retains in his memory an indelible picture of the charming scene—the mountains, the beach, and the characteristic vegetation of the region—the plumed and towering Cocoa-nut, the spreading, loaded Bread-fruit, and the gigantic-leaved Banana; the bay, with its liquid crystal, the magnificent ocean beyond, and the mountains of Raiatou, like shadowy cloudland on the horizon."

The example was followed by the natives. "Plastered houses, neat gardening, and cultivated fields" accompanied conversion to the Christian faith. Ill health in the missionary's family compelled him to return to England, and he became one of her pastors. Around the residence

"The grounds were laid out in excellent taste, all formality being avoided; and the walks and planting so disposed as to increase apparently the space, and to retain some of the wild grace of nature with the order of a well-appointed garden. But the grand charm—the glory—of the scene was its Roses. They were evidently at home in the soil and locality, and as evidently the master spirit of the place loved them and knew how to grow them. The choicest varieties might be introduced without fear of failure. The endless diversity, the profusion, the beauty, and the delicious perfume which this queen of flowers diffused about the homestead—meeting the eye at every turn, climbing on walls or trellised arches, spreading a blaze of blossom over beds disposed among the turf, presenting here and there magnificent heads of exquisite bloom, or grouped or single standards, or nestling in unexpected nooks and corners—altogether gave to the comparatively narrow enclosure an attractive loveliness peculiarly home-like in its character. A small greenhouse, adjoining one end of the dwelling, was originally all the glass about the garden; but this was soon found insufficient, and it became necessary to build a house for their accommodation as well as for the exotic Ferns and other tropical plants that required a high temperature. The Orchids formed a marvellous assemblage of floral beauty. The missionary's name became familiar both among amateurs and professional horticulturists in connection with the new plants introduced by him from his new mission field, Madagascar, particularly that marvel among Orchids, the *Angræcum sesquipedale*, and the curious and delicate Lace-plant, *Ovibrandra fenestralis*. He was a frequent exhibitor at the flower shows of the Crystal Palace and Regent's Park, and never failed to carry off prizes. In thus indulging his taste for flowers he did not embarrass himself by an expensive luxury; but contrived by the sale of plants to make the conservatory pay at least its own expenses; so that there was never on this score an accusing conscience to upbraid him with extravagance."

Poultry, pets of various kinds, bees, were cherished by him and his wife. They each were distinguished literary characters, and at an age of nearly fourscore he ceased from his labours, and within a week she was resting by his side.

That missionary was the Reverend William Ellis; and we make this record because he is an example of many thousands, clerical and lay, who similar in acquirements and associated tastes from whom we gather information. They, like the missionary, are beneficial examples; they enrich our pages by their contributions; they lead improvements to their neighbours; and for them as well as for young professionals—aye, and old too—our staff strive to be useful. Their efforts are successful, as every day's post and from many lands tell us; and one quotation from a Victoria letter represents the whole—"My wife has said more than once, *that little Journal has taught us much, but it also brightens remembrances of home.*" Such testimony animates and invigorates your old friends

THE EDITORS.

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<i>Cicindela campestris</i> , beetle, larva, and am	46	" <i>tigrinum splendens</i>	251	" for glass structures	4
" bush	46	" <i>erectum</i>	330	" for plants	75
Comifer, singular Japanese	377	" <i>Wilsoni</i>	398	Shelters for fruit trees	26
Conservatory at the Jardin des Plantes, Paris	417	Longleaf	214	<i>Solva linearis</i>	286
Combe Abbey	337	<i>Macroglossa stellatarum</i>	162	Stoke Rochford, carpet beds	441
Copings, wall	281, 268,	<i>Martynia fragrans</i>	163	Strawberry	113
Cuckoo-Spittle	14	<i>Megacible centuncularis</i>	86	" Early Crimson Pine	112
Current Sphinx	515	Melon-Cucumber	218	" Enehaufress	113
Cyripedium Lowii	517	<i>Mittonia Morelhana</i>	462	" Gipsy Queen	113
Davallia pyxidata	851	Nant	176	" Sir John Falstaff	113
Delphinium Hendersoni	354	" flower garden	177	<i>Tacsonia manicata</i>	64
Devoeote at Penmon Priory	78	Naah Court	274	<i>Tethigonia spumaria</i>	14
Draycot	490	" flower garden	275	<i>Thunbergia alata alba</i>	79
Ferns, Brazilian tree	468	Neck sores in birds, cage for	18	Trees, protecting fresh-planted	464
Fitzherbert, Sir Anthony	29	<i>Ocypus olens</i>	46	Tortworth Chestnut	26
Flower-garden plan	254	<i>Oncidium incurvum</i>	11	" Court	157
Fontaine's garden for fruit and flowers	255	<i>Orthosiphon stamineus</i>	47	Tripoxylon larva, pupa, and nest of	198
Fruit-tree protectora	249	<i>Oxalis elegans</i>	149	Track for pot trees	232
Furnace, self-feeding	95	<i>Pantaloen</i>	394	" transplanting	464
<i>Galanthus plicatus</i>	496	" I. Anderson-Henry's	335	<i>Vanessa Cardui</i>	135
<i>Galligaekia</i>	399	Pear, Lucy Grieve	333	<i>Vanilla adventitious roots</i>	337
Glass-cutter	483	<i>Phloxophora metuculosa</i>	486	Wall-copings	291, 268,
Glazing	8	Planting, ornamental	19, 98,	269	
Gooseberry caterpillar	162	Plas Newydd	219,	267	
Grape shed, Rivers'	892	<i>Pumbago Larperntie</i>	406	" flower garden	82
<i>Graptia Calbaum</i>	386	<i>Polyommatus Phleas</i>	306	<i>Woodsia hyperorea</i>	469
				Yew tree, Crowhurst	512

WEEKLY CALENDAR.

Day of Month		Day of Week		JULY 3-9, 1873.																
				Average Tempera- ture near London.			Rain in 12 years.	Sun Rises		Sun Sets.		Moon Rises.		Moon Sets.		Moon's Age.	Clock before Sun.		Day of Year.	
				Day	Night.	Mean.	Days.	m.	h.	m.	h.	m.	h.	m.	h.	Days.	m.	h.		
3	TH	Dog days begin.			74.0	59.2	62.1	13	57	af 8	17	af 8	9	2	6	0	10	4	5	181
4	F	Oxford and West of England Rose Shows.			75.1	59.2	63.2	15	51	3	17	8	0	2	6	0	10	4	5	185
5	S	West Kent Horticultural Show.			77.1	7.2	63.7	17	42	3	16	8	45	3	20	0	11	4	16	186
6	SUN	4 SUNDAY AFTER THURSDAY Meeting of Entomological Society, 7 P.M.			75.0	7.8	63.4	19	53	3	16	8	35	4	26	0	12	1	26	187
7	M	Wolverhampton and Stamford Horticultural Shows.			73.7	59.8	62.2	22	54	3	15	8	57	5	50	0	13	4	36	188
8	TU	Royal Botanic Society's Show.			74.0	59.0	62.0	20	55	3	15	8	15	7	31	1	11	4	45	189
9	W				71.1	44.1	61.8	18	56	3	14	8	22	8	16	2	15	4	54	190

From observations taken near London during forty-three years, the average day temperature of the week is 75.3; and its night temperature 59.2. The greatest heat was 97, on the 5th, 1852; and the lowest cold 35, on the 9th, 1862. The greatest fall of rain was 0.82 inch.

EVENING MUSINGS FOR PLAIN PEOPLE.—No. 6.
VINE CULTURE.



Continuation of the musings on the question of simplifying Grape-culture, so that all who have means may "grow their own Grapes," a sort of protectionist whisper suggests another matter. What are the trade-growers and fruiterers to do? First, the fruiterers sell but few Grapes to those who have gardens, and the trade-growers will find customers for all they can produce amongst those who have not gardens. I have always observed that those having gardens, and fruit happening to be scarce, are in the habit of purchasing a supply very begrudgingly. It is, after all, only natural that this should be so, as entering on a phase of housekeeping which had not been taken into account in their calculations. As a rule, a person having no garden will, according to his means, invest freely in all kinds of fruit, including Grapes, and eat and enjoy it without the slightest compunction; but depend upon it, if a person who might have a vineyard, and yet lacks this useful structure, happens to purchase a few Grapes, they may be remarkably good, but they are almost sure to have an unwelcome fruit-shop smack about them, and a nasty after-taste of perhaps 5s. to 10s. per pound to destroy their relish. No, this class will not buy Grapes, but scores may grow them who have not yet thought to do so, and if they have, they are only to be deterred by some subtle mysteries of culture, or haunted by pre-conceived or instilled notions of ruinous expense. Considering the mystery a myth, and the frightful cost non-existent, I with a clear conscience advise all who have the means of doing so to grow Grapes. It is urged on every point on the owner by possession of them for his own use, and a possible disposal of any surplus in his district market, and thus providing the public with that of which they will be glad to avail themselves at a reasonable cost, leaving the higher-class produce of skilled market-growers for the demands of those able and willing to supply themselves at its higher worth.

A more extensive adoption of plain simple Grape-growing would be benefit to many and injury to none. The tons of foreign produce imported every season are a sufficient proof that there is room for all that can be grown at home, and grown, too, at a cost remunerative to the vendor and reasonable to the purchaser. The practice is steadily growing for clergymen, professional men, and farmers to go into fruit-growing as a means of recreation and enjoyment, and it is all the more pleasurable if it pays its way. This is a hopeful sign. Some of them are turning their attention to Grapes, and the more who follow suit the better. A clergyman can preach no worse nor be less zealous in his important duties, a farmer farm no worse, a professional man be less active and useful, by engaging in a pursuit so pure and, shall I add, humanising? as any horticultural exercise. Experience, however, proves that such pursuits act beneficially as healthy

stimulants, assisting to a better and more cheerful fulfilment of the sterner duties and purposes of life.

There is one obstacle in the way of these pursuits being more freely and generally entered on. It is true it is only sentimental, but is yet in a certain degree formidable. We have the best authority as to one who could not dig, and to beg was ashamed; and there is not the slightest doubt, that in the matter of fruit, there are many who cannot give, and to sell they are ashamed; but strong-minded, clear-headed, and good-hearted men are breaking down such paltry barriers, and indeed it is time they did, and save the tons of fruit, that cannot be given, from rotting in the stores. There is nothing strained or imaginative here, but it is all hard and veritable fact; yet in saying this it is as freely admitted that there are many who can give and do give, many who have both the means and the will to do so. All honour to such men, and may their numbers increase; but of those who have the means to give or sell, and where selfishness forbids the one and pride the other, the sooner they are "educated" to a better and more reasonable course of action the better. Nothing can be more proper and legitimate, more reasonable and right, than that a clergyman, for instance, should turn to the best account the means at his disposal—that he should, if his inclination disposed him, cke out his, in many cases, scanty income by selling his surplus fruit. Many a one of his class would find a house of Grapes a source of profit and congenial occupation to himself, and would also confer a favour on his district by bringing this delicious home-grown fruit within the reach of his neighbours.

Not long ago a clergyman invited me to confer with him on his garden—a garden of fine soil. My advice was, Grow fruit freely. His reply was pertinent to the present subject. "That is just what I should like. I should enjoy it as a nice employment, but what am I to do with the fruit? I know what I should like to do, I should like to give some away—distribute it about where it might be needed or valued—and sell the rest to pay expenses. But, then, if I give to one I must give to all, not where I like, but where they like, or I shall not have peace, and if I sell it I shall get further wrong still, so am in a dilemma, and cannot decide what to do." I have given his words as literally as memory allows. Now, I have a very strong opinion, had the case been my own, that I should feel to have done ample justice to the position by considering it five minutes at the utmost, and then have gone on planting; but I am not a clergyman, being made, perhaps, of ruder stuff. However, he has planted, and I hope will live to eat, and give, and sell his fruit in peace. Amongst the rest he has planted Vines, and ought to plant more; he planted them just in the ordinary soil with evident misgivings, as he could not think they would grow in that way when everybody else carted soil and made borders; but he has had "proof of the pudding," and is satisfied now. The growth of these Vines is as perfect as one need wish to see, being remarkably stout and short-jointed, and with pith at a minimum. Not a vestige of turf, manure, bones, or other stimulant forms any part

of their feeding-ground, which is in all points similar to the rest of the garden, but, as before mentioned, the soil is good. Trees and shrubs grow with a healthy vigour, instead of exhibiting a plethora luxurians. Wherever this is the case Vines will grow, and are sure to produce a useful fruit, without the trouble and expense of a costly border or parterre, which is too often only an elaborate superfluity and a costly mistake.

This assertion, however, ought to be proved, and as one example is as good as ten, it shall be given. It will show how a border was spoiled, and this may possibly be as instructive as telling of the rectification of the error and how the new border was made. It will also show how to kill a house of Vines as well and as completely as a house of Cucumbers.

"I have made up my mind," said my pupil, "to build the viney, and want to know about the border, what I am to take out and what to put in without going to a great expense." In this case fair useful Grapes were required, and not grand exhibition specimens; indeed, with the best border in the world he could not have produced such. Being a plain man, and wanting only plain Grapes, he must have plain instructions. They proved too plain, and in trying to improve them surreptitiously he was driven to three things, and none of them particularly pleasant—viz., he nearly killed his Vines, begged my pardon for disobedience (of course as a bait to further aid), and incurred a cost of £20 in taking the spoiled border out and making a new one. The natural soil of the border's site was a brown loam inclined to be strong; it was a foot deep, rather rich by frequent manurings—just such a soil as would grow a capital crop of Wheat—and rested on a tenacious and nasty-looking marl. Would the Vine roots go into this subsoil; and if so, what then? Well, rather than incur the expense of removing it or concreting, I relied on the evidence of some Apricot trees growing alongside, which were perfectly clean, healthy, and fruitful, and simply counselled adding to the foot of good soil another foot of turf pared from the roadside, and all worked well together. No manure or other stimulant was judged necessary, but any given was to be applied entirely to the surface, leaving it to the Vines to choose between the hungry soil at the bottom and a rich feeding-ground at the top.

Now, for the carrying out these instructions, or rather the non-carrying out, and the penalty of disobedience. This was the commencement: "Now, my lads, for this border; get your barrows and tools. I've had Mr. Wright, but we can improve on him. He says, Work a foot of turf in. What's turf? I mean muck, and plenty of it. We will just top it with turf to take him in, and when he sees the Grapes he'll say, 'I told you the turf would do it, and muck was not necessary.' Then I shall have him with his manure only as a top-dressing; but I want muck at top, and bottom, and all through, and I mean to have it, and show the gardeners how to grow Grapes. They have about as many fancies as the doctors, who nearly killed my wife, and took me all my time to get her out again."

I advised, as the only way of saving the lives of the Vines, putting on 6 inches more of top-dressing, to be kept regularly moist, the top growth also to be kept moist and shaded. This was to induce the emission of roots round the collars of the Vines, and it succeeded. Every root that went into the border perfectly healthy in the spring was cut off in the autumn, and the new surface or stem roots encouraged to carry on the Vines.

Now to the future. Not many will triumph over the vanquished and leave them to their fate. But before a word of advice was given every spoonful of the spoilt border must come out. It was no small affair. It was entirely refilled with turf blackened with soot as it was put in, and mixed freely with lumpy charcoal. The owner has, in his abundance of Grapes, so far forgot his loss; and so far from the means of front ventilation being deficient, it has not been used to one-fourth of the extent it might have been, otherwise he would not produce such Grapes as he is now cutting. But this touches on another and distinct phase of Grape-culture, which must be deferred for another "evening's musing."—J. WRIGHT.

ROYAL HORTICULTURAL SOCIETY.

JULY 2ND.

The great Rose Show, which for some years past has been incorporated with the National Rose Show, closely followed Bath and the Crystal Palace, and was a decided success, the exhibitors being numerous, and the trusses shown of the highest merit. One unfortunate circumstance, however, threatened to mar the effect of the Show (which filled the two conservatory corridors),

and caused serious loss to the Society. We learned that the staging and green baize used at the Bath Show were dispatched from the Show ground at that city on Monday at one o'clock, and the railway company had not delivered the goods on Wednesday morning. The result was that staging had to be improvised, and much woodwork cut to waste, while in the morning trusses, tabling, and empty boxes were revealed in all their nakedness; but this was subsequently remedied before the public were admitted by the purchase of new baize, of course putting the Society to a heavy expense, which would not have been incurred had the goods arrived in reasonable time. Besides the Rose Show, the most liberal prizes offered by the Messrs. Veitch, amounting to £98, brought together, not the most extensive, but by far the best collection of fruits we have seen for years. Leaving these, however, for more particular notice further on, we will return to the Roses, taking the nurserymen's classes first.

In Class 1, seventy-two single trusses, Messrs. Paul & Son were first with splendid examples of Camille Bernardin, John Hopper, Louis Van Houtte, Etienne Levet, Ville de Lyon, Exposition de Brie, Marie Baumann, Alice Dureau, Duke of Edinburgh, Antoine Ducher, La France, Horace Vernet, Marquise de Gibot, Mlle. Marie Raly, Duc de Rohan, Marquise de Mortemart, Ferdinand de Lesseps, Leopold Hausburg, Dr. Andry, Vicomte Vigier, François Louvat, and Madame Thérèse Levet. These and others were very large and fine, but a trifle wanting in freshness. Second came Mr. Cranston, of King's Acre, Hereford, with fine trusses, mostly very fresh, among which we particularly noticed Madame Charles Wood, Marquise de Castellane, Exposition de Brie, Madame Laurcut, John Hopper, Victor Verdier, Le Rhone, François Michelon, Xavier Ohlo, Countess of Oxford, Etienne Levet, Duke of Edinburgh, Annie Laxton, Maurice Bernardin, Horace Vernet, Beauty of Waltham, Edward Morren, and Alfred Colomb. The third and fourth prize collections also contained many fine blooms of the above varieties, the exhibitors being Mr. B. R. Cant, of Colchester, and Messrs. Mitchell, of Pittdown. Mr. Keynes, of Salisbury, was likewise in the field. Mr. Cranston was more successful in the class for three trusses of forty-eight varieties, taking the first place with splendid trusses of La France, Prince Camille de Rohan, Edward Morren, Xavier Ohlo, Maréchal Niel, Duke of Edinburgh, Marie Baumann, Marquise de Castellane, Maurice Bernardin, Victor Verdier, Countess of Oxford, &c. Second came Messrs. Paul & Son; and third, Mr. Turner, of Slough, each with remarkably fine trusses; and fourth, Mr. Keynes.

For twenty-four varieties, three trusses of each, Mr. Turner was first with splendid examples of Ferdinand de Lesseps, Louis Van Houtte, and Prince Camille de Rohan; Messrs. Paul & Son second; Mr. J. Fraser, Lea Bridge Road, third, and Mr. Cant fourth. In the class for the same number, single trusses, the prizes went to Mr. Prince, Oxford, Mr. Cant, Mr. Turner, and Mr. Cranston.

Coming now to the amateurs' classes we found a remarkably good competition. First, for forty-eight single trusses, came T. Laxton, Esq., of Stamford, who had large and delightfully fresh trusses of Marquise de Castellane, Charles Lefebvre, Alfred Colomb, Mlle. Eugénie Verdier, Camille Bernardin, Dr. Andry, and these were only a few out of many equally good. Mr. Ingle, gardener to Mrs. Round, Birch Hall, Colchester, was an excellent second; Rev. G. Arkwright, Pencombe Rectory, third, and J. Hollingworth, Esq., Maidstone, fourth.

In the class for thirty-six trusses, Mr. Baker, Heavitree, Devon, maintained his Crystal Palace position by taking the first place with a stand of high quality. Mr. Ingle took the second place, showing very good trusses; the third and fourth prizes went to the Rev. G. Arkwright and J. Hollingworth, Esq. The last-named gentleman was first for twenty-four; Mr. Quennell, Brentwood, and J. E. Cavill, Esq., Walton Manor, Oxford, being also placed. The best twelve came from Mr. Tranter, Upper Assenden, the remaining prizetakers being Mr. Soder and Mr. Porter.

For twelve new Roses of 1871 or 1872, Messrs. Paul & Son were first, Mr. Cant second; third and fourth came Mr. Turner and Mr. Cranston. The most striking varieties in these stands were President Thiers, Madame Lacharme, Richard Wallace, Madame G. Schwartz, André Danand, Etienne Levet, Lyonnois, François Michelon, S. Reynolds Hole, and Annie Laxton. In the next class for six trusses of any new Rose of 1871-72, Messrs. Paul & Son were first with Etienne Levet, very fine; second, Mr. Cranston with Anguste Michelon; third, Mr. Cooling with Madame George Schwartz; and fourth, Mr. Keynes with Abbé Bramerel.

Tea-scented and Noisette Roses were shown in good force. The best collection of not less than twelve trusses of yellow Roses was that of Mr. Cant, which included Maréchal Niel, Gloire de Dijon, and Triomphe de Rennes, very fine; Mr. May, Stisted, was second, Mr. Chard third. In these were very fine examples of Céline Forestier, Triomphe de Rennes, and Maréchal Niel. For twelve Tea-scented and Noisette Roses the awards went to Messrs. Ingle, May, Wakeley, and Hollingworth

among amateurs; and to Mr. Cant, Messrs. Paul & Son, Mr. Turner, and Mr. Keynes among nurserymen. In these stands were beautiful trusses of Gloire de Dijon, Devoniensis, Madame Sertot, Rubens, Cheshunt Hybrid, Madame Willermoz, Maréchal Niel, Souvenir d'un Ami, and Niphetos. For six Tea-scented in bud, Mr. Cant was first, Mr. Bennett, gardener to W. W. Burrell, Esq., Cuckfield, second, and Mr. Turner third. There were classes also for Roses to be judged for their perfume. The prizes for six of any kind were adjudged to Messrs. Paul & Son, either for Abel Grand or La France; second came Mr. Turner with Abel Grand, and third Mr. Chard with Camille Bernardin. The next class was for six Tea or Noisette-Roses, flowers good of their kind, to be judged for perfume. Here Mr. Bennett was first, and Mr. Cooling second.

For twelve single blooms the prizes went to Mr. Turner, Mr. Keynes, and Mr. Cooling, the first two in particular having admirable examples.

The only two groups of pot Roses were from Messrs. Paul and Son and Messrs. Veitch, who each had plants beautifully flowered; those from the former firm were especially noticeable both for the size and freshness of their blooms.

Prizes were offered by Mr. W. Paul for six blooms of Princess Beatrice. Only one exhibitor—Mr. Farrow, gardener to G. Batters, Esq., Enfield, came forward, and he received a first prize, though his blooms did not do full justice to this truly fine variety.

Of other subjects Mr. Williams, of Holloway, sent a magnificent group of plants, many of which had already appeared at Bath. Messrs. Osborn, of Fulham, sent a group of Palms, Ferns, Lilium auratum, and Epiphyllum creatum with large white flowers. Messrs. E. G. Henderson contributed a large collection of Pelargoniums of the forcing type, hybrid Begonias, and Tree Carnations. Another collection consisted of Dr. Denny's splendid seedling Geraniums, the second set of which is in the hands of Mr. Copelin, Tyssen Street Nurseries, West Hackney. Mr. H. B. Smith, Ealing Dean Nurseries, sent a group of Petunias; Mr. Turner, of Slough, a collection of Pinks, Carnations, and Picotees which struck everyone with astonishment; also his fine new Show Pelargoniums, several of which had before been certificated, as well as Royal Standard Rose, globular, like Felix Genero in shape, but very much larger and of a bright rose colour. From Mr. Ware, Tottenham, came a fine group of Delphiniums, Pentstemons, and Antirrhinums; and from Mr. Forsyth, Brunswick Nurseries, Stoke Newington, Lobelia pumila grandiflora flore-pleno, a dwarf and compact double deep blue variety, which was exhibited some time ago by Mrs. Dixon and Co., of Moorgate Street, and then met with much approbation. Mr. Noble, of Sunningdale, again sent the beautiful Spiraea palmata; and lastly, Mr. Denning, gardener to Lord Londesborough, Norbiton, a group of Orchids, in which were extraordinary specimens of Anguloa Clowesii, Thunia Bensonii, and Epidendrum nemorosum.

MESSRS. J. VEITCH & SONS, of the Royal Exotic Nursery, King's Road, Chelsea, S.W., offered some handsome prizes for fruit. For the best collection in ten distinct kinds, three prizes of £20, £15, and £10 were offered; and one would almost fancy the large prizes had frightened exhibitors away, as the only collection was a poor one, and was disqualified through having an unripe fruit of *Musa Cavendishi*, although to it was awarded an extra prize of £5.

For the best dish of White Grapes, consisting of three bunches of one or more kinds, Mr. J. Douglas, gardener to Francis Whitbourn, Esq., of Loxford Hall, Ilford, took the first position with a very well-ripened dish of Muscat of Alexandria. The bunches were large, the berries large and well coloured. The second prize was awarded to Mr. W. Cole, gardener to J. S. Budgett, Esq., Ealing Park, W., for a very fair dish of Bowwood Muscat. Third, Mr. J. Woodbridge, gardener to the Duke of Northumberland, Lion House Gardens, Isleworth. Mr. M. Walker, gardener to H. J. Atkinson, Esq., Acton, had an extra prize for Muscat of Alexandria. And here we would remark on the shameful manner in which some of the Grapes had been cut. We noticed a dish of Canon Hall Muscat; the berries had not even swelled to their full size; they were positively green. A very good dish of Buckland Sweetwater was sent from Sir W. Farquhar's gardens, Polesden, Dorking. In Black Grapes the competition was very spirited, no less than thirteen dishes being exhibited, and the quality was excellent. The first prize went to Mr. J. Wakefield, Leamington, for a very well-ripened dish of Black Hamburgh, the berries even in size and splendid in colour. Second, Mr. J. Douglas, for a remarkably well-finished dish. Third, Mr. G. Sage, gardener to Earl Brownlow, Ashridge Park, Great Berkhamstead, also for a well finished dish of Black Hamburgh. Extra prizes were awarded to Mr. T. Rawbone, gardener to the Earl of Shrewsbury, Alton Towers, Cheddle, Stafford; and Mr. G. Holliday, gardener to J. Norris, Esq., Castle Hill, Blechingly, Surrey. Mr. A. Johnson, gardener to the Marquis of Ailesbury, Savernake Forest, Marlborough, showed three very large bunches.

The best three Fine Apples. In this class there was also a good competition, and all the exhibitors showed Queens. Mr. C. Rye, gardener to J. Deacon, Esq., Mableton Park, Tonbridge, Kent, had the first prize for three even-sized handsome fruit averaging 5½ or 6 lbs. Mr. G. Ward, gardener to T. N. Miller, Esq., Bishop Stortford, was second. He had a handsome Pley Queen of 6 lbs. Mr. G. T. Miles, gardener to Lord Carrington, Wycombe Abbey, had the third prize. Two other exhibitors took extra awards with good fruit.

Peaches.—For this prize eighteen exhibitors contested. Mr. G. Jackson, the Gardens, Tixall Hall, Stafford, was first with truly magnificent fruit of *Violette Hative*, the fruit of immense size and splendidly coloured; second, Mr. G. T. Miles with a good dish of what seemed to be Royal George; third, Mr. J. Barnett, the Gardens, Deepdene, Dorking. Two extra prizes were awarded.

Nectarines were not quite so high in quality as the Peaches, but seventeen good dishes were exhibited. The first prize went to Mr. W. Wallis, gardener to H. S. Thompson, Esq., Kirby Hall, York; the fruit was large but uneven in size and quality. Mr. G. Jackson, Tixall Hall, Stafford, had the second prize for Pitmaston Orange; the third went to Mr. Jack, gardener to the Duke of Cleveland, Battle Abbey, Sussex. Extra awards were given to Mr. W. Coleman, gardener to Earl Somers, Eastnor Castle, Ledbury, Hereford, and to Mr. G. B. Tillyard, gardener to the Earl of Yarborough, Brookesby Park, Lincoln. We do not question the awards of the Judges very often, but we would have placed the names of Mr. Jack and Mr. Coleman higher on the prize list. The Pitmaston Orange which received the second prize was not well finished, and the fruit itself is at best only second-rate, while the dishes of Elruge exhibited by Mr. Coleman and Mr. Jack were highly coloured and well finished.

Fruit-growers have to thank the Messrs. Veitch for the handsome prizes they have offered on this occasion, amounting to £98; and not only so, but we noticed that no less than ten extra prizes were awarded. And it was something new in fruit showing to see one of the firm with a handful of bank notes distributing the prizes as soon as they were awarded by the Judges. It is an old and true saying, *Bis dat qui cito dat*. We hope this will be an annual affair, and that next year collections will be exhibited worthy of the prizes offered.

Messrs. J. Carter & Co., offered prizes for the best six dishes of Peas, to include James's Prolific Marrow and Carter's G. F. Wilson. This prize brought out some excellent dishes of this useful vegetable. Mr. W. Cross, gardener to J. B. Lonsada, Esq., Sidmouth, Devon, had the first prize with Superlative, Omega, Popular, William I., James's Prolific, and G. F. Wilson. Mr. Moorman, gardener to the Misses Christy, Kingston-on-Thames, took a third prize. Mr. G. W. Bagnell, gardener to G. D. W. Digby, Esq., Sherborne Castle, Dorset, was fourth.

FRUIT COMMITTEE.—Alfred Smece, Esq., F.R.S., in the chair. Mr. Goldsmith, gardener to Sir Walter Farquhar, Bart., Polesden, Dorking, sent a fruit of a seedling Scarlet-flesh Melon called Improved Scarlet Gem. Mr. Bradley, gardener to W. Birch, Esq., Wretham Hall, Thetford, sent a new Melon called Wretham Hall. Mr. J. Cross, Gardens, Melchet Court, Romsey, sent a very handsome Melon called Read's Scarlet-flesh. It was remarkable as one of the richest flavoured red-fleshed Melons ever exhibited, and was awarded a first-class certificate. Mr. Sage, the Gardens, Ashridge Park, sent a dish of Pigs, which the Committee considered the same as Early Violet. Mr. Douglas, the Gardens, Loxford Hall, Ilford, sent a seedling Grape from the Black Hamburgh crossed by the White Frontignan, which was not in condition, and opinion was postponed to a subsequent meeting. Mr. Bunbury, the Gardens, Colham Hall, Gravesend, sent a brace of Cucumbers raised from crossing Luton Hoo and White Spine. Messrs. Veitch and Sons, of Chelsea, sent a large collection of twenty-six varieties of Cabbage Lettuce, and eighteen varieties of Cos Lettuce. They also exhibited a collection of twelve varieties of Garden Turnip, to which a cultural commendation was awarded.

The Committee met at Chiswick on the 21st of June to examine the Peas. They confirmed the decision of last year, that Emerald Gem is the same as Danecroft Rival. A first-class certificate was awarded to Dazuar, a white wrinkled Pea of dwarf habit, as early as Dillistone's, and which was raised by Mr. Laxton. A similar award was given to Mr. Laxton's The Slab, a white-wrinkled Marrow of medium growth, also very early. Another meeting was held on the 1st inst., when first-class certificates were awarded to The Baron, a blue Marrow, having pods nearly as large as Superlative, better filled, and ten days earlier; also to Laxton's Gem, a great improvement on Little Gem, being longer and more curved on the pods, and also much earlier than that variety.

FLORAL COMMITTEE.—W. R. Kellock, Esq., in the chair. The subjects submitted for adjudication on this occasion were far from numerous, and but few of them claim special notice. Messrs. Veitch sent a collection of Escallonias, of which *E. sanguinea* with deep red flowers and shining ovate leaves, had a first-class certificate. The same award was made to Mr. Muller,

Brunswick Nursery, Tottenham, for *Aristolochia floribunda*, more ornamental than most of the Birthworts; to Messrs. E. G. Henderson for Begonias *The Shah* and *Dr. Masters*; to Mr. Ware for light blue *Delphinium* Cambridge; and to Messrs. Stacey & Son, Great Dunmow, for *Verbenas* *Lady of Lorne* and *Countess of Rosslyn*; the latter bluish, with a purple centre, fine frass; the former bluish tinged with purple towards the centre, and the tips of large size.

Messrs. Paul & Son sent Cheshunt Hybrid and other new Roses which have been noticed before; Messrs. Cutbush, Tree Carnation Mrs. Robert Barclay, a showy scarlet kind, excellent for decorative purposes; Mr. Wilkinson, Guildford, Mr. Fraser, Lea Bridge Road, and Mr. G. Smith, Edmonton, seedling Zonal Pelargoniums, and Messrs. Osborn seedling Petunias. Messrs. Barr & Sugden, of Covent Garden, contributed a charming basket of Lilies, Irises, and Ixias; and Messrs. Teutschel, of Colchester, sent some varieties of *Lilium Thunbergianum*. From Mr. Pizzey, gardener to Sir E. Perry, Bart., Fulmer, came excellent stands of Pinks.

SHADES AND SHELTERS.—No. 1.

SHADING and sheltering are so combined and so essential as a means of protection against the many injuries which plants may receive, that the two subjects may be dealt with in one paper. It is not my intention to enter into the subject scientifically, but the main object of this paper is to impress upon the reader the great advantages to be derived from a general system of shading and sheltering.

The principal advantage of shading is to protect plants under glass from the fierce rays of the midday sun. When so used it does good, and it likewise favours the growth of plants by preventing rapid evaporation and consequent exhaustion. Plants in bloom are greatly prolonged in beauty and vigour by shading, but shades properly managed need as strict attention as air-giving; it is as possible to give too much shade as too much air, and very few would shade their plants in the absence of sun, neither ought they to allow shading to remain over their plants long enough to diminish the amount of light the particular class of plants stand in need of. Hence the objection, in many cases, to a permanent shading, such as lime-wash on the glass, &c., that it is there when often it is not wanted. The material which constitutes the shade should not be so thick as to darken the house and obstruct the free access of air and light; plants will not flourish under such treatment. An excellent material is to be found in a thin light canvas sold by all nurserymen; it is cheap and durable, and is sold in different widths to suit large or small houses, or it may be purchased as manufactured, and made-up by the person using it. There are other materials of a coarser texture frequently used for the purpose, also cotton bunting, and sometimes an article called *frigi domo*, which will be noticed hereafter, but none has been found to equal the thin canvas, which, with proper care, will last for several seasons.

Fig. 1 is part of a glazed roof and shows one of the first systems brought out for shading plant houses. Its only recommendation is, that it is effectual, but the plan of fixing and

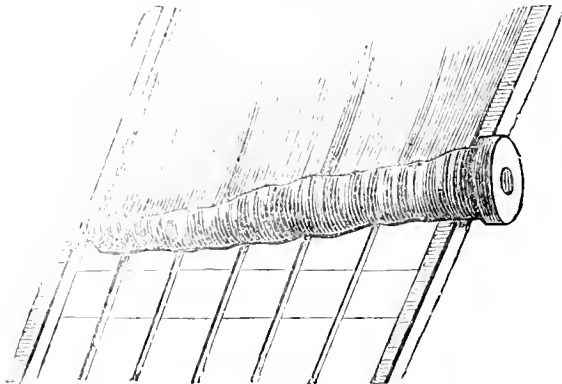


Fig. 1.

working exhibits a need of improvement. This improvement is shown in *fig. 2*, where the wooden rod or pole upon which the blind is rolled has a wheel at each end instead of at one only, as in *fig. 1*. These wheels have a groove in which the cord works. One end of this is first nailed to the top of the house opposite the wheel, and supposing the blind to be down

the cord is brought down and inserted in the groove, then taken back and passed through an iron or brass roller fixed at the same place, leaving enough length of cord to come back over the roof of the house again. Having fixed the other end of the roller in the same way, to draw-up the blind we have only to pull the cord ends, and the canvas rolls round the rod in a very neat manner. This is done from the front of the

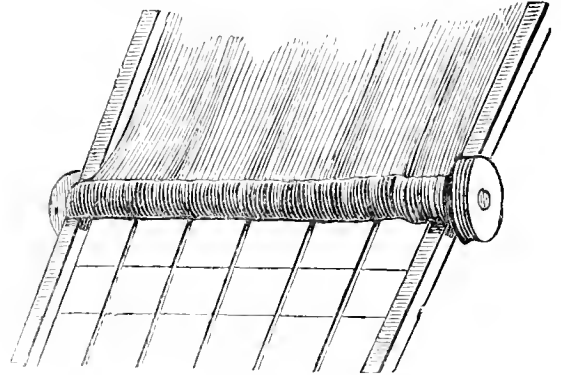


Fig. 2.

house. In letting down the blind it is only necessary to loosen the cord from its fastening, and the blind will run down of itself.

After accomplishing thus much it soon became obvious that still further improvements might be made in this system, by extending the length of the pole to 30 or 40 feet, or the length of a whole house instead of one light, or a small portion of the house, as shown in the illustrations. This was found to answer admirably, and to complete the whole arrangement it seems only to require a covering for the blind when rolled-up and not in use. This can be effected by a coping-board on the top of the house, under which the blind lies protected from all weather. I ought to mention that after making the canvas of the required size to cover the roof, one side of it is nailed to the woodwork under the coping, or permanent hooks may be inserted in this part at equal distances, and the blind provided with rings at similar distances and thus made fast. After this the other side is nailed to the wooden pole, and when the blind is rolled-up it may be held in its position by making the cord fast to an iron bracket inserted in the place where the operator stands. At many places the wheels at each end of the pole are dispensed with, and the cord put round the

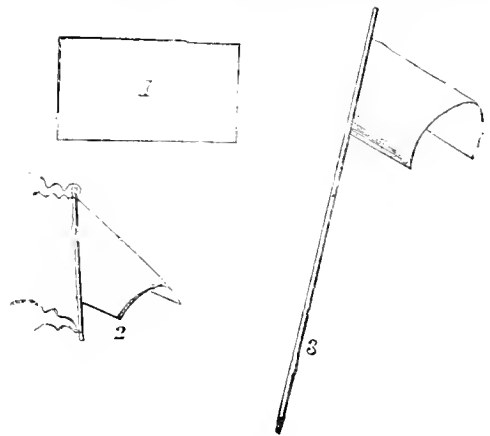


Fig. 3.

pole instead. There is a disadvantage in this, for the cord working over the canvas soon wears it in holes, and without a wheel to clear the pole from the roof of the house, propelling it up and down will soon wear it out. The above system of shading can without difficulty be applied to houses of any length. On small pits and frames, which generally stand at a much lower elevation, a thinner and lighter material such as patent cotton-netting creates enough shade, but whatever be used it will be found best to adopt the same system or nearly

so of applying it, excepting that no cords or pulleys are required; each frame should have its length of shading nailed to a small, round, deal pole on one side, and the other side ought to have rings at equal distances corresponding with small hooks in the top of the frame lights. The rings being fastened to these, the blind will run down by its own weight. When not wanted it can be rolled up by the hand and put away under cover. Each blind, or shading, should have a number attached corresponding to one on the frame to which it belongs.

Next to house-shading comes that of shading individual plants or flowers. *Fig. 3* is a very simple and useful contrivance for that purpose. A piece of cardboard, thin tin, or even thick brown paper is shaped-out as at 1, and half of one of the longest sides is fastened to the stick as at 2, and tied at the top, then the upper corner of the narrowest end has a string attached, which when pulled and tied at the bottom forms the shape as shown at 3. This, with a stake of the proper length, is ready to place over any flower that it is wished to shade.

Fig. 4 is another form of shade, and, I think, an improvement on *fig. 3*. It is a circular one about a foot in diameter,



Fig. 4.

made of tin, and in the form of a dish-cover. A socket is attached to it at *a*, fastened to the top of the cover at *b*. In this socket the handle is inserted which supports it in the ground. Those who have tried this prefer it to any other for Roses, Dahlias, &c.

Although it is not expensive yet there is a cheaper way of making such covers. I call them home-spun ones, for I have set the men to make them in the winter. It is this, a frame is shaped-out with small wire to which painted canvas is stitched; the socket which holds the stake is in the centre at top instead of at the side, as in *fig. 4*, and is merely a stout piece of elder wood with the pith taken out; this is also painted, and the canvas is bound round it with small wire. I do not advocate this in preference to the former one, but because of its cheapness it is worth recommending. When out of use a lot of them can be stored away by stringing them on a rope run through the socket-eye, and the stakes put away for another year; they will last many years.—THOMAS RECOMB.

SHORTCOMINGS AT THE BATH EXHIBITION.

MAY I, with due deference to the Royal Horticultural Society and its executive, call attention to certain things at the late Show at Bath, which struck me as exceedingly poor and deficient? First, I may remark on the narrowness of the tents put up for the fruit and cut flowers, the vegetables, and the table decorations. These were supposed to be 30 feet wide, but were considerably under that mark. They were low and ill-ventilated. No barriers were erected to separate the crowd at the entrance and exit, so that when wishing to get out of a tent one had to face a mob wishing to get into it. Only light ropes on iron stays, screwed into the boards which formed the staging, were used to keep the crowd back; these ropes were so weak and pliable, and the stays so far apart, that the crowds were forced nearly on to the flowers. There was far too little space in the first instance in these tents for the exhibitors and attendants when staging the plants and flowers, and far less for the crowd. Then, in the centre tent, no attempt was made to hide the hideous forest of wooden posts made of

rough deals screwed together. There was neither paint, nor distemper, nor anything whatever done to relieve their naked ugliness; even a few wreaths of evergreens, or a flag or two, or anything, in fact, would have been better than nothing. Then what few large plants there were—and the fine specimens exhibited by Messrs. Cole and Baines were worthy of all praise—were not made the most of; instead of being arranged in two centre masses in the middle of the tent, where persons might have admired them from all sides, they were placed on one side the tent. The only *coin d'arrantage* from which a general effect of the tent might be seen was blocked by specimen plants. The Fuchsias, which were exceedingly good, were arranged at one end, and all the small plants were put into the centre, which, being depressed, and having a feeble fountain in the middle (which, with the taps here and there, wetted the walks and made all in a puddle), had on the whole a very meagre appearance.

But I have a still worse complaint to make. No arrangements whatever seem to have been made for the gardeners and exhibitors; no congress, no conversazione, unless we except the microscopic *soirée*, to which no gardener had any special invitation, but to which one could go by the payment of 2s. 6d.; no tent set apart in the ground, no place reserved for the Judges, exhibitors, Fruit and Floral Committees to dine together the first day of the Show under the auspices of the Council; no attempt, in short, that I could see whatever to make the Provincial Exhibition of the Royal Horticultural Society what it might be, not only the first and finest exhibition in England, but a place of *réunion* for horticulturists, where the working bees of the gardening world might feel that something was being done to encourage them and to elevate them. The worthy Director of floral shows has not sufficient authority placed in his hands, nor efficient workers under him to carry out the arrangements of a great show. If the number of classes, and the number of prizes given in each class, were somewhat reduced, the Exhibition would not be injured, and money might be forthcoming to put up additional accommodation for the Floral and Fruit Committees, the Judges, exhibitors, and Fellows of the Society. Parsimony in the direction I have alluded to is no true policy, and if these provincial exhibitions of the Royal Horticultural Society are to be looked upon in any other light than the means of getting money to defray home expenses, or as advertising mediums for nurserymen and makers of horticultural appliances, the sooner the present state of things is remedied the better. When no one is to blame everybody is to blame, and I think the error only arises from there being no committee of management appointed from the officers of the parent Society, and the Local Committee having, as a general rule, no official status, so that no one thinks it his duty to stir in the matter. I have heard, however, complaints both just and deep, and I think what can be done at Manchester, York, Leeds, Bishop Auckland, and elsewhere might also be achieved by the Royal Horticultural Society, and I hope another year may see a real improvement in this matter.—C. P. PEACH.

ROYAL HORTICULTURAL SOCIETY'S BATH SHOW.

ROSE SHOW.—As I supposed, the prizes offered on Thursday, June 26th, brought together a large number of exhibitors and some remarkably fine stands of Roses, the western growers having, probably, the advantage, inasmuch as the season being backward, and their climate more forward, they had the better chance of cutting blooms for so early a date; and it was not surprising to see Mr. Crauston come out so strongly as he did, and take the foremost place, beating easily Messrs. Paul & Son and Turner, who were his principal competitors; while the excellent blooms of Mr. Baker and Mr. Cann, and the Teas of the Rev. J. Handley showed how well private growers have studied and practised the cultivation of the queen of flowers.

A great deal of dissatisfaction was expressed at the non-admission of the public at the time specified. This arises from two causes—first, that exhibitors are so long in staging, and in this case the railway trains were disappointing; and second, from the paucity of Judges. Why in the world it should be considered necessary to have only two sets of Judges I cannot say, except that the Royal Horticultural Society can always only move in the same groove unless some pressure is put on. There were numbers of persons there who were thoroughly qualified to act as judges, and by the expenditure of a few pounds the evil might have been remedied. I daresay some kind friend will say, "Oh! he wanted to be judge himself," but that was simply impossible. I had to leave by twelve, and was too fully

occupied in getting notes to attend to anything else; but I felt those in the tent who were quite competent to have judged, and a good deal of annoyance might have been spared. But I suppose it is something like what was told me when I urged that it would be as well to publish the certificates with the list of prizes. "It is simply impossible." And yet the Royal Botanic Society does it after every show! I am sure of this, that the classes for nurserymen are quite enough for any two judges, and that the smaller classes for Teas, new Roses, &c., ought to be deputed to another set, different from those who judge amateurs; in fact, if the Royal Horticultural Society would condescend to take a lesson from the Crystal Palace it might be well for them.

Roses in pots were only contributed by Messrs. Paul & Son, who had nicely-bloomed dwarf plants of Anna Alexieff, Général Jacqueminot, Gloire de Dijon, Sénateur Vaisse, Elie Morel, Mons. Noman, Beauty of Waltham. Exposition de Brie, John Hopper, Marquise de Gibot, Horace Vernet, Duke of Edinburgh, Claude Million, Camille de Roban, Ferdinand de Lesseps, Madame Fillon, and Victor Verdier.

In the class for seventy-two, Mr. Cranston, of Hereford, easily took the first prize with some very fine blooms, amongst the best of which were Marquise de Gibot, a Rose of 1870, but which has, as far as I know, been rarely seen before this season; it is of a fine clear rose colour, and half-globular in form. Dupuy-Jamain, Marquise de Mortemart, Lelia, Princess Beatrice, Auguste Neumann, Dr. André, Horace Vernet, Comtesse d'Oxford, too large and coarse to please me; Catherine Mermet, Jean Cherpin, John Hopper, Marguerite Dombraïn, Esmeralda, Edouard Morren, Princess Mary of Cambridge, Baroness Rothschild, Niphotos, Duke of Wellington, Duke of Edinburgh, Henri Ledebaux, François Lacharme, Henri Pages, large but dull in colour; Marie Baumann, Louisa Wood, very bright; Maréchal Niel, Julie Touvais, an immense Rose; Maurice Bernardin, Charles Rouillard, Caroline de Sansal, Niphotos, La France, and Madame Margottin. Messrs. Paul & Son were second with Mdlle. Eugénie Verdier, remarkable in colour; Madame Rivers, Madame Clert, Madame Clémence Joigneaux, Abel Grand, Jean Cherpin, Duchess d'Orléans, Sénateur Vaisse, Madame Boll, Exposition de Brie, Annie Laxton, a remarkably pretty flower and of good quality; Alba rosea, Vicomtesse de Vesins, François Louvat, Maréchal Niel, La Fontaine, Alba rosea, Marguerite Dombraïn, &c. Mr. Charles Turner was third with Camille de Roban, La France, Fisher Holmes, La Fontaine, &c. In the class for forty-eight trebles, the same exhibitors occupied the same positions, and in twenty-four trebles also. Mr. Cranston has Niphotos, Duke of Edinburgh, Marguerite de St. Amand, Louisa Wood, Madame Knorr, and Lord Clyde. In the class for twenty-four single blooms, Hybrid Perpetuals only, Mr. Cranston was again first with Edouard Morren, Horace Vernet, Marguerite de St. Amand, Princess Mary of Cambridge, Julie Touvais, Marquise de Castellane, Charles Lefebvre, Nardy Frères, Dr. André, Comtesse de Chabrillant, Baroness Rothschild, John Hopper, La France, Victor Verdier, &c. Mr. Turner was second, and Mr. Cooling, of Bath, third.

Amateurs exhibited in strong force. The Rev. J. B. Camm was first with Marguerite de St. Amand, Souvenir d'Elise, a most lovely bloom; Narcisse, Duchesse de Caylus, Reine d'Or, very lovely; Triomphe de Rennes, Marquise de Castellane, Pierre Notting, Edouard Morren—I have never seen this variety so well shown as by Mr. Camm—Fisher Holmes, Boule de Niece, a very grand bloom, Prince Camille de Roban, Elie Morel, Maréchal Niel, Dr. André, Duke of Edinburgh, Abel Grand, Charles Lefebvre, Centifolia rosea, Marquise de Mortemart, Camille Bernardin, Souvenir d'un Ami, Marie Baumann, Madame Clémence Joigneaux, Madame Vidot, Madame Charles Wood, &c. Mr. Baker, of Exeter, had a fine box in which the flowers were, however, a little too coarse, containing Henri Ledebaux, Baron Gonella, Madame Haussmann, Charles Lefebvre, La France, Maréchal Niel, and others. Mr. Laxton, of Stamford, was third. In the class for thirty-six, Mr. Baker was first with Marguerite Dombraïn, Souvenir d'un Ami, Lord Macaulay, Lyonais, &c.—D., Deal. [Remainder of notes on Roses next week.]

HARDY TREES AND SHRUBS.—One of the most notable features at Birmingham last year proved to be the splendid collections of these exhibited in the grounds by Messrs. Barron, of Elvaston, and others. There were on this occasion no entries in the large classes; and in that for single specimens Mr. Cooling, of Bath, sent *Piota orientalis elegantissima*; Mr. R. T. Veitch, of Exeter, *Taxus elegantissima*; and Messrs. Maule & Son, a specimen of *Thuja aurea*. But worthy of special notice in this class of plants was the collection sent by Mr. Maurice Young, of Godalming. He had, at considerable expense, sent a quantity of old stumps and other materials to form a roofery at the entrance to the large tent. The outer margin was formed of low-growing plants and hardy Ferns, the other portion of the space being very judiciously and effectively planted, mostly with Japanese evergreens and Maples. *Euonymus elegantissimus* was very pretty in its white variegation; *Piota semper-aurea*, a fine dwarf golden

species, which Mr. Young thinks superior in effect to *Thuja aurea*; *Raphiolepis ovata*, a handsome evergreen shrub with white flowers and glossy deep green leaves, it has black berries in winter; *Retinospora plumosa aurea*; Young's Golden Chinese Juniper, *Juniperus chinensis aurea*; *Ligustrum coriaceum*, a handsome Privet; *Cryptomeria spiralis falcata*; and to add to the effect some improved seedling *Acubas*, one of them with thick, leathery, deep green leaves, which will be well adapted for planting in exposed positions. Mr. Young must be congratulated on the success of his exhibition. His plants are thoroughly well grown, and as far as we are aware he has been the first to hit upon this plan, which shows these extremely pretty Japanese plants to the best advantage. Mr. Fowler's Castle Kennedy, sent a basket of small plants of his *Abies Douglasii Stairii*, the young growths of which are creamy white, and are said to change to a green colour in winter.

SUPPLEMENTARY FRUIT SHOW.—On June 26th there was a supplementary exhibition, the same exhibitors staging in nearly every case inferior examples to those put up on the first day of the Show. Mr. W. Coleman, Eastnor Castle, sent a collection of very good fruit—Black Hamburg Grapes, excellent Peaches, Brown Turkey Pigs, Elruge Nectarines, and a Melon. Mr. W. Cox, of Madresfield Court Gardens, came in second with a nice collection. Mr. Coleman and Mr. Cox also exhibited the best Grapes. Prizes were offered by Messrs. Carter for examples of the new Melon, Little Heath, sent out by them for the first time this season. The best came from Mr. Gilbert, gardener to the Marquis of Exeter, Lurghley, Stamford.

TABLE DECORATIONS.—In our remarks on the Royal Horticultural Society's Show at Bath last week, we only cursorily noticed the table decorations. We intend now to call attention to them rather more fully, for, though they did not make so decided a feature of the Show this year as they did at Birmingham in the last, yet there were some especial features with regard to those exhibited this year to which we wish to allude.

There were only five exhibits this year, and these may be divided into two classes, two that were utterly meagre, poor, and thin, and three that were overloaded with decorations. One of these last was exceedingly meritorious if it had not been for the napkins. Even though many persons might object that even without the napkins, and the loose flowers stuck into them, the rest of the table was crowded, yet the arrangement of the flowers was exceedingly good, their quality unexceptionable, and the fault of redundancy is certainly on the right side. One which received no prize at all had certainly nothing to recommend it, either with regard to the arrangement of the flowers or the fruit; the glass vases laden with glass balls set on a centre of reflecting glass were decidedly meretricious in their glare. There was one redeeming feature in this table, which was exhibited by Mrs. Beck, of Milsom Street, Bath, and that was the carafes for water of a classic Pompeian or Egyptian pattern, standing in a light silver stand, supported by silver wire, having glass heads as pendants. These were certainly good, but the rest of the adornments of the table, which we shall refer to again, were decidedly of the shabby showy order. After these preliminary remarks we will go more into detail with regard to each of the different entries, and will take them in the order in which the prizes were awarded.

The first prize was adjudged to Miss C. Harris, Clarendon Park, Salisbury. There were three centre vases; and by the way we may remark, that all the exhibits, except Miss Blair's, had three vases for centres, as prominent features—one central, and two sides ones balancing. On Miss Harris's table the three vases were similar in height and design, though the ornamentation was somewhat different. This we consider a mistake in the first instance, as in no case should the two side-centre vases be so tall as the centre one. Miss Harris's vases were a flat glass on the table, with a tall slender glass rising from it, and three small side glasses hanging on bent wires, standing out at right angles from the centre of the stem of the tall glass. The principal vase had a spray of *Bougainvillea glabra* in the centre, with a little *Dielytra spectabilis* and *Verbascum*, and three tall common field Grasses, standing out above it, mixed below with Quaking Grass; the three little side glasses had each a spray of poor *Fuchsia* with a bit of the flower of *Cerastium tomentosum* and a little Maidenhair Fern. The base of the vase had heavy masses of *Adiantum farleyense* splayed flat on the table, a Fern which we hardly thought before could be used with bad taste; *Oncidium flexuosum*, purple Iris, a little hardy yellow *Azalea*, and flowers of the common Laurel put in to imitate Lily of the Valley. The two side vases had white Everlastings and *Acroclonium roseum* mixed with grass; the side pendant glasses, *Cerastium* and *Fuchsia*, the same as the other, and the base rather better arranged, as it had some pretty flowers of *Kalmia latifolia* to help to set it off. There were four small glasses with Iris and Fern, and buttonhole bouquets, which were neatly made up for each of the guests. With regard to the Iris we may remark that they were of that particular shade of colour which turns nearly black by gaslight. There were eight dishes of fruit, top and

bottom Melons and Pines, which looked fairly good. The rest of the fruit was utterly bad; two dishes of Grapes both unripe; Strawberry-bird; Apricots small and unripe; Oranges, and Apples. If simplicity and privacy of idea with meanness of fruit was what was to be aimed at, then the first prize was justly awarded to the first prize, even if it is not the best. But, which we describe next, was a very good one; but in this case there was something for the guests to eat.

The second-prize table, exhibited by Miss Blair, 50, Upper Bedford Street, Russell Square, London, is soon described. In the centre was a March stand flat on the table for a base, a small flat glass, about 18 inches in all, with a taller vase rising out of it—in fact, an ordinary March stand with a vase rising out of the top one. The centre was nicely decorated, having at the base white Water Lilies alternately with Cactus, and relieved with white Gloxinia, mixed with Ferns and Grasses. On each side of the centre vases there were two small Palms put through the table—a practice which we hope will soon be exploded—with two small segmental glasses put round the Palm to hide the folds of the tablecloth, filled alternately with blue Centaurea and white Pinks; there were twelve tall glasses holding single flowers, or buttonhole bouquets for the guests, set in finger-glasses, in which were floating a few odd flowers of Borage and sprays of Lycopodium. On the whole, though there was a decided paucity of decoration, yet the arrangement was more tasteful than that we have before described; the fruit was better, and we do not think we should have been so tired of the decorations at the end of the dinner as we should have been in the previous case in looking at bad Fuchsias, Grass, and Cerastium.

The next in order of merit (according to the Judges' award) was that of Mr. W. C. Armstrong, Cheltenham. In the centre was a tall vase rising from a flat dish, having six cornucopia-shaped vases extending as branches from the middle, three taller, three intermediate. This was standing on a silvered glass having eight segmental glasses arranged like a double quatrefoil to encircle it; in each of the quatrefoils were figures alternately of a little Cupid, each holding a basket in which were single Peaches, and swans in the alternate quatrefoils, floating apparently on the glass mirrors. The upper vase had *Spirea japonica*, *Paneratium*, *Begonia boliviensis*, all good, with pieces of rather poor scarlet Geranium mixed with them, which might easily have been dispensed with. The cornucopia suspended glasses were dressed alternately with pink and scarlet Geraniums, mixed with *Adiantum*, *Spirea*, and *Begonia fuchsoides*. The flat vases had *Ixora*, *Dipladenia*, *Eucharis amazonica*, *Roses*, *Lælia purpurata*, with an edging of Fern, the flowers though good being rather too crowded; and with the swans and boyish Cupids, segmental glasses, &c., this centre piece was overdone. The two side pieces were somewhat similar in point of shape to Miss Blair's central one—*i.e.*, a March stand with an additional tall vase rising from the centre. The flowers were arranged somewhat in the same way as the other, though not quite so overcrowded. There were eight flat glass baskets with glass handles, containing *Roses*, *Geraniums*, and other flowers, and eight tall glasses filled with Grasses. These were arranged four-and-four—*i.e.*, four flat and four tall alternately round each side-centre. The napkins were arranged very tastefully to represent Water Lilies or Lotus, with a buttonhole bouquet in a small glass in the centre of each. When all the small glasses, fourteen in number, the baskets eight, tall glasses with Grasses eight, segmental glasses eight, centre vase eight, and two side vases six, come to be reckoned up, there were according to our computation fifty-two glasses or vases of flowers to be arranged. The fruit was good. Top and bottom, Melon and Pine, two; White and Black Grapes, two; Strawberries, two; Nectarines, two; one Cherry, one Orange, and a Peach in the centre of each of the small vases, supported by the boy Cupids. The table was no doubt on the whole overdone and crowded, though in many respects meritorious, especially in napkins.

The fourth we come to, the fourth prize, was exhibited by Mr. Cypher, of Queen's Road Nurseries, Cheltenham, who, if our memory does not deceive us, easily carried off the prize at Birmingham, and must have done so here, if some evil fate had had not made him put up some extraordinary napkins, looking rather like sugared sponge cakes decorated with louse flowers. If these could have been removed the rest of the decorations were very good; indeed, we have hardly ever seen three better centre vases than those which he showed here. The centre was composed of three tiers of glasses, the base a flat glass but elevated about 4 or 5 inches from the table, standing on a mirror with segments of glass surrounding it. The base was beautifully arranged with a fringe of Ferns drooping gracefully so as to reflect their fronds from the mirror. The flowers were *Ixoras Colci* and *Javanica*, *Eucharis amazonica*, *Roses*, *Dipladenia amabilis*, *Allamanda grandiflora*, with Fern, and *Anthelia gracilis*, having sprays of *Cyperas alternifolius* rising out of it, veiling without hiding the flowers. The next tier of flowers had *Phalænopsis grandiflora*, *Justicia*, *Ixora*, and other flowers mixed with Quaking Grass, and the top was tastefully arranged

with *Paneratium*, *Gloriosa Plantæ*, *Spirea japonica*, and Ferns. The two side centres were somewhat similar, but smaller and not so tall. The flowers in each were very choice, and, though they were not crowded, maidenhair being used more than the Quaking Grass, the upper vases having rich sprays of *Orchidium flexuosum*. There were four oblong vases arranged at each end in the shape of raised glasses, with a taller one emerging from them. These had flat segmental glasses surrounding them, set in the form of a double S, having a fruit dish in the centre. These glasses were filled with choice flowers, but rather overfilled, and the segments were overdone. The fruit, which was decorated with loose flowers and Ferns, was good. Top and bottom Pine and Melon, two Grapes—*i.e.*, black and white, Peaches, Oranges, Figs, two Strawberries, and three Nectarines. The napkins we have already alluded to upon. We could not help regretting that owing to these napkins and also a redundancy of flowers, Mr. Cypher did not gain the first prize which his centre vases richly deserved.

The other exhibit of Mrs. Hick, Milsom Street, Bath, we have already alluded to. There were three similar glass vases differing only in size, made of silvered glass, with a large, light, ruby-coloured ball on which they stood; then stood a large silvered mirror in the form of three circles, connected together with longer pieces, on which were long glass prisms filled with flowers, the circular glass mirrors having imitation glass Water Lilies. The vases had heavy glass balls depending from the upper rim. The flowers in these though good were heavily arranged. There were good flat glasses in which the buttonhole bouquets were placed, and the water carafes which we have already alluded to were good, but, on the whole, we should say the table arrangements were of the shop, shabby.

We may remark, in conclusion, that the tables for fourteen were far too small and too narrow, giving those who wished to decorate highly too small a space, and not sufficient scope for their inventive powers. It was this, no doubt, that led the Judges to give the first prize to one essentially poor and weak. In fact we may conclude that, with the exception of Mr. Cypher's three vases and some of his other decorations, the Bath Exhibition of dinner-table decorations somewhat taught us what to avoid, and we hope that another time the happy mean may be reached between under-paucity and over-decoration; the one tending to poverty and meagreness, the other to an overcrowding which is wearisome to the eye.

Our remarks have taken more space than we had anticipated, and we will pass over the single vases, hand bouquets, and other decorations, to which we may, perhaps, be induced to allude at another time. We intend also, in another notice, to call attention to some of the leading exhibits in the horticultural implement department, though our notes, which we published last year of the boilers and greenhouses at Birmingham, were so full as to preclude the necessity for any lengthened observations this time, as so many of the exhibits were in many respects the same.

CRYSTAL PALACE ROSE SHOW.

JUNE 28TH.

The great Rose Show which is yearly held at the Crystal Palace always attracts thousands of visitors, all of whom appear to be lovers of the Rose, and numbers of them are rosarians. This year the arrangement of the tables was more pleasing than usual, the flat appearance which long rows of stands of cut blooms are wont to present being relieved by the introduction of a variety of plants; indeed, this almost became a necessity owing to several exhibitors, from various causes, not having come forward—a circumstance which must ever interfere with any predetermined plan.

In the nurseryman's class for seventy-two single trusses Messrs. Paul & Son, of Cheshunt, were first with splendid examples of *Barones Rothschild*, *Olivier De-Juanne*, *Miss Poole*, *Général Jacqueminot*, *Madame Boll*, *Mme. Baumann*, *De-Vienne Lamy*, *Aurore Boréale*, *François Louvat*, *Madame Vidot*, *Abel Grand*, *President*, *Gloire de Dijon*, *Camille Bonnard*, *John Hopper*, *Borce Vernet*, *Exposition de Brice*, *Mlle. Eugénie Verdier*, extremely beautiful, *Xavier Olibo*, very fine, *W. Wilson Saunders* (new), *Rev. St. Reynolds Hole*, *Comtesse d'Oxford*, *André Dumand*, *Christine Nilsson*, *Duke of Edinburgh*, *Monsieur Noman*, *Madame Willencoz*, *Ferdinand de Lesseps*, *Edward Morren*, *Louis Van Houtte*, *Lord Macaulay*, and *Marquise de Mortemart*. In the second prize stand, that shown by Mr. J. Cranston, King's Acre, Hereford, the trusses were also of high merit, particularly *Edward Morren*, *Dupuy-Jamain*, *Etienne Levet*, very bright; *Dr. Andry*, *Impératrice Charlotte*, with a fine glow in the centre; *Elic Morel*, *Marquise de Castellane*, *Victor Verdier*, *Prince Camille de Rohan*, *Marguerite de St. Amand*, *La Esmeralda*, *Mons. Noman*; a seedling of the *Madame Moreau* form, but crimson; *Duke of Edinburgh*, *Comtesse d'Oxford*, very fine; *Marquise de Gabot*, *John Hopper*, *La France*, and *Madame Entabé*. Third came Messrs. Mitchell & Sons, Pittdown, with *Barones Rothschild*, *Ferdinand de Lesseps*,

Charles Lefebvre, Triomphe de Rennes, Anna de Diesbach, Madame Lacharme, Comtesse d'Oxford, Henri Ledechaux, Louise de Savoie, Napoleon III., Horace Vernet, Adam, Duke of Edinburgh, splendid; Souvenir de Charles Montault, Richard Wallace, Souvenir d'Elise, and Edward Morren. Mr. Turner, of Slough, took the fourth prize.

The next class, that for forty-eight varieties, three trusses, is always very effective, and so it was on this occasion. Messrs. Paul & Son were again first; Mr. Keynes, of Salisbury, second; and the remaining prizes went to Mr. Cranston, Mr. Turner, and Messrs. Mitchell. Among the varieties best represented were Victor Verdier, Duke of Edinburgh, Louisa Wood, Alba rosea, Marquise de Castellane, Maréchal Niel, John Hopper, Edward Morren, Devonensis, Comtesse d'Oxford, Mdle. Eugénie Verdier, Xavier Olibo, Louis Van Houtte, La France, Catherine Mermet, Prince Camille de Rohan, André Dunand, Marquise de Gibot, Marie Baumann, Lyonnais, Baroness Rothschild, Ferdinand de Lesseps, Dupuy-Jamain, and Triomphe de Rennes.

For twenty-four trebles the honours went to Mr. Cranston, Messrs. Paul & Son, Mr. Keynes, and Mr. Turner; and for the same number of single blooms to Mr. Walters, Mount Radford, Exeter; Mr. Cooling, Bath; Mr. Lee, Lyonslall, Herefordshire; and Mr. Parker, Victoria Nursery, Rugby.

The amateurs' classes were unusually good as regards quality, though the number of competitors was not so great as generally the case at this Show. R. N. G. Baker, Esq., of Heavitree, Devon, who has been successful at the shows of previous years, again took the lead, sweeping off the first prizes for forty-eight, thirty-six, and twenty-four, also an equal first for twelve trusses of any single variety, with stands in which were superb examples of Xavier Olibo, Comtesse d'Oxford, Exposition de Brie, Marquise de Mortemart, Duke of Edinburgh, Maréchal Niel, Louis Van Houtte, Annie Laxton, Marguerite de St. Amant, Louisa Wood, Camille Bernardin, Baroness Rothschild, Marie Baumann, Mdle. Louise Uxkull, John Hopper, François Louvat, Alfred Colomb, and Duke of Edinburgh. Mr. W. Farren, Crescent, Colbridge; the Rev. J. B. Cunn; Mr. Davies, Wilton, Salisbury; and Mr. Ingle, gardener to Mrs. Round, Colchester, took the remaining prizes for forty-eights with excellent trusses.

For thirty-six trusses the Revs. G. Arkwright and J. B. Cunn came in second and third, with Mr. J. Davies fourth. The principal prizes for twenty-four and for twelve trusses went to Messrs. Prince, Ingle, Bennett, J. L. Curtis, Rev. A. Cheales, and W. Soder.

In the open class for twelve trusses of any new Rose of 1872, Messrs. Paul & Son were first with Annie Laxton, bright rose; Messrs. Curtis & Co., Devon Rosery, Torquay, second with Bessie Johnson, large, bluish, a very pretty and fragrant Rose, which was certificated last year. Messrs. Curtis also staged a fine twenty-four of the same variety, but, unfortunately, they were wrongly entered.

In collections of twenty-four new Roses of 1871 and 1872, the prizetakers were Messrs. Paul & Son, Cranston, and Turner. The most conspicuous for quality were Madame Lacharme, white; Lyonnais, Mrs. Veitch, W. Wilson Saunders, President Thiers, Etienne Levet, Auguste Rigotard, S. Reynolds Hole, Bessie Johnson, Richard Wallace, Madame George Schwartz, and André Dunand.

For twelve blooms of any single variety of Rose, equal first prizes were awarded to Mr. R. N. G. Baker and the Rev. G. Arkwright; to the former for Baroness Rothschild, to the latter for Souvenir d'un Ami, both very fine. Mr. Walters had a second prize, and equal thirds went to the Rev. J. B. Cunn and Messrs. Paul for Marie Baumann and Baroness Rothschild.

The best collection of yellow Roses was that shown by R. Webb, Esq., of Calcot, who had, among others, fine blooms of Maréchal Niel, as well as the double Persian. The other prizetakers were Mr. F. May, Braintree, and Mr. Quennell, Brentwood.

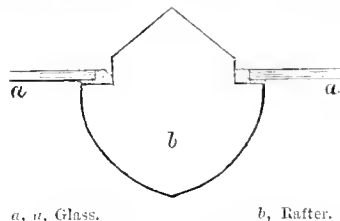
Vases and épergnes of Roses arranged for effect were successfully shown by Miss A. Hyder, Messrs. Soder, Rose, and others; Fern cases by Messrs. Dick Radcliffe & Co., and Mr. Jones, Epsom; and there was a host of table decorations, in which Mr. Buster, Mr. T. Wilkinson, and Miss Hudson took the lead. Messrs. Paul exhibited a fine group of Roses in pots; Messrs. Downe, miscellaneous groups; Mr. Turner, Pinks; Mr. Parker, blooms of Paeonies; and the Rev. H. H. Dombain, Ranunculuses.

GREENHOUSE GLAZING.

I MET with a method of glazing the other day which was new to me, as it may be to many of your subscribers, and as I was assured it was perfectly successful, I send you a short account of it. I could see for myself that it looked well, and was a great saving in putty.

The rafter and rabbit are made as usual, but the glass is cut slightly narrower, leaving nearly one-eighth of an inch play on

each side. The putty is put on the rafter as usual, and the glass pressed down, and on the putty rising on each side, a knife is passed along the face of the glass, removing the whole of the putty which bulges up. The rafter then receives three coats



of paint, allowing the paint to come slightly on to the glass. The effect of this method is that there is no putty to crack away from the rafter, as usually happens; there is only a quarter of the putty used, and when kept painted no water gets in and rots the wood. In the old method you found the putty cracking and coming away in long strips, and when once it had begun to crack there was no use painting, as the putty came away paint and all. The panes of glass are kept in their place by a small half-inch tack at the upper corner.—J. P., of York.

NOTES AND GLEANINGS.

THE following are THE RESULTS OF THE ROYAL HORTICULTURAL SOCIETY'S SHOW AT BATH, as far as can be ascertained at present. The number of visitors and the receipts at the gates were on

	Visitors.	Receipts at the Gates.
		£ s. d.
June 24th	2530	69 17 6
" 25th	10,238	509 16 11
" 26th	20,100	867 16 2
" 27th	10,914	408 8 4
" 28th	10,329	238 2 6
Total	54,011	£2154 1 5

In addition there was a considerable sum derived from the sale of tickets before the opening day, which will greatly swell the amount, besides a sum of £16 19s. 6d. derived from Bath chairs.

— In the *Yorkshire Gazette* we see it is stated that the POTATO DISEASE is reported to have appeared in various places in North Yorkshire. The early American varieties seem mostly affected.

IMPORTS OF POTATOES AND GUANO.—The importation of Potatoes still increases. In the last month the value was £232,396, and in five months £1,546,426, and in the same period last year £145,709. In the last five months the increase of guano imported was considerable compared with the same period in the preceding year. In 1872 the amount was £315,652, and this year £712,500.

GARDENING IN THE WEST.*—No. 4.

WARMINSTER.

FROM Trowbridge to Warminster is a short run by rail; and at Warminster the great attraction is the nursery of Mr. George Wheeler, one of the best in the west of England, as it is also one of the most interesting. All nurseries are interesting more or less to someone, however small and however special the cultivation may be; but the nursery of Mr. Wheeler is one which must be interesting to everybody, as it has preserved all the characteristics of the olden time while it has kept well in front with the present. Here we meet with every novelty worth cultivating, and here, too, we find such a collection of herbaceous plants and ornamental trees and shrubs as would amaze and puzzle the modern gardener—even modern nurserymen would be lost here. It is quite refreshing to spend even one day in this nursery, and especially if you are fortunate enough to have Mr. Wheeler himself as your companion. Though eighty-two years of age he possesses all the energy and activity of mind he ever had, and there is not a plant or tree in his vast collection of which he cannot readily tell the name. May his bow long abide in strength! This nursery consists of several

Our view of Wood Ashton in last week's number was from a photograph taken by Mr. Wilkinson, of Trowbridge. Our view of the entrance to the Victoria Park, Bath, was from a photograph by Messrs. Dutton, the eminent photographers of Kenrietta Villas, Bath.

detached portions, necessitated from the difficulty of securing a sufficient area in a ring fence. In all it measures over forty acres. In an establishment of this extent we expect to find a great deal. There is, of course, the ordinary nursery stock of forest trees, hedge plants, and such shrubs and flowering trees as are usually planted for the ornamentation of grounds; but besides these there is a very full collection of trees and shrubs such as are used to form arboretums, and what is more surprising in the present day, Mr. Wheeler has preserved and added to his long-existing collection of herbaceous plants, which cannot be less in number than two thousand species and varieties. These he continues to cultivate with all his wonted assiduity—not starved things in No. 60-pots, but large masses planted out in the open borders after the fashion of botanical collections, whereby the habit and full character of the plants can be easily judged of. The glass houses contain the ordinary stove and greenhouse plants, but there is a specialty in the *Calcarias* grown by Mr. Wheeler which must be seen to be appreciated. The strain he has succeeded in obtaining is a very dwarf-habited plant not more than 6 to 9 inches high, producing a mass of flowers like a head of Cauliflower, remarkable in the size of the flowers, in their colours, and markings. This is the finest strain of *Calcarias* we have ever seen. We cannot undertake to mention, far less to describe, all we saw at Mr. Wheeler's; but we can promise those who have a love for plants, and who are not "bedders-out" only, if they pay a visit to Warminster and call on Mr. Wheeler they will be amply repaid, however far they may have journeyed.

There is a good healthy gardening spirit of emulation about Warminster. Roses and Rhododendrons are here in the ascendant, and here, too, resides our excellent friend and correspondent, Mr. Hinton, who, while he is not engaged in ministering to the physical and sanitary well-being of the population, may be found tending his choice collection of Roses, and otherwise storing his mind with gardening lore to be dispersed for the benefit of all living through the pages of our Journal.

The private garden of Mr. Smith, a resident in the town, is well worth seeing at this season of the year. In acreage it is not extensive, but is of good size for a villa garden. The great feature here is a bank of Rhododendrons and Azaleas, which even Knaphill and Bagshot could not surpass. There are also some good specimens of Conifers and other ornamental trees, and especially a handsome Purple Beech. Mr. Smith's specialty is Roses, and these he cultivates to perfection. Such flowers of *Maréchal Niel* must be seen and not described. No wonder that in the "election of Roses" so skilfully conducted by Mr. Hinton, Mr. Smith should have placed the *Maréchal* at the head of the poll, for we never saw such Roses. Mr. Scott has also a good little garden upon which he bestows great care, and in which, besides a nice collection of stove and greenhouse plants, he cultivates very successfully a choice collection of Roses.

HEYTESBURY.

While at Warminster we took the opportunity of running down to Heytesbury, a quiet, secluded, pretty, little village, nestling under one of the southern slopes of Salisbury Plain, and a quondam borough disfranchised at the first Reform Bill. Here, at Heytesbury House, is the residence of Lord Heytesbury, situated in a beautifully wooded park, which, like that at Rood Ashton and other parks in the county, would be improved if some of the trees were thinned-out, and those left were thrown more into groups. The fact is that some of these parks assume more the aspect of forests than parks, through a judicious arrangement of the trees having been unattended to. At Heytesbury there is ample material to work upon, and beautiful as the park is, a judicious thinning would add still more to its beauty.

Gardening at Heytesbury is at present in a transition state. The old garden, which was an extensive walled-in space, was situated on the north side of the house; but the present lord being desirous of including this in the park, and removing the garden farther from the house, a new one is in the course of formation on the opposite side of the turnpike road which passes through the estate from Warminster to Salisbury, and as yet little progress has been made with it. We have therefore little to say about the gardening of Heytesbury, which has for the last thirty-eight years been well presided over by Mr. Rose.

Returning to Warminster by rail, the next attraction which commands attention is

LONGLEAT.

Longleat, or Langlate, is the princely residence of the Marquis

of Bath. It is in the parish of Horningsham, and is the domain once belonging to a St. Augustine Priory, dedicated to St. Radegund. The Priory was dissolved by Henry VIII., and the estate granted to John Horsey, and in the year following he conveyed it to Sir John Thynne, ancestor of the family whose property it has continued. He built Longleat, beginning it in 1567, and nearly finishing it in 1580, in which year he died. Details of all he accomplished are in Hoare's "Modern Wiltshire," but we must only record here that "he made a garden and orchard where part of the present garden is, and planted an orchard and Hop yard where the Chestnut grove now is."

It is said that the drawings of the mansion were furnished by an Italian architect, and that John de Padua, "Devisor of his Majesty's buildings" to Henry VIII., was Clerk of the Works. The Elm avenue to Frome was formed by one of his successors, murdered in 1682, but the mansion was completed by his successor. The planting of the park was confided to "Capability Brown," and 50,000 trees are said to have been planted annually during several years.

It is five miles from Warminster, and about the same distance from Frome. Approaching it from the former, the park gates are reached less than two miles from the town, and from the gates to the house is rather over three miles, through woods of fine timber, the road winding and undulating so as to command the splendid views which, from the elevated position of this part of the park, are to be seen from various points. This road is wide with broad margins of grass on either side, from which green glades occasionally penetrate the woods, relieving the dull monotony of the continuous margin of trees. If a little more were done in this way, the approach on the Warminster side might be very much improved. Here and there, and at certain distances along the route, large masses of Rhododendron ponticum have been planted. These extend far away among the timber, and on the occasion of our visit they were in their greatest beauty. Lord Bath appears to take much pleasure in this mode of decorative planting, to which are added at intervals single specimens of the most ornamental Conifers. Within a mile of the house the road begins to descend abruptly till it enters a wide richly-timbered valley intersected by a stream, on the farther side of which the house is seen in all its stately grandeur. As we approach it we find there are no dressed grounds to pass through in order to reach the entrance front, for the park comes close up to the house, and the road, which from its appearance and the freedom with which Lord Bath permits the public to use it, is more like a highway. And here we take this opportunity of testifying to the self-denying liberality of this estimable nobleman; possessed as he is of one of those grand ancestral domains of which Great Britain only can boast, and which he has a perfect right to reserve to his exclusive private use, he nevertheless throws the roads and the park open for the public benefit, that they may roam about and enjoy the amenities of the locality as much as he does himself. Some, we were told, not unfrequently have the bad taste to picnic under the trees immediately in front of the principal entrance, and such is the courteous bearing of the family towards these intruders that they are never interfered with. In short, the inhabitants of Frome and Warminster and the surrounding country have this magnificent park kept up for the public benefit, and we trust they duly appreciate the boon.

Having now met Mr. Taylor, the competent head of the gardening department, we were conducted over the principal parts of the grounds.

When we visited Longleat thirty years ago, there was on the north side of the house a flower garden of elaborate pattern, designed by the then Marchioness of Bath. It might have been regarded as the forerunner of all the modern styles of flower gardening, and it showed an originality of invention and a skill of adaptation which the garden-designers of our own day have not surpassed. This, however, has been cleared away, and a new arrangement has been adopted, which is being carried out by Mr. Gibson, jun., in conformity with the views of the Marquis, who is taking great personal interest in the new works. Other great changes are being made in this part of the grounds, which when completed will be highly ornamental. Bounding the flower garden on the north is an old orangery of the original type, a substantial structure with a slated roof and windows only in front, such as were erected from the beginning to the middle of the last century. In this there are some very large Camellias of the older time which

are the pictures of rude health, and being annually covered with a profusion of bloom seem to luxuriate in their location. The light being only on one side of the trees—for trees they are—have grown all in that direction. They are planted in slate tubs, the soil being loam and peat. It is a pity that a house of this size and substantial character should not be made more useful by having the present roof removed and a glazed one substituted. It might in this way be transformed into a handsome conservatory, for which its ample dimensions and sufficient height fully qualify it.

Between this flower garden and the water is a lawn, on which are planted some fine specimens of ornamental trees. Among these our attention was attracted to noble Tulip Trees, Cut-leaved Beech, *Robinia viscosa*, *Ptelea trifoliata*, and other species, while at some distance from these there is perhaps as fine a

specimen of *Abies Canadensis* as is to be found in the country. We measured it, and found it was 37 yards in circumference, forming a perfectly round ball.

The kitchen gardens are a mile from the house, and the path leading to them is through the woods, from which picturesque peeps of the valley and the richly wooded park beyond are here and there obtained. Since Mr. Taylor was appointed to the management of the gardens great alterations and improvements have been made in this part of the grounds. At intervals along the course of this walk the original underwood has been cleared and the space occupied by specimen Conifers and other ornamental trees, while in places where the ground is suitable wide clearings are made, and deep glades which lose themselves in the shady vegetation make a pleasing variety in the scenery. In these alterations we were told the Marquis takes a lively in-



LONGLEAT.

terest, and the effective manner in which they are carried out testify to his lordship's good taste and appreciation of artistic design. As we near the kitchen garden these clearings become more extensive, and between the woods and the entrance the walk leads through an extensive lawn, planted with fine specimens of ornamental trees, some of which are of great age and size, and among them a *Salisburia adiantifolia* 65 feet high. On the way from the house through the woods are some fine trees of Purple Beech, and a noble specimen of Tulip Tree 100 feet high.

The kitchen garden within the walls seems larger than it really is, Mr. Taylor having given the extent as four acres and a half. The glass is extensive, and is devoted to plant and fruit-growing, much in the proportions that are expected in an establishment of the size of Longleat. For internal decoration Mr. Taylor sends in fourteen hand-barrowloads of plants at a time, from which one may gather to what extent plants are grown, and they are well grown, as everything else in the garden is. In the range of old houses we saw one division of it, 40 feet long, entirely filled with an old Vine in the best of health. The new houses which have been built in the upper garden are very commodious and useful; they consist of three ranges standing parallel to each other, each of which is 35 yards long by 18 feet wide. Though skilful in all the branches of gardening, Mr. Taylor is especially so as a fruit-grower; his Cucumbers, Melons, and Vines are a sight worth seeing. Like

a judicious man, he never grows more than one sort of Cucumber and Melon, and consequently he has always a pure stock of each, instead of the mongrel varieties which those must necessarily have who grow more than one variety. These he grows trained under the glass like Vines; and like Vines they are in more than one respect, for the strength and vigour of the stems and branches are marvellous, though each plant has not a bushel of soil to grow in. The Melon to which Mr. Taylor gives the preference is Cashmere, a valuable old variety, the only defect of which is its liability to crack in ripening. This he obviates by strangling the stalk of the fruit and checking the excessive flow of sap.

The great feature in the garden at Longleat is the large viney which has been recently erected. It is 216 feet long by 30 feet wide, span-roofed with a lantern ridge, and 18 feet from the floor to the ridge. It is a fine structure, and, with the exception of the large conservatory at Chiswick, we should suppose this is the finest viney in the kingdom. The Vines are all planted inside, and we never saw plants growing with greater luxuriance. The Vines are yet young and have not produced fruit, but we expect to hear of their doings some day. This house, the design of Mr. Taylor and built under his direction, is worthy of his ability; and constructed as it is according to his ideas of the requirements of good Vine-growing, we can see already in the state of the Vines that his conception has been a true one.

There are very many things of which we could have written to be seen in this fine place, but our space is limited. We hope to have future opportunities of returning to the subject, and every year will add to the interest of it; for the Marquis of Bath being himself possessed of great taste, we have no doubt that, under his direction and the practical experience of Mr. Taylor, Longleat will become one of the most interesting as it is one of the grandest places in the kingdom.

A CENTURY OF ORCHIDS FOR AMATEUR GROWERS.—No. 12.

ONCIDIUM.

An extensive genus, the species of which, like the *Odontoglossums*, are found luxuriating in high mountain regions of the western hemisphere, although unlike the last-named genus, they are not exclusively mountain plants, for many of them are found in the islands of the West Indies, and at low elevations on the mainland. The following, however, will thrive well under cool treatment:—

O. BIPOLOM MANS.—This beautiful plant is a wonderfully profuse bloomer. It is a compact, free-growing plant. The flowers are large and very bright yellow. It blooms during early summer. This variety succeeds best when grown upon a block of wood or in a basket. Native of Monte Video.

O. FLEXUOSUM.—In the days when so many new kinds are being introduced, many of my readers who are already advanced in Orchid culture may smile at seeing such an ancient recommended, nevertheless I confidently recommend it to general notice. It grows freely, produces its brilliant yellow flowers in great abundance, and is simply invaluable for setting for dressing vases, &c. I have heard it makes a fine ornament for embellishing a lady's hair, but I do not think yellow should be used for such a purpose if seen by daylight, whilst by gas-light yellows always appear white. It should be grown in a pot. Native of Brazil.

O. INCURVUM. A very elegant and distinct plant, added to which it blooms from the month of August into midwinter. Pot-culture suits it best, as this species is a somewhat robust grower. The flower-spikes are much branched, and about 2 feet high; flowers very numerous; sepals and petals rosy pink, freckled towards the ends with white dots; lip white in front, rosy pink at the base; crest yellow. Native of Mexico.

O. LEXOCURVUM.—This is a very fine, robust old plant, discarded by many cultivators, but really a beautiful subject when well grown. It produces much-branched spikes some 8 or 10 feet long, clothed with numberless flowers; sepals and petals yellowish green, with a large pure white lip. It blooms nearly all the year round. Native of Mexico.

O. PSEUDOCALYPTUM MANS. Like the preceding, this is an old Orchid, but a valuable one where cut flowers are in request. It produces very long branched spikes of flowers, which are bright yellow, barred with brown. It blooms at various times, but usually about the end of spring or the beginning of sum-

mer, and the flowers last a month or five weeks in full beauty. Native of Mexico.

O. PHALANOPSIS.—This beautiful species is dwarf and compact in habit. The scape usually bears some five or six flowers; the sepals and petals are creamy white, barred and spotted with reddish violet; lip large, of the same colour as the perianth, and furnished in addition with a beautiful golden yellow crest. It likes an abundance of water, and should be grown in a pot, but a very little peat and sphagnum must be placed over its roots. Native of the high mountain regions of Peru.

CATTLEYA CITRINA.—This has always appeared to me a most interesting plant, and I would advise all amateurs to add it to their collections. Many Orchid-cultivators do not succeed with this species, but if two rules be observed little difficulty will be found. First, the plant must be grown upon a block

of wood, and always hung with the leaves pointing downwards; next it must be grown in the cool house with *Odontoglossums*, and should never be subjected to the drying system. The plant has small, oval, pseudo-bulbs, which, together with the leaves, are glaucous green; the flowers are usually solitary, sometimes, however, they are produced in pairs; they are very large for the size of the plant, thick, and waxy-looking, whilst the colour is rich deep yellow. The blooms last about a fortnight in perfection, and are very sweet-scented. Native of Mexico.

PHAIUS GRANDIFOLIUS.—In this plant we have a very old inhabitant of our gardens; it is a terrestrial plant, growing about 3 feet high. The leaves are broad, plicate, and dark green; flower-spike longer than the leaves, erect, and many-flowered; the blooms are large, and curiously mottled with reddish brown and white. They are produced early in spring, and remain long in full beauty. It comes from China, where it is a cultivated plant. — **ERBERTO CRUDE.**



Oncidium incurvum (Bot. Mag.).

HEREFORDSHIRE (WEST OF ENGLAND) ROSE SHOW.—In our advertising columns will be found a notice of this Show, which will be held in the Shire Hall, Hereford, on Tuesday, July 8th. If the sample of Roses shown by Mr. J. Cranston at Bath on

June 21th and 26th may be taken as a type of what Herefordshire can produce this year, the Show should be an exceptionally good one and a treat to all rosarians. It certainly deserves all encouragement, as it is one of the few instances where a district show has been carried on with merely the Rose (the queen of flowers) as the object of attraction. We have rarely hitherto seen better Roses exhibited by amateurs than those which on different occasions have been shown in the Shire Hall at Hereford; and we especially noticed at the Rose Show on the third day of the Royal Horticultural Society's Exhibition at Bath, that the west-of-England amateurs—Mr. Canon, Mr. Baker, Mr. Scott, and others, carried all before them. We prophesy, therefore, that there will be a more than ordinarily good show.

BIRMINGHAM ROSE SHOW.—I know that a great many of those who have hitherto supported our Show will not do so again,

unless the Committee go back to the old times. The Show must be kept special, or it will utterly collapse, and more common sense must be exercised in selecting the date. An exhibition of Roses for the midlands in the middle of June is simply an impossibility; no Rose Show can or should be held here earlier than the first week of July. Until this year our Rose Show has been equal to anything achieved even in London. I sincerely trust that the Committee will seriously consider its present condition and quality, and do something to restore it to its old prestige.—Z. O., Birmingham.

WORK FOR THE WEEK.

KITCHEN GARDEN.

IMMEDIATELY a crop is done with, either remove or dig it in. In either case sprinkle the ground with lime to destroy slugs, but more abundantly in the latter than in the former case. In all cases of earthing-up crops in dry weather give them a good soaking with water previously. A few Mazagan Beans may yet be put in, which will produce late in the season if the weather prove favourable. *Cape Broccoli* and Grange's may now be planted where the early Peas have been removed. The main crop of the other sorts must be got-in as early as possible. If the weather continue dry they will require an abundant supply of water. Sow a little more *Cabbage* seed immediately, if the sowing we recommended last month has failed. Another sowing of *Chervil* should now be made for succession. Put in a few cuttings of *Cucumbers*. Sow a little seed so as to have a few plants to plant-out for a succession till Christmas. Continue to pay every attention to those in frames; they must have a liberal supply of water twice a-week, and should be sprinkled every afternoon. Continue to plant-out a few *Endive* about once a fortnight to keep up a succession; another sowing should be made. The last principal sowing of *Dwarf Kidney Beans* should now be made. Earth-up the advancing crops. Those in flower will be greatly benefited by a good watering. Those *Leeks* sown in drills should be thinned to a foot apart in rich ground; the thinnings will do to plant out. Make a sowing of *Parsley* so as to get strong plants by the winter. Earth-up and stick the advancing crops of *Peas*, water those that are in bearing. A few more may yet be sown, which will come into bearing if the autumn is favourable. Make a sowing of the various sorts of *Radishes*. The Turnip-rooted, however, are generally preferred at this season. *Vegetable Marrow* plants will require a pretty liberal supply of water during the continuance of dry weather. Stop the main shoots to cause them to throw out laterals.

FRUIT GARDEN.

Grape Vines against walls now require unremitting attention. Train up young shoots from the lower part of the wall for bearing next year. Stop the bearing shoots at two joints above the fruit; remove all useless and superfluous shoots. Wash wall trees to free them from dirt and insects. Thin the summer shoots of Gooseberries and Currants. Protect fruit from birds. Hang up bottles of sugar and beer to entice and catch wasps. Encourage the growth of Strawberry runners. The packing of fruit to be sent to a distance is a very important matter, and one that is deserving of more attention than is usually paid to it; at least, if I may judge from what I have lately seen, I do not think it necessary to pack Grapes in bran, or Peaches in cotton, to insure their safe carriage. The former can scarcely be freed from the bran, and the cotton sticks to the skin of the latter, which is with difficulty removed. Experience leads me to believe that the best method of packing Grapes is to put a layer of moss or dry short grass at the bottom of a shallow box, which is afterwards covered with a sheet or two of silver paper; a layer of Grapes is then placed in, and over them a few more sheets of paper and a more moss, so as to keep them tightly packed when the cover is on. Peaches and Nectarines should be wrapped up separately in silver paper, and then packed in cotton, moss, or dry short grass. If a box is to take more than one layer, a false bottom should be placed between each one. The usual fault in packing is giving the fruit too much spring. The tighter they can be packed in any soft material without injury to the fruit the less liable are they to sustain injury by carriage. The boxes should afterwards be placed in a hamper, which gives more spring than they otherwise have.

FLOWER GARDEN.

Remove suckers from Roses, and clear the stems of wild shoots. Strong shoots of Chrysanthemums may now be layered in pots to produce dwarf compact bushes. Those in pots may soon receive their final shift. Carnations and Picotees will soon be in bloom; let plants in pots be moved under an awning like that used for Tulips. Here they may be arranged on a raised platform or not, according to taste. Picotees may be grouped on one side and Carnations on the other, taking care that the tallest plants are behind, and at the same time contrasting the colours as much as possible. Pippings may be put in on a slight bed; layering may also now or very soon be pro-

ceeded with. Much of next year's success depends on this matter. All seedlings should be marked, noticing their various properties as to form, colour, substance, &c. Ranunculuses may be taken up as soon as the foliage has turned yellow, for should wet weather ensue they might emit fresh fibres, and if taken up then they are likely to be worthless.

GREENHOUSE AND CONSERVATORY.

There is a scarcity of flowers generally in the conservatory now. The usual routine of training the climbers and keeping the other plants in order, together with neatness, is all that is immediately wanted, but keep a good eye to your winter stock. Camellias that have formed their flower-buds may now be potted; those of them that are to flower early should be kept in-doors all summer, but the spring-flowering ones may be turned out soon. Attend to Violets and Chrysanthemums. The China Rose, called *Cramoie Supérieure*, is the best of them all for winter forcing, and takes the place of the old *Sanguinea* in the bouquets at Christmas. Anne Boleyn Pinks for forcing ought to be now in a forward state, and if they show symptoms of flowering, pinch off the stems as they appear. In short, this is just the time to attend diligently to such plants as will flower from October to May. All but the very best specimens are now removed from the greenhouse; you will have room to introduce annuals, planting three or four of them in large pots; with a little care they will come in useful for the conservatory.

STOVE.

If you imagine that any of your established stove plants will require another shift this summer, let it be done soon, but avoid shifting large specimens so late if you can; rather encourage them with a little liquid manure occasionally. Your young plants may be potted as they require it for the next two months. Do not neglect to make cuttings of *Justicias*, *Clerodendrons*, and such useful plants early in July for flowering next year; these will form beautiful plants before the end of October. *Pentas carnea* belongs to this class; it is a very useful plant in winter, and may be had in flower all the year round. Air, moisture, and cleanliness, as usual, are requisite.

PITS.

For growing a stock of young plants in summer no structures are so good or economical as good pits. Place the pots on a bed of sifted coal ashes, and if you can procure clean moss free from slugs, &c., it is an excellent plan to place a thin layer of it between the pots after it is well damped. You have thus a source of constant moisture, which, passing up among the foliage, is very beneficial to all plants in summer, and they require less shading when they are thus managed. The pits and frames used for propagation must be kept shaded throughout the day; give little or no air; where bell-glasses are used, wipe them occasionally. Cuttings of Roses and many Heaths may now be put in with every prospect of success; shade them and keep them moderately moist. Pay strict attention to young seedling exotics. Continue to put in cuttings of all plants required which can be propagated at this season; pot-off those cuttings that are rooted.—W. KEANE.

DOINGS OF THE LAST WEEK.

No rain, but a week of high winds, which have been very injurious to vegetation by tearing-off and lacerating the leaves of tender plants. Such weather is also injurious in another form, as it brings hordes of aphides into the garden. So much is this the case, that many persons argue for spontaneous generation; of course we believe in no such thing; what we do believe is that certain states of the atmosphere are more favourable to the increase of this pest than others, and the wind carries them hither and thither until they find a suitable breeding-ground. We had some hand-lights filled with plants perfectly free from green fly; they were carefully watched every day, and it was found that this pest was blown on to them very often from some Roses about eighteen paces from the hand-lights—at least there was no other apparent cause of their presence.

KITCHEN GARDEN.

Notwithstanding the dry weather, the *Peas* are doing very well, and are continuing to bear abundantly; it would be as well to note that the best early Pea for flavour is Laxton's Alpha; and the best-looking pod, which fills very early, and is of a very deep green colour, is William I. The later Marrow Peas are coming in; one of the very earliest and best is G. F. Wilson; it is very near to Veitch's Perfection, but comes in much earlier.

Celery.—We have been planting successional crops of *Celery* in trenches not so deep as usual. We have much difficulty to keep *Celery* from rotting in the winter, but we never so careful in earthing-up; whether it is the climate or soil we know not, but all sorts are alike; cocoa-nut fibre refuse was tried, but we did not succeed with this, and only tried it once. Lettuces and other small salads are grown on the ridge between the trenches. After this Cauliflowers will not succeed with us; they become club-rooted, and have never yet been worth the ground and labour bestowed upon them. We beat the gardeners

who have clay soils with early vegetables, but for late summer crops we have no chance against them.

FRUIT AND FORCING HOUSES.

Pine Houses.—Except to attend to ventilation, only one matter requires to be mentioned; it is apparently a small one, but in reality it is not so. Under the back wall is a staging for plants, and occasionally specimens are taken out of the plant stove and placed here, and notwithstanding the utmost precautions being taken to keep them free from mealy bug, this pest has on two occasions appeared on the Pines. As soon as it was observed, the plants infested were taken out and destroyed. We had to adopt the same radical cure on a plant last week. The only way to keep clear of the enemy will be to confine the stove plants in the house devoted to them. On one other occasion we had some trouble with its appearing in the early viney, the bunch or two affected were removed, and the others carefully watched for its re-appearance. This hint may act as a caution to others. There are few plant stoves free from this mealyascal, and when the house is too full of plants it is better to throw them away than it is to risk spreading the enemy in Vine and Pine houses.

Vinerias.—In the early houses little or no attention is required; the houses are looked over once a-week or so, and any decayed berries removed from the bunches. When the berries showed signs of shrivelling we gave the roots a very moderate application of water. In late houses, except damping the borders and paths twice a-day to produce a moist atmosphere, and pinching-back all growing shoots where the houses are already well furnished with leaves, our work for the season is pretty well over until the crops be gathered.

ORCHARD HOUSE.

As there are now plenty of excellent *Strawberries* to be gathered out of doors, there is no need to trouble in watering those in pots, although *British Queen*, *La Constante*, and *Frogmore Late Pine* are just ripe. Owing to a press of other matters the *Strawberries* in pots were not watched so carefully as they ought to have been, and the berries in an early stage of their development were attacked by mildew; the weather being favourable to its spread it increased with singular rapidity. On its first appearance a dusting with sulphur would have arrested its growth, and the warm pipes painted with sulphur would have effectually cleared the plants. This was not done, and the result was that much fine fruit was spoiled. Some of the varieties are much more liable to be attacked than other.—Amateur the most, and *La Constante* the least. A head gardener should be Argus-eyed to notice everything himself. The young gardeners who have the charge of departments ought to be specially watchful for the first appearance of any enemy—insect, fungus, parasite, or otherwise, and lose not an instant in having it conquered.

Peach and Nectarine trees in pots require much attention. We have surface-dressed, and the fresh rootlets are ramifying into the rich material; fresh dressings will be applied as the others disappear. The growing shoots are stopped as often as they require it.

FLOWER GARDEN.

Our garden is not a large one, nor is the accommodation for bedding plants extensive; but if there is one thing in which we take a pride more than another, it is to see the flower-beds well filled early in the season. They are now a mass of bloom, and being filled with continuous-flowering plants they will remain so until the end of the season. Many of the beds had been previously planted with spring-flowering plants, and the way the *Hyacinth* and *Tulip* beds are managed is this: When the bulbs are planted the beds are first deeply trenched and plenty of manure added, so that the ground is in good condition at the time the bedding plants are put out. Instead of lifting the bulbs, the plants are planted amongst them without removing the leaves and stalks. These, as far as our observation has yet gone, afford some slight protection from frost and winds; when they decay they are removed. Next season the same bulbs will give a good display of flowers without being removed, and when they are done flowering will be lifted and planted out in a spare piece of ground, or given away amongst the cottagers. By this plan we only require to purchase imported bulbs once in two years.

We have been cutting the grass edgings, and hoeing and weeding all beds and borders. All Roses over-blow and faded are picked-off, removing the seed-vessels at the same time. All suckers are removed with a sharp spud.—J. DOUGLAS.

TO CORRESPONDENTS.

N.B.—Many questions must remain unanswered until next week.

Book.—*H. O. T.*—In addition to those you have there are the Rev. S. B. Peck's "Book about Boses," Mr. W. Paul's "Rose Garden," with coloured illustrations, and the Rev. R. W. Thom-son's "Amateur's Rosarium."

ELMS DESTROYED BY SPIDER MITE.—Loosen the bands that have injured the bark, and mix over the wounds a thick mixture of cow dung, clay, and

water. Support each tree by a hoop bound round with straw to prevent the bark being chafed, and have three wires attached on three opposite points of the hoop, and fastened to stakes driven into the ground at about 3 feet from the tree stem.

JAPANESE HONEYSUCKLE (*Alicia*).—It very commonly blooms in England. You are correct in naming *Geraanium lucidum*, but we cannot identify the other from the specimen enclosed.

LIGHT MANURE FOR WINDOW PLANTS (*H. L.*).—Guanoo 1 oz. to the gallon of water, thoroughly dissolved and strained before use, applying it at every alternate watering.

SUPPENDING HARD WATER (*Idem*).—Place it in an open tub or cistern exposed to the sun for a few days, and it will lose much of its hardness.

TRAINING AND PRUNING CLEMATIS STANDESHII (*E. R. O.*).—It may be pegged down so as to form a bed quite as well as *C. Jackmanni*. Both should be pruned early in spring just when the buds are swelling. Cut-out the old, and leave the young shoots of last year.

CACTUS SPECIOSISSIMUS PRUNING (*Fudge*).—We do not see what you want in pruning this plant as you propose. Leave it as it is, and put in heat stakes so as to bring it into form. No pinning is needed beyond cutting out, immediately after flowering, the old stems close to the point whence they proceed. Let the plant grow and flower.

VINE IN GREENHOUSE (*Idem*).—The shoots that come from the bases of the leaves are laterals; they should be repeatedly pinched to one leaf as they grow. Stop the canes when they reach the top of the house. The wires should be 15 inches or 16 inches from the glass, and the Vines ought to be trained in the same way as the runners run. The rods or canes in a greenhouse should be trained 3 feet 6 inches or 4 feet apart, so as not shade the plants too much. One Vine with three canes will be sufficient for your house.

DESTROYING APHIS IN CONSERVATORY (*Stainchly*).—The only means we know, without resorting to fumigation with tobacco, or using tobacco water or other solution likely to cause coloration, is to dust the plants with tobacco powder, but as that has to be syringed off it will leave its mark. Our correspondent has been told that some decoction in which quassia forms a part, has been found useful. We should be obliged by particulars of a solution that will destroy aphid and not discolour the woodwork, &c.

MELONS WITH FRUIT FLOWERS ONLY (*Hard Times*).—Your Melons must be very vigorous, in which state alone we have known them produce female flowers only, or but few males. Could you not bring male flowers from other plants, or those of a neighbour who wish to improve their female flowers? It is not necessary that they should be of the same kind or plant, only it will not do to save seed from them unless they are impregnated with the same kind. We should secure the male flowers from some friend or neighbour's plant to insure fertilisation. Your treatment, so far as we have it explained to us, is right. Give a little more air and keep rather dry whilst the fruit is setting.

BARREN STRAWBERRY PLANTS (*E. C. H.*).—We do not know of any means of distinguishing the barren from the fertile plants. The method we adopt is to take runners from plants that have fruited, and from none other. We have not any barren plants, but some go blind. Why not remove the barren plants now? They only impoverish the ground, and the unfruitful are grosser feeders than the fruitful.

PEACH TREES OUT OF DOORS SHEDDING LEAVES (*T. J.*).—We think the leaves are shed from the cold and the effects of an attack of insects. The mulching with half-rotten manure and giving a good watering will do good if your trees are not vigorous. If they are very vigorous the manure would be injurious. The mulching of straw only prevents evaporation from the soil, which in seasons like the present is not great.

CAULIFLOWERS DESTROYED BY GRUBS (*Euphorbia*).—There is no specific against club or ambury. Probably the best remedy is to dress with gas-lime at the rate of twelve bushels per acre, pointing it in with a fork before planting. A good dressing of soot, also lime and salt, is good. Of the last use twenty bushels per acre, and of soot enough to make the surface quite black, pointing in before planting. Apply the salt as a dressing to the surface. Before planting dip the stems and roots in a composition formed of soot, lime, and cowdung in equal parts brought to the consistency of thin paint. The best preventive is to plant in ground not recently cropped with any of the Cabbage tribe.

BUSKIDEE GRAPE (*J. Lovell*).—We remember the Grape well—the *Hubscher unguis*. It is our Black Muscadine, and may be obtained in most English nurseries. We will keep in mind your request about the back volumes.

GRAPES FAILING WHEN COLORING (*C. F.*).—Your account is not very clear, but we think your Grapes must be badly mildewed. Such attacks are very rapid and often unexpected, and the remedy or prevention difficult. We have checked the evil at times by sulphur applied to the vines on a dull day, a brisk fire being kept up both then and at night, so as to fill the house with a strong sulphurous vapour, but not by any means to burn the sulphur, as that destroys the foliage. Even the milder emanations from dry sulphur alone plentifully scattered over the house will sometimes check this pest. In dull seasons like the present it is advisable to sulphur as a precautionary measure, as it unfortunately sometimes happens that the too liberal use of sulphur on pipes or lines, heated so as to give off a strong vapour unpleasant to breathe, is hurtful to the stalks that support the berries, and slauking takes place. Considerable caution is required in using sulphur, but if the case is very bad it is indispensable, and we know of no other remedy. It may be some consolation for you to know that mildew has been very prevalent this season, and many promising crops of Grapes have fallen a prey to it. Of course we know that mildew is a fungus which attacks the berry, generally on one side; and the part that is attacked is so injured that its further growth is prevented and the berry continuing to swell, the skin, not yielding to the expansion, cracks, and decay sets in. If, therefore, you have not already tried sulphur, do so at once. It may, perhaps, be of some service; but we fear if the disease has run some days it will be of little avail.

SHAWBILLS (*Sudworth*).—The varieties are so numerous, so nearly alike, and are so liable to damage during their carriage, that we cannot undertake to name them.

ESPALEER PEAR AND PLUM TREES NOT FRUITFUL (*Bird-song*).—We believe the crops are only indifferent in the districts where these fruits are extensively grown to supply the London and other markets, although Apples and the small fruits are plentiful enough; but if it has always been so in former years, then there must be something wrong. We have more faith in the season and situation influencing the crop than any particular mode of pruning either the tops or roots; but the latter operation would seem the more necessary in your case, as you say the trees make long rampant shoots which

are destitute of fruit buds. It is not of much use to shorten them at present, as doing so would cause the production of a host of laterals. But some time in July, when the shoots are partially ripened at their base, they may be stopped, or rather one-half their length should be cut away, first tying in what new wood is wanted. When the shoots are cut off, they should be dried in a hot air stove, or in a dry place, and then be used for grafting. It may be still further shortened, and in the winter the trees may be stopped. Root-pruning is more necessary than in other cases, and should be done in an open standard, as the roots will be more exposed to frost. A first balance kept up between top and bottom, which is not the case when the top is severely pruned in each season. These means may, perhaps, cause fruitfulness, but if the soil or situation be unfavourable it is not so likely to be so. We presume your ground is well drained, for a dry situation promotes fruit-bearing. Near to a manufacturing town, where noxious vapours and other impurities render a healthy vegetation next to an impossibility, fruitfulness in Pear and Plum trees is altogether out of the question.

SHOWS (W. M. Ball).—We cannot make out what you wish to know. The shows of the Royal Horticultural Society, Royal Botanic, and Crystal Palace are advertised in our columns when approaching.

MAGGOTS IN WINTER ONIONS (A Subscriber).—This complaint is more frequent amongst the spring-sown than the autumn onions, but the evil is the same in both. In some seasons and in some grounds it is very destructive. The best remedy that we know is to give the bed a good watering with rather strong soot water—*i.e.*, water in which soot has remained some hours. The strong acid taste the water afterwards has is unpalatable to the maggots, or kills them. Lime is sometimes used in a similar way, but it is not so effective. But when the disease has run to some length remedial measures are of little use, as the evil is done. In soils where this disease is of frequent occurrence, it is thought good practice to dip in a quantity of soot before the seed is sown. This, and a full exposure of the soil to the frosts of winter, will usually insure immunity from this pest.

FUNGI (C. J. S.).—Your Fungi are both abnormal. That resembling fingers is an arrested growth of *Lentium lepidum*; and the Agaric is some species of *Pholota* very much drawn up, from its peculiar habitat near the ram-water eistern. Neither is admissible for the table.

CAMERA (Anxious Learner).—We cannot give you the information, and the gentleman who wrote on the subject is dead.

ASPARAGUS SELF-SOWN—SOWING SEED VERSUS PLANTING (Herbert).—It is desirable to strip-off the berries at the time of clearing-off the haub in autumn, strew them on the bed, and then cover with manure, &c.; but this is only necessary when the beds are thin of plants. For well-furnished beds it is quite unnecessary. In sowing seed to remain permanently, as compared with planting one or two-year-old plants, we have a case in point. In 1871 we sowed beds with seeds, and we planted others with one-year-old plants. The seedlings were thinned out to 1 foot apart, and otherwise treated the same as the transplanted plants. This year on the beds sown we have Asparagus fit to cut, but on the planted beds it is very far from it. The planted beds are fully a year behind the sown beds. Both are full of plants. The beds for sowing the seed are all well prepared as for planting.

DRIVING ROSES (J. B. F.).—The shoots of the Briar in which the buds are inserted should be shortened to about 1 foot above the bud if strong, to 9 inches if of medium vigour, and to 6 inches if weak.

CAMELLIA CUTTINGS AND GRAFTING (Idem).—The cuttings should be entirely of this year's growth, and should be 4 or 5 inches long or less, removing the lower, but retaining two or three of the upper leaves. Pull them in July or August when they are ripe at the base. Grafting is best done in spring, just before the plants begin to grow. The best stocks are those of about the same thickness as the scion, a little larger rather than less. On an old plant the scions should be placed on the side shoots rather than on the stem. All growths at grafting should be stopped, so to cause the sap to flow into the scions, for if shoots are left they would appropriate to themselves what should be forced up to the scion. The scions should be of last year's wood, well ripened.

VINE LEAVES BROWNED (G. S.).—The leaf you sent us was infested with red spider, the under side completely covered with the insect's webs. We should have the Vines thoroughly syringed twice daily, directing the water forcibly against the under sides of the leaves. When the Grapes change colour the syringing should be discontinued. We should also give the border a good dressing of guano, making the soil quite yellow, and wash it in by watering now and then when the Grapes are changing colour. The water used for syringing should be soft and clear.

PRUNING-DOWNS ROSE SHOOTS (C. B. A.).—The shoots should not be finally pegged down until they are ripe, or before autumn, as on their being well ripened depends their surviving the winter. We presume that you mean the summer pegging, to take away the straggling appearance which would otherwise be apparent. Commence to do this as soon as the shoots become firm and will bend without "snapping." It is best done in dry hot weather. The Strawberry, we think, is a small specimen of Keens' Seedling.

DESTROYING WOOD-lice (A. F.).—The best way to destroy wood-lice is to place a little hay all round close to the wall or side of the Mushroom bed, leaving the bed uncovered, and on the removal of this in the morning they will be congregated in the angle formed by the wall and side of the bed; on this pour boiling water. The hay, as removed, should be plunged in boiling water. This repeated a few times will thin their numbers more than anything we know, and applied with care need not destroy more than a very small portion of the bed. It is about the only effective means where they are very numerous.

ADIANTUM CAPILLIS-VENERIS CULTURE (F. H.).—Grow it in well-drained pots 6 or 7 inches in diameter, filled with a compost of three parts sandy fibrous peat, half a part fibrous loam, and half a part in equal proportions of crocks, or pots broken small, and silver sand. Put so that the rhizomes may be only just covered with soil. Water as required to keep the soil always moist, and sprinkle overhead twice daily in summer, then water abundantly, but do not sodden the soil. Afford shade from bright sun. It will succeed in a shady part of the greenhouse, and luxuriate in the stove, but out of doors we have not found it succeed, though it may do so in warm sheltered spots.

STRAWBERRIES FOR EARLY FORCING (D. J.).—Of the Strawberries you enumerated—*viz.*, De Bourg, Sir Joseph Paxton, Oscar, President, and Sir C. Napier, the best for early forcing is Sir J. Paxton, and after it President.

EGGS NOT RIPENING (Maria Hankinson).—Your district is too cold to ripen Eggs away from a wall. By all means cover with glass, and if convenient cover the pots with glass, but under such circumstances they must be artificially watered. The fruit would ripen better if the plants were trained to the wall. From what you say in your letter we do not think it will be

necessary to renew the soil. An angle of 15 will be sufficient pitch for the roof.

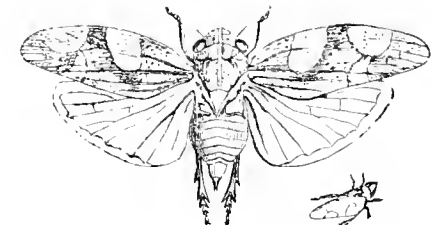
SCALE ON PEACH TREES (H. N. O.).—The Peach branch you sent is infested with the Vine scale. *Coccin. Vitis*, occasionally found on the Peach and Nectarine. Now that the scales are in leaf, the best remedy is to brush the branches over with a strong solution of lime, and allow it to remain on for a week or ten days. After the scales have gone the trees with a comparatively mild dose of 250 ft soap to a gallon of water, avoiding washing sulphur to bring it to the consistency of thin putty. Apply with a brush, taking care not to dislocate the buds.

TOWARD FRUIT TREES UNPRODUCTIVE (Idem).—The cause of the trees not bearing well is not but in consequence of their making too much wood. We should advise you to dig round them next November at a yard, less the width of a spade, from the stem, work under the ball to the centre, and cut any roots that may be going down the trench. We would fill up again with the soil taken from it, thoroughly mixing with it an equal quantity of old mortar rubbish. This will check the growth of the trees, and cause them to make short-jointed wood, as well as to ripen it better. Let us know if you have not fruit in a year or two. Be careful to leave the ball of soil to each tree undisturbed, only cutting off the roots in the trench, and those that go down say at 18 inches from the setting-on of the roots.

CERCOUS SPITTLE (N. S. R.).—All its popular names refer either to the saliva-like froth in which it buries itself; to its jumping powers when full grown, for it is closely allied to the grasshopper; or to its appearance at the same time as the cuckoo. It is the *Tettigonia spumaria* of some entomologists, and the *Cercopis, Cicada*, or *Aphrophora spumaria* of others. Its larva enveloped in its froth is especially prevalent upon the young shoots of the White Thorn or Quick; but it also infests the stems of Pinks, Carnations, Lilacs, and many other plants. If the froth be removed, one and sometimes two small, pale green, aphid-like insects are detected. These are the larva or young of the Froth-fly, and appear like the figure marked c in the annexed



woodcut, b representing the froth it emits. By means of its sharp rostrum or beak it extracts the sap of the plant, and voids it as an excrement in the frothy form which is its characteristic. About the end of July it sheds its skin, leaving t in the froth, and comes forth the perfect insect, as represented by the figure marked a, which magnified, and in another attitude, is represented in our second woodcut. About the beginning of August the



males and females may be found in pairs numerous on the plants they frequent. They are of a dirty white color, thickly dotted and clothed with short hairs; head broad and bluntly triangular, with black lines down its centre and sides; eyes, one on each side, near the base of the head; rostrum long, bent underneath its body when not in use; antennae ending in a fine bristle; thorax and shield (scutellum) adjoining the back of the head, brownish. The wing-cases are brown, mottled with ochre, with four whitish patches on the margin; the under wings are transparent and iridescent. The legs, six in number, short, but two hind-legs longest, and formed for leaping. It is not ascertained where the eggs of this insect are deposited, but probably on the stems of the plants on the shoots of which the larvae feed. It appears, however, that they can travel after hatching, for seedlings and plants raised from root-cuttings are often affected. We know of no better plan for destroying the insect than drawing the affected shoots between the fingers, and then dipping these into a bowl of water after each grasp. In the case of Carnation stems and other flowers requiring more tender treatment, all the froth may be taken from the infested branches by means of a piece of sponge, and itself then removed by a camel's-hair brush. It is probable that dusting each froth with Scotch snuff would destroy the insects.

MANNER FOR STRAWBERRIES (Smolton).—It is not good practice to have Strawberries on the same piece of ground twice without a change of crop. We should not be at the trouble to remove the old plants and runners, but would trench them in, placing them at the bottom of the trench along with the first spit. On this give a good dressing of hotbed, stable, or farmyard manure, and then place the bottom spit on the dung, so that your ground will be trenched two spits deep, and the manure will be between the bottom and top spit. We should go further and give a dressing of well-decayed manure on the surface, and fork it in before planting. We have no doubt you would succeed better were you to give the plants a change of ground.

TAN AROUND CURRANT AND GOOSEBERRY BUSHES (Idem).—We should remove the tan in the autumn, and give a good dressing of manure. The tan dug-in is apt to foster fungus in the soil, especially the rougher portions. That indeed it is used need not be removed.

NAMES OF PLANTS (Roberts).—We cannot name florists' varieties. There are regions of *Begonia*, (*J. W.*)—If you send a specimen in flower we will endeavour to name it. (*Euphorbia*).—The leaf with its tendrils is, we think, *Ampelopsis heterophylla* (var. *quinquefolia*), Virginia Creeper, and the frond of Fern probably that of *Adiantum setulosum*, but we cannot be certain from such small fragments.

POULTRY, BEE, AND PIGEON CHRONICLE.

DONCASTER POULTRY SHOW.

The annual Show of the Doncaster Agricultural Society was held on June 26th and 27th. The park in which the Meeting took place is within easy reach of the station, and is well adapted for such a purpose. The poultry and Pigeons, shown in Turner's pens, were placed under a large tent, in which the light was uncommonly good, and the birds seemed very comfortable. Three silver cups were offered for poultry, one being for Game, one for Bantams, and the other for Any other variety. As no cup was offered for Pigeons, the entries were not so numerous as in the first named section.

There were five classes for *Game*, and the birds were unusually good for the time of year. The first class was for single cocks, and the prizes were awarded to Brown Red, Duckwing, and Black-breasted Red, all three being capital in shape and sound in hand. In Black Reds the birds were mostly out of feather, but the cock in the first prize pen was in high order though badly matched. The hens were rather large and broody, though otherwise good. Brown Reds were a grand class, the competition being close; and the cup was awarded here to a perfect pair of close-feathered birds. Duckwings, with the exception of the first and second-prize pens, were not good as regards the cocks, but the hens to which they were matched were very good in colour. Game any other variety were all Piles, most of the best birds being much out of feather. The prizes were awarded more to quality for Game purposes than feather, and in this respect the birds would compare favourably with the rest of the Game classes. Of *Dorkings* the Silver-Grey were large and very good in colour, but the Dark Greys were more particularly good in feet and size rather than colour. In *Spanish* there were four pens, all of which were good, and, with the exception of the first-prize pen, great difficulty was felt in awarding the prizes, so close was the contest, and the cup for their section was awarded here. *Cochins* were more numerous, but with the exception of the three winning pens, which were all Buffs, were not in good order. *Brahmas* (Dark), were a large class and the quality very high, the shape and size of some of the hens being very striking, as also the lacing on the plumage. Light Brahmas were but poor in all respects. *Silver-spangled Hamburgs* were all good and the prizes keenly contested, the first-prize pen being very even in spangling, though the second contained a splendid hen. *Silver-pencilled* were good in point of marking and plumage, and also very neat and good in style. *Gold-spangled* were a very bright lot, the shade of light being exactly suited to the variety, and showing off the birds to great advantage. *Gold-pencilled* were failing in colour and getting somewhat shabby, though in point of quality the birds were good, although the second-prize cock was somewhat darker than it is advisable to breed them. In Black Hamburgs there were but three pens, but these were all very good, the first-prize pen taking precedence on account of brilliancy of plumage only. *Polands* were all Golden and of fair quality, and in nice plumage. Of *Bantams* there were not heavy entries, and, with the exception of the winners, there were no good birds shown. In single cocks the winners were Black-breasted Red, and the cup for the section was won by the first-prize bird, which in our opinion is the embodiment of quality as a Black Red Game fowl, and it is to be regretted there are no such birds of this colour among large Game fowls at the shows this season. The second was a fair kind of bird, but large in body and wing, and thin in chest and shoulder. In the class for a Red cock and hen of any age, the first-prize birds were very forward chickens in full feather, in fact the second and third being adult birds which do not require special notice. In the Variety class the first prize went to Piles and the second to Duckwings of fair quality. Black Bantams were a nice lot and in good feather, and, there being a class for Whites, six entries were the result, the winners being good specimens.

Turkeys and *Geese* did not show to advantage on account of the loss of plumage, but they were very large; and in the latter, Toulouse were first and White Emblen second. *Aylesbury Ducks* were a good lot, although failing in feather to a great extent, but size and quality of bill were extremely good.

Pigeons came next, and in Carriers and Tumblers there was only one entry in each class, but the birds were worthy of high competition. Pouters had two pairs of Whites, and both good. In Doves a pretty pair of foreign Whites were first, and a very good pair of Blue English second. Except the first in Barbs, the others were very poor. *Jacobins*, all Red, were very good and in nice order. *Trumpeters* had but one good pen, these being of the newly imported variety; and Nuns only one pair, which was very good. *Dragoons* were fair birds and all Blues; and in Antwerps all were Duns and very good. The first-prize Magpie was Red and the second Yellow, the former pair being almost perfect in colour. In the Variety class the first-prize

birds were Buff Isabelle and the second Ice Pigeons, both pairs being all that can be desired; in Fantails only the first-prize pair were noteworthy, but they were perfect specimens. In the Selling class Ice Pigeons won both prizes, and both pairs were extremely good and cheap.

Game.—*Cock*.—1, C. W. Brierley, Middleton. 2, F. Sales & Bentley, Crowle. 3, C. Chaloner, Whitwell. 4, T. Mason, Lancaster. *Black-breasted Red*.—1, C. Chaloner. 2, T. Bottomley, Shelf. 3 and 4, T. Wood, Scotton. *Brown and other Reds, except Black-breasted*.—1, C. W. Brierley. 2, T. Mason. 3, F. Sales and Bentley. c. C. Chaloner.

Game.—*Duckwings and other Greys and Blues*.—1, C. Chaloner. 2, E. Windwood, Worcester. 3, F. Sales & Bentley. *Any other variety*.—1, C. W. Brierley. 2, H. C. & W. J. Mason, Drighlington. 3, H. Walker, Gomersal. c, F. Sales and Bentley.

Dorkings.—*Silver-Grey*.—1, J. Robinson, Garstang. 2, W. Roe, Newark. 3, O. E. Crosswell, Bagshot. *Any variety*.—1, J. Newall, York. 2, W. Harvey, Sheffield. 3, J. Robinson. c, W. G. Lysley, Rawtry Hall.

Spanish.—1 and Cup, J. Powell, Bradford. 2, Burch & Boulter, Sheffield. 3, J. Boulton, Bristol. *the E. Brown, Sheffield.*

Cochins.—1, F. E. Ansell, Cowley Mount, St. Helens. 2, W. Harvey. 3, H. C. and W. J. Mason, Drighlington. *hc, W. Whiteley, Clough.*

Brahmas.—*Dark*.—1, J. E. Smith, Sheffield. 2, H. Lacy, H. Helen Bridge. c, Dr. Holmes, Chesterfield; H. Bolton, Bingley; H. Lacy. *Light*.—1, W. Whiteley. 2, H. Bolton. 3, Rev. H. W. Hutton, Lincoln.

Hamburgs.—*Silver-spangled*.—1 and 3, H. Beldon n. 2, J. Robinson. *hc, J. Robinson; Ashton & Booth, Broadbottom. Silver-pencilled*.—1, J. Robinson. 2 and 3, H. Beldon.

Hamburgs.—*Golden-spangled*.—1 and 3, H. Beldon. 2, J. Robinson. *hc, Burch & Boulter. Golden-pencilled*.—1 and 3, H. Beldon. 2, J. Robinson. *Black*.—1, J. Robinson. 2 and 3, H. Beldon.

Polands.—1 and 3, W. Harvey. 2, J. Robinson.

Bantams.—*Game*.—*Cock*.—1 and Cup, W. F. Entwistle, Westfield, Bradford. 2, F. Steele, Sump Cross, Halifax. 3, R. Crabtree, London. *Black-breasted and other Reds*.—1, W. F. Entwistle. 2, F. Sales & Bentley. 3, F. Steele. *hc, S. Smith, Halifax. c, W. W. Dumbell, Doncaster.*

Bantams.—*Game*.—*Any variety*.—1, W. F. Entwistle. 2, C. Chaloner. 3, F. Steele. *hc, J. Waddington, Guseley. 2, H. Beldon. 3, E. H. Ashton, White.* 1, H. Beldon. 2, Rev. F. Tearle, Newmarket. 3, G. Puffeyman, Jun.

Turkeys.—1, Lady Hawke, Wormley Park. 2, E. H. Brookbank, Tickhill. 3, E. Ladbroke.

Ducks.—*Aylesbury*.—1, J. P. Carver, Langthorpe. 2 and 3, J. Walker, Rochdale. *hc, J. Robinson. Rouen*.—2, Lady Hawke. *Any other variety*.—1, 2, and *hc, W. Bams, Pudsey, Leeds. 3, C. W. Brierley. c, G. Liddle, Doncaster.*

Geese.—1 and 2, J. Walker. 3, Lady Hawke.

Selling Class.—*Cock and Hen, of any Race and Duck*.—1, J. Powell. 2, W. Harvey. 3, E. Johnson, Waltham-upon-Deane.

EXTRA STOCK.—*hc, E. Knowles.*

PIGEONS.

CARRIERS.—1, E. Brown, Sheffield.

POUTERS.—1, W. Harvey. 2, G. Sadler, Boroughbridge.

TUMBLERS.—1, W. Harvey.

DOVES.—1, H. Yardley, Liffingham. 2, W. W. Fowler, Pontefract. *hc, J. Crosland, Wakefield.*

BARBS.—1, W. W. Fowler. 2, H. Yardley.

JACOBIANS.—1, W. Harvey. 2, J. E. Crofts, Blyth, Worksop. *hc, W. W. Fowler H. Yardley.*

TRUMPETERS.—1, W. Harvey. 2, J. C. Elwis, Doncaster.

NUNS.—1, W. Harvey.

DRAGONS.—1, W. Harvey. 2, H. Yardley.

ANTWERPS.—1, J. Gardner, Preston. 2, J. Crosland. *hc, H. Yardley.*

MAGPIES.—1 and 2, J. E. Crofts. *hc, W. Harvey.*

FANTAILS.—1, J. F. Loverside, Newark. 2, W. W. Fowler.

ANY OTHER VARIETY.—1, H. Yardley. 2, W. Harvey. *hc, J. E. Crofts (2).*

SELLING CLASS.—1, W. Harvey. 2, J. E. Crofts. *hc, W. W. Fowler.*

JUDGES.—Mr. James Dixon, North Park, Bradford; Mr. E. Hutton, Pudsey.

THE CHATTERS POULTRY AND PIGEON SHOW.

THERE cannot be a doubt that the entries made this year for the Chatters Show were considerably lessened in numbers by so many other shows being held simultaneously; still, it was most gratifying to find the majority of both poultry and Pigeons shown were of unusual excellence. It proved to be a very largely attended meeting, as the weather was not only fine, but the railway companies, by liberal fares and special trains, aided the success in no slight degree. The arrangements of the tent and general fittings were excellent, and every attention was given to the birds exhibited.

The entry of *Dorkings* was extraordinarily small, the best-shown varieties being the Silver-Greys and the White Dorkings. As to the *Game* fowls, they were in quality much beyond those to be met with at ordinary poultry shows, Messrs. Hall and Matthews exhibiting first-rate pens, though some of the birds were about moulting, consequently were not in the best of show trim. *Cochins* comprised a few good Whites, and a pen of dark Cinnamon-coloured that were worthy of favourable mention, but most of the pens were matched badly. Some early Dark *Brahma* chickens took the lead on the award list, pressed by some adults that were entered by the same exhibitor. An extraordinarily well-plumaged pen of Golden-spangled *Hamburgs* were winners of the highest premium in their appointed class, and also the extra prize as being the best pen of any variety of poultry in the show-tent. The other extra prize, given to the best pen shown by a local exhibitor, was secured by Crève-Coeurs. In *Hamburgs*, also, the Silvers-spangled and Golden-pencilled were the best kinds shown. Of *Spanish*, not even a single pen was entered—a quite unexpected result, as heretofore the competition has been good; it appears, however, that this breed is not constitutionally suitable for the district, and they are therefore not local favourites. *French* breeds were a fine class, and the *Game Bantams* were very far beyond any hitherto seen in this neighbourhood, nor were the Black Bantams less worthy of the attention bestowed on them by visitors. The *Geese* and *Turkeys* were very fine large birds, well shown too, considering the lateness of the season.

point of view. Mr. J. G. Dru, 2, Gloucester Terrace, New-castle-upon-Tyne, is the Secretary.

DUCKS WITHOUT WATER.

A CORRESPONDENT of the American "Country Gentleman" says—The question is often asked, Can Ducks be reared with profit without the accommodation of a pond? I answer, They can. I have raised the Rouens two years without any water except what was given to them. When young I used a common pie-tin, and as they grew a milk-pail was placed in its stead, thus saving any from being drowned. I have had good success, seldom losing one.

Rouens, under ordinary circumstances, will be found as profitable as any variety, for the following reasons: First, the rapidity with which the young Ducks grow. It is not uncommon to see them in full feather and weighing 4 lbs. when eight or ten weeks old, yielding very fine flesh for the table, which makes them valuable for early market. Second, when full grown they often weigh 9 to 10 lbs. each. Third, as egg-producers they rank the best, laying in the full a good number of eggs. Then, with a little cessation in midwinter, they recommence in spring, when other varieties have only just begun. They make a nest and are zealous of keeping it, avoiding the trouble of shutting them up at night. Fourth, the eggs are large and rich, making them valuable for culinary purposes. Fifth, they are the most determined stay-at-home birds imaginable, seldom if ever rambling beyond sight of home, never troubling the neighbour's crops, or keeping you travelling nights to bring them home. This breed is highly esteemed by breeders for their size and deliciousness of flesh. It may be imagined from their large size, that they must consume more food than our smaller varieties. On the contrary, they are remarkable easy keepers, and require less food than the common Duck.

[The above is perfectly correct as regards ducklings, but old birds must have a swim and a depth of 18 inches at least in the breeding season. It is because they are better without water that we always advise rearing ducklings in a pigsty. We have never found Rouens very early layers, and 9 to 10 lbs. are the top and an exceptional weight.—EDS.]

A HORNED CANARY.

AT No. 30, Mill Street, Ludlow, Salop, a Canary may be seen with horns. It is ten years old, yellow, a hen bird, fairly proportioned. Six months since, the owner noticed an excrescence on the bill, which gradually became a horn, and has attained the length of five-sixteenths of an inch, inclines backward and a little outward; appears to be of the same material as the beak, but is somewhat transparent and rather flat than round. Three to four months since, the second horn began to appear, and is now three-sixteenths of an inch in length. The first one appears to have attained maturity, the second to be in progress. The position of the horns is between the breathing orifices and feather-growth, in a line with the eyes and the point of the bill. The bird was, some time back, in bad health, as a child when cutting teeth, but is now quite well and tunes better than in any previous year. It is of average note-power.—S. R. J.—(*English Mechanic*.)

BEE SUPERSTITIONS.

LAST August I purchased a swarm, for which I paid 10s. So far as I could judge from my limited experience with bees, for the first fortnight they appeared to be doing well, but one night, about eight o'clock, I found they had deserted the hive, and were on the ground in a cluster the size of a large plate. I gently lifted the hive and placed it over the cluster. About ten o'clock I found most of the bees had gone up into the hive, which I then returned to its stand. For a short time the bees appeared to work, but one day, thinking they appeared very quiet, I lifted the hive, and discovered that it was quite empty of bees. There were three nice pieces of empty comb. I think the bees were teased by wasps. Our parishioners tell me that I did two things wrong, and that in consequence my bees could not thrive. One was to give money for them, which is always unlucky; the other was that I did not have them at the right time of the year. I ought to have had them on old Christmas-day. Is there anything in these ideas? How had I better make a fresh start, and what little handy-book would you recommend? What do you think of Mr. Edwards's pamphlet, and the hive he recommends?—A CLERGYMAN'S WIFE.

[The truth is that you were taken in; we hope not, however, by any one of your own parishioners, who might chuckle over having "done the parson's wife." A swarm bought in August, that had only three small pieces of comb built when it died, was not worth half a crown. The bees could not get enough to live on, and deserted their hive in the forlorn hope of falling into better quarters. We can hardly suppose that you can give any credence to the absurd superstitions of villagers respecting the

purchase of bees, or the time at which they ought to be procured. The idea as to giving money being unlucky is not at all uncommon, though, perhaps, not so prevalent as it used to be; but the second idea advanced by your parishioners we have never heard before.

Your proper method of procedure is to purchase a swarm at the end of May or very early in June, making an imperative stipulation to have it brought to your garden on the day of its swarming; or to purchase a good strong established stock in the autumn or early spring. If you wish to stock any of the improved hives, you had better wait until next year, and on having a swarm brought to you, knock out the bees the same evening, and place your hive over them, lifting it up on to its stand as soon as the bees seem to have gone up, either that night or very early the next morning.

Probably our little publication, "Bee-keeping for the Many," which can be had at our office by sending five stamps, would suit your purpose. We have but little acquaintance with the pamphlet published by Mr. Edwards, and none whatever with the hives he advocates.]

DEATH OF THE TRICK TERRIER BILL JOHNSON—HIS FEATS.

THERE are no doubt hundreds of our readers who have seen or heard of the famous trick terrier Bill, owned by Captain H. W. Johnson, of this city. Bill was a great favourite wherever he was known, on account of the remarkable feats which he could perform, and the wonderful intelligence he possessed. It seemed at times that he had the reasoning faculties of a human being instead of the brute instinct generally attributed to canines. The animal died yesterday at Captain Johnson's country residence, Yang-tse Villa, Stamford, Connecticut.

There are comparatively few men who are so well known in New York as was this dog, and his death will be regretted by all who have witnessed his performances. Only a few days ago James Gordon Bennett, jun., of the *Herald*, offered a fabulous sum for Bill, but Captain Johnson would not sell him at any price, although he valued him at \$10,000. He was almost as great a traveller as his master, and had visited nearly every quarter of the civilised, and some parts of the half-civilised globe. In fact, Bill had a world-wide reputation.

While in China he delighted the "pig-tails," who regarded his performances with wonder akin to awe. In Paris he attracted universal attention wherever he went. Although his master might have sold him to Barnum or other curiosity-hunters for a fabulous sum, the animal was not to be disposed of for money. Among the feats performed by this dog, was one never attempted by any canine quadruped. He would stand upon one foot, and balance himself on the nozzle of a champagne bottle.

Whenever his master entertained friends at dinner Bill was always present. The dog would occupy a seat beside his master, and when the wine had been passed round would place his fore paw upon the cork, and hold it there, as much as to say, "Gentlemen, you have had enough." While at sea, and when the vessel was pitching about at a violent rate, Bill would balance himself upon four champagne bottles, standing with a foot on the nozzle of each. He could stand upon his fore or hind legs, and maintain his position steadily enough to have his photograph taken. The feats of bringing articles for which he was sent, watching his master's property, &c., were very common-place matters for Bill.

Bill was ten years old, weighed 12 lbs., and was a full-blooded black-and-tan. Captain Johnson purchased him when six months old of Mr. Charles Kimball, new agent of Colonel James Pisk's line of steamers. Bill's cold corpse is now in the hands of a skilful taxidermist.—(*Poultry Bulletin*.)

THE HOMING PIGEONS AT SOUTHAMPTON SHOW.—In your report of the Hunts and Berks Agricultural Society's poultry Show at Southampton, you refer to the Homing Pigeons as a new and interesting class, and state you will be curious to know the result of their flight. The birds from Reading all returned, and flew a sweep like race home from the showyard; the conditions of the sweep being, the birds to be caught and conveyed to the club house for satisfaction. The result was as follows:—Mr. C. H. Buckland's bird first; Mr. J. W. Barker's second; Mr. J. Albury's jun., third; my five birds taking two hours three minutes to complete the journey, although they had flown from Southampton railway station on the previous Friday in one hour forty-two minutes.—I. W. BARKER, *Hon. Sec., Reading Pigeon Society*.

FECUNDITY OF THE TAME RABBIT.—The *Aigle du Midi* states: "A farmer named Pinel, of Revel, in the department of the Haute-Garonne, France, has lately commenced breeding Rabbits on an extensive scale for consumption, and that he expects the operation to be successful in a commercial point of view. In the space of five months, from May last, he, with fifty female

and five male Rabbits, obtained 1300 young, and he now intend to have 200 females. By allowing these latter to produce only every two months, instead of every month, as they can do, he calculates that he can procure 500 Rabbits a-month, or 6000 a-year. He has had constructed a large shed, 30 yards long by 20 wide and 40 feet high, and in it are 140 compartments, of which ten are set apart for young Rabbits separated from their dams, fourteen for the adults, twelve for the males, and the rest for the doe Rabbits and other purposes. Pinel makes this calculation: Out of 270 Rabbits born every month, the average number of deaths is twelve, so that there remain for sale 258, which can be disposed of for 12 cents each, making \$56.76, or \$681.12 a-year. This sum is increased to \$931 by the sale of the manure. The expense of producing 258 Rabbits is estimated at \$274, so that a clear profit remains of \$657. As Rabbits can be fed in great part on the refuse of the farmhouse and farmyard, it is thought that they might in many localities be bred to advantage."

OUR LETTER BOX.

Books (*Apiry*).—"The Bee-keepers' Manual," you can have it free by post from our office if you enclose five postage stamps with your address.

CHICKENS ILL AND DYING (*C. Holt*).—We are at a loss to know why your chicken died. It seemed to have had all that was necessary for health and comfort, but we do not think your feeding is as judicious as it might be. Indian corn is not good for chickens. Change your diet. Give them ground oats or barley-meal for the first meal in the morning; give them bread crumbs and table scraps afterwards; at mid-day then some whole barley, and wind up with a feed like the morning. Discontinue wheat, Indian corn, and the cooked meat. If the discharge continues, give a small teaspoonful of castor-oil.

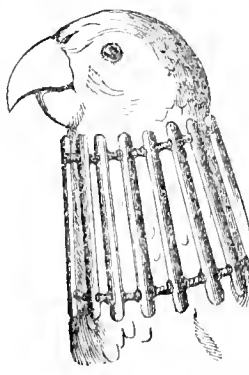
BRABMA CHICKEN DYING SUDDENLY (*J. Evans*).—Where a well-fed and healthy chicken (as yours was before it died) becomes suddenly ill, and dies spite of remedy, we always attribute death to some poisonous food. We are careful in hunting at anything of the sort, because it opens a wide door, and causes an uneasy feeling which may have no real foundation. The chicken arrived in a very decomposed state, rendering all examination impossible. Poisonous food may be picked up accidentally, without evil act or feeling on the part of anyone. Death may be the result of injury either to the head or the spine, and it is more than probable, as two were taken and the others remain in health, that some such accident was the cause of death. The evacuations from healthy birds should be brown and white. A few birds must die, and we will hope these are the two, and that the others are going on well. We are always happy to answer any questions. Should you have any more to ask about these chickens, give us more detailed information about their feeding.

PLANTS SUPPOSED TO INJURE FOWLS (*T. T.*).—The flower is hemlock; the leaf is a fern, which is certainly harmless. The chickens may eat the hemlock, which may cause the mortality. There is nothing among the other plants you name that would kill poultry, and there is no reason why chickens should always die in May, nor do we think they would eat hemlock.

BONE-DUST FOR FOWLS—LEG WEAKNESS (*R. E. H.*).—We took the chemical part of your question to one who is learned in such matters. He said:—"The sulphuric acid will not harm the fowls; it is only added to convert the phosphate of the bones into super-phosphate." Of course, we said, how came we to forget that? We feel more at home about Light Brahmas and leg weakness, and so, instead of telling you where the crushed bone can be had unadulterated, we tell you you ought not to want it at all. We cry out continually to follow nature. We do it with our own birds, and we have no leg weakness or anything of the sort. Eschew all modern inventions, and try to feed your fowls as Pheasants and Partridges feed in a state of nature. You never see them with leg weakness—an entirely modern disorder. They get nothing that you cannot give. Avoid stimulating and spiced foods. If you can get ground bones, give them, they possess all the material for bone; if you cannot, give barley-meal. The husks of oats and barley contain chalk. Vary the mid-day meal with bread—scraps from table and kitchen. Be sure that weakness is not the result of inter-breeding, and consequent weak constitutions. If it is, no feeding will cure it.

TROUBLE POULTRY SHOW.—In Silver-Grey Rabbits we are informed that A. H. Eastern took the first, and S. Ball second.

PARROT SUFFERING FROM SORES (*L. M. S. P.*).—The best treatment is to have a sort of enameled male, such as one sometimes sees round the necks of horses which have sore places. It should be made of pieces of wood, each about 2 inches long; the wood to be round, like a black-lead pencil, the ends rounded to prevent their hurting the bird, and each strip should have two holes made in it a little way from each end, through which holes a piece of string should be passed, but a knot must be tied on both sides of each piece of wood, so as to keep them from slipping out of place. The accompanying sketch will give a clear idea of what we mean. We would also recommend a very small quantity of magnesia to be put into the drinking water of the bird now and then.



WOODEN HIVES (*Wallaston*).—If wood is so very unsuitable a material for bee hives, why is it so largely used by American, German, and English bee-keepers, to say nothing of those of other countries having, with those mentioned, every extreme of temperature? We have, for many years, had colonies in both wooden and straw hives, and have generally found our strongest and most forward stocks in the spring to be in wood. There is frequently more or less of moisture, which may collect on the under side of the cover, but we have never found it to be very injurious, provided the stocks are strong and well-provisioned, and that the floor-boards are changed or cleaned in the spring. There is no objection to your proposed plan of boring four holes through each side of your boxes, and covering the

whole with lead-bands. These holes must not, however, be covered with zinc or the bees will soon show their appreciation of your efforts to provide them with ventilation, by effectually stopping up every hole in it. The best mode of effecting your object is to have mats of straw, the bands of about 1 1/2 inch thick, not too tightly twisted together, substituted in October for the usual wooden cover. They may be kept down by slips of wood at the two sides of each hive, projecting a little beyond the cover, and tied with strong cord passing under the floor-board.

DISTILLING ROSE WATER (*A. S. J. M.*).—Put 4 lbs. of rose petals into a pan with three quarts of river water, and leave the mixture four-and-twenty hours; then put it into the still, and distil from it as much odoriferous water as you can. Take off the still, throw away its contents, and rinse it out well. After this fill it to two-thirds with fresh-gathered rose petals, on which pour the above drawn rose water; distil this, and when you have procured as much good rose water as it will yield, let the fire go out gradually. Do not continue the distillation until the petals scorch. To avoid this danger the still may be plunged in a water bath, and the bath placed over the fire. A temperature between 200° and 212° will be enough for the distillation.

METEOROLOGICAL OBSERVATIONS,

CAMDEN SQUARE, LONDON.

Lat. 51° 32' 40" N.; Long. 0° 8' 0" W.; Altitude 111 feet.

DATE.	9 A.M.						IN THE DAY.				RAIN.
	Barom. at 30 inches at Sea level.	Hygrome- ter.		Direction of Wind.	Temp of Soil at 1 ft.	Shade Tem- perature.		Radiation Temperature.		In. grass	
		Dry.	Wet.			Max.	Min.	In sun.	On grass		
1873. June and July.	Inches	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	In.	
We. 25	29.965	62.1	54.7	N.W.	60.6	68.5	56.0	124.2	54.1	—	
Th. 26	31.225	61.9	54.0	N.W.	59.2	67.9	46.2	117.2	48.2	—	
Fri. 27	30.128	68.0	61.9	N.W.	59.7	73.0	55.1	124.6	52.7	—	
Sat. 28	30.043	62.0	56.1	S.W.	62.8	78.3	55.5	130.7	57.0	—	
Sun 29	29.963	69.4	61.9	S.E.	62.7	77.7	52.2	112.6	47.9	0.692	
Mo. 31	29.743	59.7	58.8	W.	62.2	62.5	57.5	72.2	57.2	0.270	
Tu. 1	29.965	61.8	57.3	N.	60.4	74.0	53.6	118.1	50.5	—	
Means	29.996	63.6	57.8		61.1	72.8	54.1	114.9	51.8	0.362	
Mo. 23	30.079	64.0	56.4	N.W.	62.5	75.1	52.1	130.0	51.0	—	
Tu. 24	30.041	61.0	56.3	S.W.	62.1	66.8	49.6	99.8	47.0	—	
Means	30.106	63.5	58.7		60.2	74.0	51.0	117.8	51.2	0.118	

REMARKS.

- 23rd.—Fine day, very hot sun.
- 24th.—Fine day throughout.
- A fine week of warm June weather, especially the last few days.
- 25th.—Rather dull morning but beautiful afternoon, evening, and night.
- 26th.—Moderately fine all day, but with one or two sprinkles of rain.
- 27th.—A very fine day, bright and sunshiny with a pleasant breeze, though sometimes rather strong.
- 28th.—Rather dull in the morning, but fine afterwards.
- 29th.—Fine and warm in the morning, rather dull after 2 P.M., rain in the evening, at times very heavy.
- 30th.—Rather dull morning, but no rain till about 4 P.M., after which time it rained more or less all the day.
- July 1st.—Fine pleasant day, rather warm, but by no means oppressive.
- Very similar to the previous week, except that on Sunday and Monday there was heavy rain. The temperature in sun has also been lower. The total rainfall for the first six months of 1873 (10.20 in.), is 1.63 in. below the average of the six years, 1860-65.—G. J. SYMONS.

COVENT GARDEN MARKET.—JULY 2.

Very little alteration to make, except that out-door Strawberries have come in with a glut, growers finding a difficulty in making a clearance, and prices ranging from 3d. to 1s. 6d. per punnet.

FRUIT.

	s. d.	s. d.		s. d.	s. d.
Apples.....	doz.	3 0 to 5 0	Mulberries.....	doz.	15 0 to 20 0
Apricots.....	doz.	2 0 3 0	Nectarines.....	doz.	15 0 30 0
Cherries.....	doz.	2 6 4 0	Oranges.....	doz.	10 0 10 0
Chestnuts.....	doz.	0 0 0 0	Peaches.....	doz.	15 0 30 0
Chestnuts.....	doz.	0 0 0 0	Pears, kitchen.....	doz.	1 0 3 0
Black.....	doz.	0 0 0 0	Pears, dessert.....	doz.	6 0 18 0
Figs.....	doz.	6 0 10 0	Pine Apples.....	doz.	4 0 8 0
Filberts.....	doz.	0 0 0 0	Plums.....	doz.	0 0 0 0
Cobs.....	doz.	3 0 2 6	Quinces.....	doz.	0 0 0 0
Gooseberries.....	doz.	3 0 6 0	Raspberries.....	doz.	0 0 0 0
Grapes, hothouse.....	doz.	4 0 10 0	Strawberries.....	doz.	4 0 6 0
Lemons.....	doz.	10 0 10 0	Walnuts.....	doz.	15 0 30 0
Melons.....	doz.	5 0 8 0	ditto.....	doz.	100 0 2 6

VEGETABLES.

	s. d.	s. d.		s. d.	s. d.
Artichokes.....	doz.	3 0 to 6 0	Mushrooms.....	doz.	0 0 to 2 0
Asparagus.....	doz.	3 0 6 0	Mustard & Cress, punnet	doz.	0 2 0 0
French.....	doz.	6 0 12 0	Onions.....	doz.	4 0 10 0
Beet, kidney.....	doz.	6 0 6 0	Pickling.....	doz.	6 0 0 0
Beet, Red.....	doz.	1 0 3 0	Parsley per doz.	doz.	0 4 0 0
Broccoli.....	doz.	0 9 1 6	Parsnips.....	doz.	0 9 1 0
Cabbage.....	doz.	1 0 1 6	Peas.....	doz.	2 0 5 0
Cape-brams.....	doz.	1 0 0 0	Potatoes.....	doz.	0 0 9 0
C Carrots.....	doz.	0 6 0 0	Kidney.....	doz.	0 0 0 0
Cardflower.....	doz.	3 0 6 0	Round.....	doz.	0 0 0 0
Cauliflower.....	doz.	1 6 0 0	Radishes.....	doz.	1 0 1 0
Coleworts.....	doz.	2 6 4 0	Rhubarb.....	doz.	0 6 1 0
Cucumbers.....	doz.	0 6 1 0	Salsafy.....	doz.	1 0 1 6
pickling.....	doz.	0 0 0 0	Savoy.....	doz.	2 0 3 6
Endive.....	doz.	2 0 0 0	Scorzenera.....	doz.	1 0 0 0
Fennel.....	doz.	3 0 0 0	Sea-kale.....	doz.	0 0 0 0
Garlic.....	doz.	0 6 0 0	Shallots.....	doz.	0 3 0 0
Herbs.....	doz.	0 3 0 0	Spinach.....	doz.	2 0 3 0
Horseradish.....	doz.	3 0 4 0	Tomatoes.....	doz.	2 0 3 0
Lark.....	doz.	2 0 0 0	Turnips.....	doz.	0 3 0 0
Lettuce.....	doz.	1 0 2 0	Vegetable Marrows.....	doz.	0 0 0 0

WEEKLY CALENDAR.

Day of Month	Day of Week	JULY 10-16, 1873.		Average Temperature near London, 43 years.			Sun Rises.		Sun Sets.		Moon Rises.		Moon Sets.		Moon's Age.	Clock before Sun.	Day of Year.	
		Day	Night	Mean.	Days.	m.	h.	m.	h.	m.	h.	m.	h.	Days	m.	s.		
10	TH	Wisbech Horticultural Show.	74.7	59.3	62.5	16	57	af 3	13	af 8	14	9	20	3	0	5	3	191
11	F	Oundle Horticultural Show.	75.4	59.7	63.0	11	58	3	12	8	50	10	11	4	17	5	11	192
12	S		75.9	59.5	63.2	14	59	3	12	8	17	10	11	6	18	5	18	193
13	SUN	5 SUNDAY AFTER TRINITY.	76.1	51.1	63.7	10	0	4	11	8	56	10	42	7	19	5	26	194
14	M	Houston died, 1733.	74.5	59.5	62.5	15	1	4	10	8	52	10	11	9	20	5	32	195
15	TU	St. SWITHUN.	76.6	59.7	63.7	23	2	4	9	8	7	11	7	10	21	5	39	196
16	W	Royal Horticultural Society, Fruit, Floral, and General Meeting.	76.9	59.1	63.0	17	4	4	8	8	23	11	after.		21	5	41	197

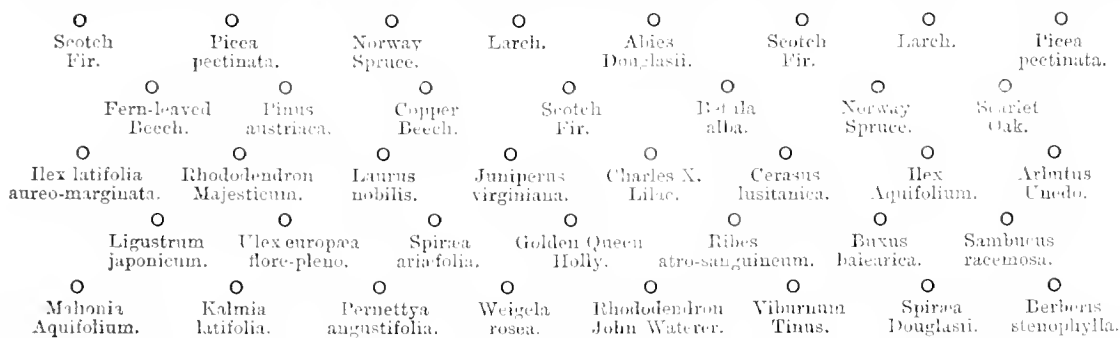
From observations taken near London during forty-three years, the average day temperature of the week is 75.6; and its night temperature 59.6. The greatest heat was 94°, on the 14th, 1847; and the lowest cold 31°, on the 10th, 1853. The greatest fall of rain was 1.69 inch.

ORNAMENTAL PLANTING.—No. 5.

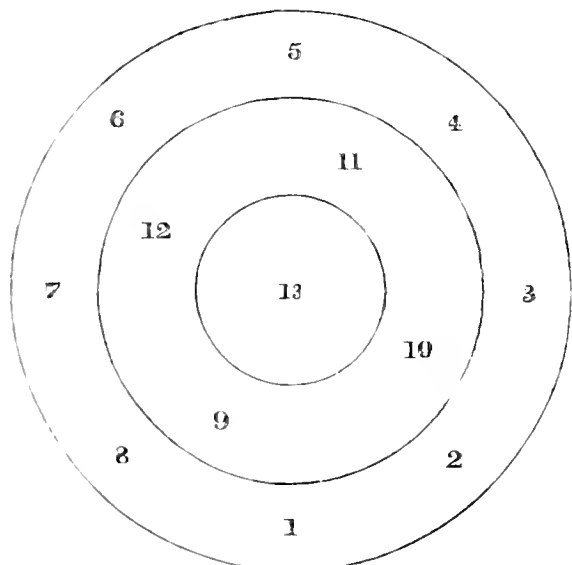
In mixed groups and borders of shrubs we have a feature of such interest and importance that it merits the most careful attention and study. The effect of one form with another is here fully realised, and the peculiarities of each plant are turned to the best account; those of sombre hue and heavy mould forming admirable foils to others possessing the sprightly grace which slender growth, upspringing or pendulous, and light-coloured or variegated foliage, impart. Those shrubs retaining healthy foliage throughout the winter,

and hence termed evergreens, afford the most pleasing variety when associated with deciduous forms, imparting an air of warmth and fulness to what would otherwise appear naked and sterile in a very great degree during that cold period of the year; and when the warm skies of spring and early summer clothe the bare death-like deciduous forms with fresh foliage, crowning many, too, with gay flowers, an air of freshness, life, and animation pervades the group, which thus changing in its aspect with the seasons at no time appears heavy or monotonous, but contains within itself that charming variety so justly admired and sought after.

In the following arrangements of trees and shrubs I have excluded any of an uncertain or doubtful character,



Plan of a Portion of a Mixed Border of Shrubs, with a Sheltering Belt of Two Rows of Trees behind.



naming only such sterling kinds as are to be depended upon. The four detached groups are arranged in the form of a circle. That being the simplest and most elegant of all forms, is, I think, the best for general purposes. Moreover, by studying the most prominent characteristics of the plants named, the circular arrangement may very easily be modified or extended to adapt it to beds of more complex or irregular outline.

Group of flowering deciduous shrubs (see accompanying figure):—

1. Ribes sanguineum. Crimson.
2. Philadelphus grandiflorus. White.
3. Dentzia crenata flore-pleno. Rose.
4. Spiraea arifolia. White.
5. Cytisus hirsutus. Yellow.
6. Spiraea Douglasii. Pink.
7. Ribes aureum. Yellow.
8. Cytisus pallidus. Cream-coloured.
9. English Laburnum. Yellow.
10. Double Crimson Thorn. Crimson.
11. Syringa (Jaloe) Dr. Lindley. Deep crimson.
12. Anagallis communis. Pink.
13. Magnolia conspicua superba. Wht.

Evergreen group:—

1. Berberis Darwinii.
2. Viburnum Tinus.
3. Cotoneaster Simonsii.
4. Ulex europaea flore-pleno.
5. Kalmia latifolia.
6. Ligustrum japonicum.
7. Rhododendron Breganzium.
8. Cistus ladaniferus (Gum Cistus).
9. Ilex Aquifolium.
10. Rhododendron Barclayanum.
11. Cerasus lusitana.
12. Arbutus Unedo.
13. Cupressus macrocarpa.

Mixed evergreen and deciduous group:—

1. Pernettya angustifolia.
2. Ribes aureum.
3. Weigela rosea variegata, grafted and trained to the form of a cone.
4. Mahonia Aquifolium.
5. Erica medieterranea.
6. Berberis Darwinii.
7. Kalmia latifolia.

8. *Cytisus albus*.
9. *Laurus nobilis*.
10. *Acer Negundo variegatum*.

11. *Phillyrea latifolia*.
12. Golden Queen Holly.
13. *Betula incisa pendula*.

Mixed evergreen and deciduous group with plants of bolder type:—

1. *Juglans laciniata*.
2. *Garrya elliptica*.
3. *Sambucus argenteo-variegata*.
4. *Cupressus Lawsoniana*.
5. *Crataegus Oxyacantha flore-plena*.
6. *Ilex Aquifolium*.
7. *Pyrus Malus floribunda*.

8. *Juniperus chinensis*.
9. *Rubra Pseudo-Acacia*.
10. *Rosa Nordmanniana*.
11. *Betula alba*.
12. *Picea Finsappa*.
13. *Picea pectinata*.

There are two methods which may be followed in the culture of such mixed groups and borders. The first is to plant the shrubs so far apart that each may eventually be brought to its fullest development of form and size; and the other is to plant more thickly, so that the growth of each shrub may soon meet and become merged in that of the others near it; thus forming a picturesque thicket, which, while it is in some degree ornamental, and is very suitable for certain positions, notably where a thick low screen is required, yet has no features of sufficient interest to attract more than a passing glance. But when the first method is followed, the plants individually and collectively are constantly growing in beauty and interest. It is true that by planting sufficiently distant to afford each shrub space for this full development, the bare surface of the soil is exposed to view for a longer period than is the case when a thicker system of planting is followed; but even this trifling objection may be overcome by filling the intermediate spaces with low-growing plants, to be gradually removed as the growth or training of the permanent occupants may require, taking care constantly to replace the exhausted soil with that which is perfectly fresh and sound.

I have given the colours of the deciduous flowering group, but refrain from descriptive notes of any of the kinds named, as a future paper will be specially devoted to a subject of so much importance.—EDWARD LUCKHURST.

THE PROVINCIAL SHOWS OF THE ROYAL HORTICULTURAL SOCIETY.

THESE annual meetings are so important to the Royal Horticultural Society, and to the interests of horticulture generally, that I venture to offer a few suggestions, based, as I think you will testify, on experience, and calculated as I believe to assist in promoting a more satisfactory state of things as regards the harmonious working of the arrangements.

Most of the shortcomings and insufficient organisation which almost yearly form subject of complaint in reference to the management of the provincial shows, arise, as I believe, from the want of a clear and definite understanding between the Council of the Society and the Local Committee for the time being as to what are their several duties and obligations. I would therefore suggest the desirability of this doubt and uncertainty being once for all removed, by the Council considering itself, as it is unquestionably regarded by outsiders, responsible for all arrangements during the show week. It possesses, or ought to possess, a staff of officers familiar with the requirements and exigencies of these great shows: experience must have taught them what plans work well, and in what respect past shows have been deficient in organisation; it is peculiarly and permanently interested in the smooth working and success of the arrangements. It is the Council, then, and not the local committees that the horticultural public justly hold responsible for defects and omissions, and it is the Council which is in duty bound to foresee and prevent them in future.

The local committee has its natural and proper duties, and they are clearly defined in practice if not formally set forth in any official document, and they consist chiefly in raising sufficient funds to enable the issuing of a liberal and special schedule of prizes complementary to that of the Society; also in working-up local interest in the show, the sale of admission tickets beforehand, and the adoption of such means as shall, as far as possible, insure such a large attendance of visitors during the continuance of the show as to raise a sum of money sufficient to cover all expenses, and leave a handsome balance of profit for the Society.

There are many other things which a good local committee can, and doubtless will do. They can invariably give advice on local circumstances of the utmost value to the Council, and their opinion on such matters ought to be always sought and carefully weighed; and they can frequently secure the support and influence of important residents in their neighbourhood.

In the event of the local secretary being an energetic man of business, and especially if he be an enthusiast in horticulture and experienced in the details of show management, he can render the Council invaluable assistance in numerous ways; but the more thoroughly he performs the duties of his office the smaller will be the time at his disposal for anything else, and he ought certainly not to be held responsible for those general arrangements which it is the duty of the Council to make, and which for the comfort and convenience of exhibitors it is essential should be made. As, however, it frequently happens that the local secretary is not experienced in the details of show management, and can rarely or never be familiar with the requirements of such extensive gatherings as the provincial shows of the Royal Horticultural Society, I think it is tolerably clear that it is not either reasonable or judicious to trust to him for such arrangements. The Council, then, with its officers, must be the responsible body. Their accumulating stores of experience should render the annually recurring work a less laborious and more successful one year by year. With all diffidence I would offer for their consideration the following suggestions:—

First, That the Council should appoint as an executive committee for the management of the provincial shows not less than two of their body, who must be first-class men of business, able and willing to do real work, with the addition, perhaps, of the local secretary or some other member of the local committee selected for his fitness by that body; these, aided by the Assistant Secretary and the Superintendent of Shows, should have full power to make the necessary arrangements, and should be held responsible for all defects. This executive body ought to take up its abode in the show town a few days before the show, in order to make the members of it familiar with the exact state of things and the condition of the arrangements; to see that all needful preparations have been made, or, if not already made, to make them. The details are so multifarious and so varying from time to time that I will make no attempt at specifying them. I will simply add that to defer going to the show town to the day before the opening—and I know this has been the case—is almost to insure unsatisfactory results.

Second. Among the arrangements I should consider the following essential:—(a), To ascertain what lodgings, plain, clean, and as inexpensive as possible, may be secured for exhibitors and their assistants during the show week. Advertisements in the local journals stating what is required would generally elicit abundance of replies. From these a register might be compiled which, with a map of the locality, should be kept in the superintendent's office ready for reference on the arrival of exhibitors, &c. (b), To provide (but of course not to pay) for the horsing of exhibitors' vans. In towns where there are two or more lines of railway this is extremely necessary. The railway officials, if applied to soon enough, will invariably find the necessary supply of horses, &c. But exhibitors ought to know before leaving home that this has been done. (c), To issue a programme of the arrangements, giving exhibitors, *inter alia*, the names and addresses of the officials of the various railways to whom they must give notice in order to ensure the attendance of horses, &c. A copy of this programme should be sent to every person who has entered to exhibit; and it should be inserted in all the horticultural journals issued in the week preceding the show. The horticultural world would thus have published to it what it always desires to know, while much correspondence would be rendered needless, at the same time that mistakes would be prevented.

Third. I commence a fresh paragraph with a suggestion which I trust will receive due consideration. It is well known that exhibitors and horticulturists, as a body, have for years past been asking for the accommodation of a room at the provincial shows where they may have a chance of intercourse with their friends and with other horticulturists who, known to them only by name, are among those whom they desire to know better; a horticultural club-room, it has been called. Surely the Royal Horticultural Society cannot think it beneath its dignity to extend its influence to foster social intercourse among the votaries of the pursuit, the progress and development of which was one of the primary reasons which called it into existence. Now for my suggestion: Let the Council at once provide a moveable structure, so made that when not in use it may be packed up and stowed away, but which shall be used at all forthcoming provincial exhibitions. It need not be very expensive, but it should be made of durable materials and of ample size. Let it contain three rooms, one being as large as the other two. The two smaller rooms to be occupied, one

by the Superintendent of the show as his office, and the other by the Local Secretary; the largest room being reserved for the club room. The latter should be under the charge of a trusty and well-informed attendant, who might receive all letters addressed to exhibitors at the show ground and distribute them to their owners on application; he might also be the depository of messages, &c. A large room would not be needed, but it should be furnished with a long table and chairs, writing materials, &c., and might be used for letter-writing, interviews, &c. The building would in reality be the official head-quarters, and, having been seen once, would be recognised readily enough on all future occasions. Frequenters of these shows know too well the bewilderment they are always in as to where the officials are to be met with. With such a structure placed conveniently near the tents, this source of annoyance, loss of time, and inconvenience would be entirely removed, and a desideratum would be supplied by the club room. If expense be a consideration, then I venture to think that exhibitors will cheerfully contribute their share of the cost in order to secure such a great addition to their comfort.

Fourth. But now suppose the executive committee to be on the ground in advance, the official head-quarters to be duly inaugurated, the machinery of the show perfect, there yet remains a lubricating agent wanting to insure the smooth working of the machine. Need I say that courtesy is the lubricator? I mean, let the Council and their officials then insure a good stock of courtesy to keep things smooth; let them show a fair consideration to those who alone make these shows a possibility—not a fussy condescension, but a thoughtful gentlemanly bearing towards their fellow horticulturists, and the future of the provincial shows will be more flourishing than has been their past.—LOCAL COMMITTEEMAN.

I ENTIRELY concur in the pertinent remarks of Mr. Peach relative to the shortcomings of the Royal Horticultural Society, with one exception—his exonerating of the director of floral shows, as he calls him, from any blame. Now, in many of the points I believe the blame to be mainly due to him. He had a *carte blanche* for the arrangement of the tent, the Local Committee were willing to allow him whatever he needed, and what was the result? First of all the tent. This and the arrangement are simply a reduced copy of the International Exhibition tent designed by Mr. Gibson, and yet show after show we get the same—the same bare poles and beams, the same insignificant cascade, the same absurd fountain. And then the disposition of the plants. Who is accountable for the mal-arrangement of them if it be not the director of the floral shows? Who but he placed Mr. Baines's and Messrs. Cole's plants where they were, or hid the splendid *Fuchsias* out of sight, or filled up the centre with plants?—interesting, no doubt, but that made no show. He is evidently no originator. That he is no artist one can at once see. Let the difference between the gardens at South Kensington now and what they were bear me out.

And then the arrangement (?) for the luncheon. Surely it was left to him, and he could have at least arranged that those who were engaged in hard work should have had a quiet meal instead of being mixed up with any who chose to come in. Could not the Council make some change, and place the direction of this provincial show either in the hands of the local committee, or in that of some one who has some taste, and who can combine the *suaviter in modo* with the *fortiter in re*?—IGNORAMUS.

THE Secretary, W. H. Lindsay, Esq., has consulted some of the leading exhibitors and others of sound judgment to ascertain what measures should be adopted to render the country exhibitions of the Society far more satisfactory than was that recently held at Bath. After much discussion it was unanimously agreed that each Show should be of four days' duration, commencing on Tuesday, opening each day at 2, and closing at 6 p.m. on the Friday, and that articles for exhibition should be received not later than 9 a.m. of the first day. The desirability was fully recognised of having a tent or room on the exhibition ground where the committees and exhibitors can meet. It was unanimously recommended that the Council should consult competent persons relative to persons desirable to act as judges, and that the judges should be in threes to each division assigned to them; also that there should be a manager appointed to each tent to give information and to see that care be taken to facilitate the inspection of the exhibits.

Moreover, very strong opinions were expressed that exhibitors should be shown more attention and courtesy.

THE GLADIOLUS.

It was somewhat curious that the week before Mr. Witherspoon's letter appeared in the Journal I had been talking to one or two persons as to the probability of nitrate of soda being good for the Gladiolus. I had noticed the remarkable difference in some fields of Wheat near me where the nitrate had been used, and admired the wonderful glaucous character of the blades; and although I believe there is no analogy between the Wheat and the Gladiolus, yet it had occurred to me that perhaps what was good for one might be beneficial to the other, and Mr. Witherspoon's letter clearly establishes the fact. He does not say how he uses it, or in what proportions, and as he has found it so beneficial, it would be a boon to many to know more about it. By-the-by, in writing about the advice given by some to plant in new ground and deepening it, I had not Mr. Witherspoon in my thoughts, but, notwithstanding what he says about the wireworms not liking the nitrate, I am not quite convinced; they seem so impenetrable to anything that I have ever tried, that I should be delighted to hear that anything was too much for them.

As far as we have gone this season I can say my Gladiolus look well; but, then, I never like to rely on their appearance, as so many things come in to mar one's hopes and prospects. I hardly think that the spikes will be quite so large, but there is a good deal of health in the shoots, which makes me hopeful. My friend, Mr. Banks, complains of his having suffered by the dry weather; from other growers the accounts vary, but probably in a week or two we shall hear more about them.—D., Deal.

THE ROYAL VINEYARD GRAPE.

In the Journal of June 26th (page 507), "J. T." holds up this as "a first-class late white Grape," but does it set freely? A few years since I gave the result of my experience of this, the worst-setting Grape I know, and how I succeeded in setting every berry by simply drawing the hand over the bunch when in flower, charging the hand with pollen from Lady Downe's, which is in flower at the same time. I agree with "J. T." that it is of vigorous constitution and a good bearer, producing splendid bunches and berries with a Muscat flavour. What few berries can be kept remain plump up to February. I have never, however, succeeded in sending a presentable bunch to table; more than half the bunch has to be cut during the ripening of the part which remains, being so much affected with spot, or something in appearance more like a scorch, but scorch it cannot be, as the foliage is so dense. This spot, as I shall call it, commences just as the fruit is swelled-off to its full size, and goes on more or less until fully half the bunch is gone. I tried the Vine pots, and had good bunches and berries, but the result was the same as in the case of the Vine which is planted in the border. I have it planted on a south-east wall outside, where it is equally vigorous and prolific; but our summers have not been so warm during the last two years. In 1870 I had one tolerable bunch from outside, which was nearly ripe and quite eatable.

I would not recommend this Grape to anyone. We retain it simply because we can make up a dish of the bits of bunches to go along with Lady Downe's for very late use. Muscat of Alexandria, if properly managed, will keep to go with Lady Downe's, and for size of bunch and berry we have no Grape to equal it. Like Mr. Douglas, I cannot see any improvement in our new late Grapes. Give me Black Hamburgh, true, and a Muscat of Alexandria; I would grow nothing else to any extent. I could enumerate many meritorious Grapes; but if I only had space for two Vines, the Black Hamburgh and Muscat of Alexandria would be the two.—C. M. McCrow, *The Gardens, Nash Court, near Faversham, Kent.*

METROPOLITAN FLORAL SOCIETY.—Will you allow me to announce to our members, and to florists generally, that the autumn Show of this Society will be held in one of the oldest haunts of the older generation of florists now rapidly passing away—the Royal Surrey Zoological Gardens, and that the schedule will be more liberal than we have been enabled to offer for the last three years, that the competition will be exclusively for flowers, and that every effort will be made to make it a success. The days fixed for it are August 26th and

27th. Schedules will be ready in a few days, and I shall be happy to answer any inquiries directed to me on the subject.—D., Deal.

A VISIT TO THE ROSES AT CHESHUNT.

HAVING often been invited to pay a visit to Cheshunt, I have at last been able to accomplish this, and found the last week of June very favourable to my purpose. Shoreditch Station is not a palace of crystal, nor is the Lea Valley the perfection of the picture-que; however, the happy owners of land, generally rented at £5 an acre, are probably able to view this latter with considerable complacency; as the Scotch sometimes say, "She is better than bonnie." Cheshunt is advertised as thirteen miles north of London; it is certainly a good half-hour off by the Great Eastern Railway. The Cheshunt Station is a mile from the nurseries, but the lover of antiquity will do well to stop at the Waltham Station just before it. The lovely Eleanor's Cross, very near to the Waltham Station, both for its exquisite beauty and good preservation, would of itself well justify and repay a pilgrimage. Passing the ancient "Hostellerie of y^e Foure Swannes," dating from 1260, as its quaint old signboard, stretched across the road, informs all men, and leaving on the right Mr. W. Paul's well-known and famous nurseries, Paul & Son's at Cheshunt is reached in about one mile and a half.

The first sight on entering is singularly interesting to a rosarian beginning to advance in years; there is the original guinea plant of Maréchal Niel as first sent out, and, as a companion plant, the first Charles Lefebvre; grand old Briar stocks they have, but are evidently beginning to feel their years and hard service. After this, seventy acres under spade are more or less open to the footsteps of the inquiring visitor. It will only be possible to mention what, perhaps, is the most striking in the Rose districts. Having been sent by the courteous proprietor to the principal nursery ground, appropriately called Roselands, I found myself at once in a bewilderment of beauties. Such growth and such grandeur are not often to be witnessed. The Manettis were hardly out, but the plants appeared of extraordinary vigour; while, as for those on Briars, they were enough to send the amateur home despairing for ever! It was, however, some consolation to reflect that if Roses did not do well in the rich loam of the Lea Valley, on the banks of the New River, and with any quantity of manure at their service, they would be little likely to prosper on any other portion of our planet. But there they are, and will soon be telling their own tale in "the boxes." A Rose is not really understood until it has been seen growing in some quantity, all the best are found under these conditions at Roselands: the dignified and fastidious Marie Baumann appears there in the very rudest health, and really not much smaller than that monster Paul Neron. It might be invidious to mention names where all are so magnificent, but I may remark that Etienne Levet, President Thiers, and Annie Laxton (the last a considerably improved Jules Margottin) are fully bearing out the good opinions of last season.

Having returned, and partaken of Mrs. Paul's graceful hospitalities, I was conducted by the proprietor himself through the home garden, and especially over the seedling beds, a part interesting above all else to the experimentalist. The number of seedling Roses is very considerable. It was impossible not to look with deep interest on the collection of possible glories and beauties before us. Here, too, we moralised, how many embryo Maréchal Niels and Devoniensises may have perished, victims of too severe winters! As Gray remarks of another place—

"Some village Hampden, that with dauntless breast
The little tyrant of his fields withstood;
Some mute inglorious Milton here may rest,
Some Cromwell guiltless of his country's blood."

However, the actualities are sufficiently striking. Several still unnamed seedlings were shown to me of robust growth and most brilliant colouring, and which will probably be hereafter heard of; but the three that have been lately named and selected are unquestionably the present pride of the garden. Reynolds Hole and Wilson Saunders are both very good reds, the latter a seedling from Charles Lefebvre, but of sufficiently distinct foliage, and likely to be very valuable in its class; the former is evidently a great favourite with its owner; I did not see blooms which could supply an opinion. But the Rose of the season will certainly be the Cheshunt Hybrid. It has already received high commendation in your Journal, and is every way calculated to win golden opinions. It is very hardy,

very vigorous, large, of a brilliant colour—in fact, almost a Maréchal Niel among the red Teas, and a Rose which, I suspect, soon no Rose garden will be without.

Passing on through the new Rhododendron garden, which would excite high admiration, had the Roses any to spare to it, we then visited the Roses plunged-out in their pots, and a wonderful blaze of colour and brightness they afforded; the pegged-down Roses are also in very fine order. The Roses under glass had been brilliant, and in one instance showed a Rose hep of Madame Falcot, which had been fertilised from a bloom of Camille de Rohan, a combination which, if it succeed, will be one of rare excellence.

Returning home the happy owner of an instantly purchased Cheshunt Hybrid, even at the formidable price at which alone, for the present, it leaves Cheshunt, taking one mere lingering look at the sweet Queen Eleanor, and returning with rather more rapidity to Shoreditch, I escaped the varied perils of that peculiar locality, some day to tell again of rosarian rambles.—A. C.

VERONICA RUPESTRIS.

A REALLY good blue is a colour more frequently met with among the flowers of hardy herbaceous plants than those of tender exotics. Even bedders-out are not over-well supplied with good clear blues; it is true Lobelias come in very well, but Verbenas do not approach the true tint, and exhibition plants are very deficient in this colour. Hardy herbaceous plants, however, present us with many examples. The Campanulas, Veronicas, Delphiniums, Aconitums, Violas, and others give us many splendid blues, and a good clear blue, like a bright scarlet or a clear yellow, is at all times acceptable. Such an one is the subject of the present short notice.

Veronica rupestris, a trailing plant of low growth but compact habit, is certainly one of the most showy of its family, and as hardy as a Buttercup. It has not been so long amongst us as many neglected hardy plants, having been introduced during the last twenty years, and it is a most desirable addition. Its foliage is small and willow-shaped; habit spreading, and the branches all disposed to root as they lie upon the ground. Each shoot as it points upwards is divided into innumerable spikes of bloom, rising 6 inches or more high, while their bases are within an inch or so of the ground. The thickly-set spike of blossom is of a very bright blue with a small spot of white in the centre, which becomes larger as the bloom advances, being but little seen at first, so that the impression is that we are looking upon a clear bright blue-flowered plant; but I do not think the presence of white an objection, as it, perhaps, imparts brightness. The number of flower-spikes is such as to completely cover the space the plants occupy, and masses nearly a yard in width have a gay appearance in May and June.

Veronica rupestris is, perhaps, a little too late for spring bedding, yet old plants of it are in full bloom before *Viola cornuta* growing under similar circumstances, while it is much more dwarf. I have been thinking of trying it in beds for late spring decoration, as it can be so successfully transplanted, and is so accommodating as to site, &c. Perhaps, however, the best of all places for it is the rockery, to which its spreading habit seems so well adapted, and in such a position it cannot be otherwise than at home. Certainly no more becoming plant could be employed either there or in the mixed herbaceous border, to which a few plants near the front give a brightness which it is difficult to equal, even in the flowery month of May.—J. Roxson.

ROSE BARONNE DE MAYNARD.

I AM pleased to see the Rev. W. F. Radclyffe speak so well of this pure and useful variety. As a general garden decorative Rose it quite heads the list, in my opinion, amongst whites. It is an easy and free grower, is less susceptible of Rose ailments than many of its neighbours, and is an exceedingly free bloomer. It ought to be in every garden where Roses, and especially white ones, are cherished; and who would not cherish them, and who does not covet them, both to tone down and bring out the richer colours by the force of innate purity and vivid contrast?

My attention was first drawn to this variety by my employer, who takes the opportunity of seeing all old and new Roses both at the principal exhibitions and in many gardens. He has long pronounced it the best white Rose, and up to the

present time stands by it firmly, and I as firmly believe he is right. It is not, however, an exhibition Rose. It lacks the build and cup-like contour to take a place amidst a group of perfect cut blooms. Plant it, however, in the garden, and a lady armed with a pair of scissors, and engaged in decorating her room, will never pass it by. On that recommendation I am content to leave it, because it shows as plainly as anything can do, that a garden is incomplete without a plant or plants of Baronne de Maynard, the best early and late white Rose. I should like to see a large bed or hedge of this and, say, Général Jacqueminot alternately planted. The effect could not fail to be exceedingly fine.—J. WRIGHT.

ROYAL CALEDONIAN HORTICULTURAL SOCIETY'S SHOW.

THE Edinburgh Midsummer Show is always an interesting one, and on this occasion the display in the Music Hall, George Street, on July 2nd, was general and excellent. Plants were somewhat deficient, but the shortcomings in this respect were amply compensated for by the rich assortment of fruit. At no corresponding show have we had the pleasure of seeing such fine collections of Grapes; the highly-finished, well-ripened bunches were superb.

For the collection of six sorts of fruit, Mr. P. Stewart, gardener to Charles Tennant, Esq., The Glen, was first with two fine Queen Pine Apples, two splendid bunches of Black Hamburgh, some excellent Peaches, Nectarines, Plums, and Figs. Mr. Fortune, gardener to J. Jardine, Esq., Castlemilk, Dumfries, was second with some Pines inferior to those in the first-prize collection, good Peaches and Black Hamburgh Grapes, a dish of the fruit of *Musa Cavendishii*, Garibaldi Strawberry, and Munro's Little Heath Melon; of the latter Mr. Fortune showed four fruit weighing 22 lbs.

For two bunches of Black Hamburgh Grapes Mr. Stewart was first with perfect examples. The second-prize bunches, from Mr. Neil, gardener to Mrs. Erskine Wemyss, Wemyss Castle, Fife, were much larger in the berry, but not up in colour. For two bunches of Muscats, Mr. McConochie, gardener to A. Smollet, Esq., Cameron House, Dumbarton, was first with fine bunches rather unripe. A fine bunch of Muscat Hamburgh and one of Black Prince from Mr. Stewart were first for two of any variety; Mr. Laing, Pitcairrie, Fife, coming second with Madresfield Court, small in bunch, but large and plump in berry. For two of any sort, white, Mr. McConochie was first with fine Buckland Sweetwater; Mr. Laing second with Golden Champion. These were not quite ripe, but otherwise perfect, exhibiting no defects whatever. Mr. Stewart was first for a single bunch of Black Hamburgh, and Mr. Laing second. In the class for flavour Mr. Neil was awarded the first prize for a thoroughly-ripened bunch of Black Hamburgh. Mr. Fortune being second with the same variety. Chasselas Musqué from Mr. McConochie, and the same from Mr. Laing, took the prizes for white Grapes.

Some fine Queen Pines were exhibited by Mr. Stewart, who also obtained the first prize for a single fruit. Melons were numerous. Mr. Laing came first with a fine Queen Emma, Mr. Shaw, Donisla, Newington, second. For six Nectarines Mr. Gibson, Vogrie House, showed some finely-coloured fruit of the Newington. The first-prize Bellegarde Peaches, from Mr. Tait, Calder House, were also fine. Excellent Prince of Wales Strawberries came from Mr. Fairgrieve, gardener to the Duke of Athole, Dunkeld, and from Mr. Smeal, Meadow House.

On the two principal tables in the centre of the Hall were staged the twelve stove or greenhouse plants in competition for the ten-guinea prize given by Messrs. T. Methven & Sons, nurserymen, Edinburgh. Only two lots were shown, the first coming from Mr. Paterson, Milbank, and the second from Mr. Currie, Salisbury. Mr. Paterson's group contained a magnificent specimen of *Onidium sphaclatum*, the pretty *Erica Bothwelliana*, *E. Bothwelliana alba*, *E. tricolor Wilsoni*, *E. Antoniana*, *E. Paxtoni*, *Dracophyllum gracile*, a large plant of *Latania borbonica*, and a beautifully-flowered plant of *Disa grandiflora*. Mr. Currie's collection contained a unique specimen of *Anthurium Scherzerianum* with forty-five fully-expanded spathes, *Cypripedium barbatum* with an immense number of blooms, a fine plant with six spikes of bloom of *Dendrobium densiflorum*, *Lælia purpurata*, *L. purpurata var.*, a large plant of *Statico profusa*, and the curious spiny *Astrocarum mexicanum*.

Ferns, British and exotic, were well represented from the fine collection of P. N. Fraser, Esq., Cannonmills Lodge, trees from Mr. Currie, others from Mr. Paul, Gilmore Place, and Mr. Weatherston, Restalrig. Pelargoniums were not up to the mark in form and profusion of bloom. Some good Tricolor and white-edged *Geraniums* were shown by Mr. Kennedy, St. Margaret's Tower, who had the first prize in both classes.

The nurserymen's collections filled the greater part of the Hall; that from Messrs. T. Methven & Sons contained some lovely *Begonias*, *Marantas*, *Crotoms*, *Dracenas*, *Ericas*, *Azaleas*,

&c. Messrs. Dickson & Co., Waterloo Place, had also a fine collection of stove and greenhouse plants, among which were some beautiful *Caladiums*, *Agaves*, *Pandanuses*, a magnificent plant of *Statico Clarkii*, &c. The Lawson Seed and Nursery Company (limited) had the orchestra tastefully adorned with large specimens of *Coniferæ*, *Palms*, *Picuses*, and probably the finest plant of the lovely *Adiantum farleyense* that has ever been shown in Edinburgh. A large and varied group of succulents from the same firm was a great centre of attraction and note-taking. These plants are quite admissible in the choicest collections, and we hope to find a special prize offered for them in the Society's next arrangements.

Cut Roses were shown in high condition, such as we would have looked in vain for in the memorable 1872. The finest blooms in the Hall came from Mr. Hugh Dickson, Belmont Nurseries, Belfast. His stand, containing forty-eight, was magnificent; Duke of Wellington, Alfred Colomb, La France, Baroness Rothschild, Camille Bernardin, Duke of Edinburgh, François Fontaine, Lyonnais, and Marquis de Castellane were gorgeous, though not exceptional. Second to these in merit, but first for the stand of twenty-four, were those shown by Mr. McMillan, Broadmeadows, Berwick; especially fine amongst these were *Souvenir d'Elise*, *Adam*, *Alba Rosea*, and *Devoniensis*, all Teas. Amongst Hybrid Perpetuals were *Marquise de Castellane*, *Vicomtesse de Vesins*, and *Jules Margottin*. For twelve, Mr. McMillan secured the first prize, Mr. Armour was second, and Mr. Fairgrieve, Dunkeld, third. Mr. McMillan was first for six cut blooms, also for twelve splendid Teas of the following varieties: *Madame Willermoz*, *Madame de Tartas*, *Madame Gaillard*, *Comtesse de Brossard*, *Madame Falcot*, and *Niphotos*. These blooms, as well as all the others shown by Mr. McMillan, were very much superior to any exhibited in these classes.

Messrs. Downie, Laird, & Laing exhibited a very large fruit of a new Cucumber named Birthright, said to be very prolific, and a fine winter sort. Nothing could have been possibly finer than the half-dozen fruit of this variety shown by them at the show in December last.

First-class certificates were awarded to Mr. William Young, 33, South Bridge, Edinburgh, the enterprising acting Secretary to the Society, for two new Carnations of the *Souvenir de Malmaison* kind. That named Young's Rival is a massive bloom of a beautiful rich pink colour; the other, Young's Beauty, is of equal form, with a light ground distinctly striped with deep pink. Both are highly fragrant, and quite acquisitions.

SCOTTISH PANSY SOCIETY.

THE annual competition was held in connection with that of the Royal Caledonian Society. Much interest was manifested in this department, especially by amateurs. Hundreds of unnamed blooms of all known shades and markings were shown by nurserymen, gardeners, and amateurs. Messrs. Dickson & Co., Waterloo Place, Edinburgh, who have done much to improve and popularise these flowers, occupied the first place. Amongst their twenty-four first-prize dissimilar blooms, Dickson's Golden Gem, Snowflake, Canary, Aman, Magnifica, Butterfly, and *Stricta alba* were especially fine. In the open class for the best white ground, Messrs. Dickson & Co. were first with the lovely form of Jane Grieve; for the best yellow ground, Mr. D. Kerr, gardener to Lord Shand, Glenclorse, with Robert Burns. For the best dark self, Mr. D. Taylor was first with the Rev. Mr. Morrison. Snowdrop was the finest white self, Cherub the finest yellow; and In Memory, from Messrs. Dickson & Co., the finest blue. Jane Grieve, shown by Messrs. Dickson & Co., was awarded a first prize as being the best bloom in the room. Messrs. Dickson & Co. obtained the silver medal as taking the greatest number of prizes. Other successful competitors and medal-takers were Mr. Beveridge, Portobello; Mr. Mitchell, Corstorphine; Mr. Cuthbertson, Corstorphine; and Mr. Fairgrieve, Dunkeld.

TUNBRIDGE WELLS HORTICULTURAL SOCIETY'S SHOW.

ONE of the greatest events of the year at this place is the annual Flower and Fruit Show. A stranger visiting the town could not fail to be apprised that something of importance was taking place, and that the centre of attraction was the Calverley Hotel and grounds opposite the station on the South-Eastern Railway. To this spot a little before three in the afternoon people are flocking in crowds, and at the grand entrance to the Hotel there is much difficulty in obtaining admission, owing to the pressure. Thanks to the indomitable perseverance of Mr. E. F. Loof and an excellent working Committee, this has become one of the best country shows in England. Excepting on the occasion of the distribution of Messrs. Veitch's prizes at the Royal Horticultural Society's Show on the previous Wednesday, we have not seen such an exhibition of Grapes this year; but at this Show, held on Friday, July 4th, other sorts of fruit were exhibited in proportion, and of excellent quality.

The principal exhibitors of Grapes were Mr. J. Douglas, Loxford Hall Gardens; Mr. H. Spencer, gardener to T. Holman, Esq.; and Mr. G. Halliday, Bletchingley. Black Hamburgs were well coloured and ripened, and Golden Champion as fine as ever it has been exhibited. The best Pines were sent by Mr. C. Rye, of Tunbridge, and Mr. G. Ward, of Bishop Stortford. The best Strawberries, an excellent dish of Sir J. Paxton, were sent from Dr. Newington's gardens, Ticehurst. Collections of fruit were not shown so well as the other classes. Mr. T. Hopgood, gardener to Julian Goldsmid, Esq., exhibited the best dishes, quality and arrangement being taken into account.

Tunbridge Wells is strong in Cucumbers. No less than thirty brace were staged in competition. Mr. J. Staples, gardener to Mrs. Candy, showing a brace of a fine white-spined variety, and taking the highest award.

In stove and greenhouse plants, fine-foliaged plants, Ferns, Lycopods, &c., there was strong competition. The best stove and greenhouse flowering plants were sent by Mr. W. Knight, gardener to F. D. Shadwell, Esq., Fairlight. The intense crimson of his *Kalosanthes coccinea* and the deep blue of *Statice imbricata* were remarkable. Fine-foliaged plants of considerable merit were sent by Mr. G. W. Jobson, gardener to W. H. Stone, Esq., Leigh Park, Havant; amongst them were fine examples of *Pandanus ornatus* and *Cordyline indivisa*.

Lycopods were really splendid, and the well-grown healthy plants of *Selaginella apoda*, *S. Lobbi*, *S. Martensii*, *S. formosum*, and *S. caesia* sent by Mr. H. Scammell, gardener to C. Reily, Esq., Nevill Park, secured for him the first prize. We have not space to enumerate all the prizes, nor to describe the handsome specimen Ferns nor the *Fuchsias*, fifty specimens of which were arranged down the centre of the large tent. We have seen very good *Oreibids* exhibited here, but on this occasion only one poor collection was shown.

The cottagers are not forgotten at Tunbridge Wells, and we must say that the prizes awarded to them were well earned, their productions being of a very high order of merit. A series of prizes are also given for the best-managed garden, the value of which in the aggregate amounts to upwards of £15, and no less than twenty-one competitors contested them. The competition is confined to a radius of five miles round Tunbridge Wells. Mr. A. H. Bull had in this instance the honour of being in the highest position, and was awarded the first prize of £4.

ROYAL HORTICULTURAL SOCIETY'S ROSE SHOW AT BATH.

(Continued from page 6.)

In the class for thirty-six Mr. H. Grant was equal first with Mr. Baker, and had Cloth of Gold, Madame Charles Crapelet, Pierre Notting, Madame Marie Crédde, Madame Boutin, La France, De voniensis, Charles Lefebvre, America, Ferdinand de Lesseps, &c. The Rev. J. B. Cunn was second.

New Roses did not come out very strongly. Only one box of blooms was shown by Messrs. Paul & Son; it contained Madame Lacharme, a nice bloom; Bessie Johnson, Reynolds Hole (a seedling of Mr. Paul's), very dark; W. Wilson Saunders, another seedling remarkably like Charles Lefebvre; Cheshunt Hybrid, Annie Laxton, and some others not very striking. In the prize for the best twelve blooms of any Rose of 1872-73, the prize was given to Annie Laxton, a remarkably fresh-coloured flower, and exhibited by Messrs. Paul & Son; second to Mr. Cranston for André Duand, a light-coloured flower, style of Baronne de Rothschild. Messrs. Paul also exhibited fine blooms of Cheshunt Hybrid, and Mr. Cooling obtained third for Abbé Bramet—not that this is a better Rose than Cheshunt Hybrid, but the same exhibitor cannot take more than one prize in each class; I regard it as a rough high-coloured *Géant-des-Batailles* style of flower. In the class for six blooms Messrs. Paul & Son were first with Annie Laxton, Mr. Cranston second with Madame Bellon, and Mr. Cooling third with President Thiers. For two new Roses in pots sent out by English nurserymen since 1871 there was no competition, Messrs. Paul & Son being the only exhibitors; their plants were Princess Louise and Cheshunt Hybrid. Altogether it was a very pleasing exhibition, and my chief regret was that I could not linger over it.—D., Deal.

OPENING OF THE PUBLIC PARK AT WARRINGTON.

THE formal opening of Bank Hall and Gardens as a Town Hall and Public Park, was the occasion of a great demonstration in Warrington on June 20th. The demesne which has passed into the hands of the Corporation in trust for the people of Warrington belonged to the Patten family, a time-honoured name; and the Right Hon. J. Wilson-Patten, M.P., in placing within the reach of his fellow-townsmen the opportunity of acquiring so desirable a property, has only afforded another instance of his desire to act the part of a real benefactor.

The Park has many advantages over a new place. It has

ready-grown trees and shrubs, three-quarters of a century old, which few new parks can boast. The trees are not so numerous as they were twenty-five years ago; several outside the gardens have been cut down to make room for buildings, and consequently there is not the same picturesque scenery there was formerly. But to compensate for this, the growth of flowers has been increased, and new walks so arranged as to make the grounds appear larger than they really are; fresh openings have been made to give more effective scenery within the walls. Rhododendrons flourish, and some are large and some very old, one still standing which the late Mrs. Wilson-Patten, mother to Col. the Right Hon. J. Wilson-Patten planted, was the first Rhododendron grown in that garden. Although the grounds are laid out with taste, it is capable of modification to make it more advantageous as a public park. Viewed from the front of the Hall is a lawn belted on each side with trees; the east, or side towards the town, is the front entrance through an avenue of trees, chiefly English Elms, some very old. On the west side is another drive lined with trees not so old as those on the east side. Looking from the front door over Arpley meadows, which lie low, across the Mersey to Hill Cliff and other rising ground in Cheshire, we see a nicely wooded landscape, dotted with houses in the distance, but the view is somewhat deteriorated by the railways. On the west of the Hall is the grass land, belted north and south with trees, but open to the west against several works. North of the Hall is the garden, and from the new council-chamber is a view over a close-mown lawn, surrounded with large Rhododendrons, interspersed with trees, flower beds, walks, and a serpentine sheet of water, with a rustic-looking temple at one end, the whole being enclosed by a wall. The flower beds are filled with ornamental-foliaged and flowering plants, and the number used for this purpose is over 9000.

Banquets, illuminations, and processions rightly attended the auspicious event, for auspicious it is for any town to have in its vicinity such a people's park and gardens. Among the processions was one that has endured for many centuries, and was one of the most interesting—"The coronation of the Bonnie Queen of May," which took place in St. Elphin's Park in the evening, before an immense concourse of people. Shortly after six o'clock the procession, headed by the band of the Runcorn parish church, marched to a hollow part of the Park, where there was erected a temporary platform, with two chairs thereon, for the accommodation of the King and Queen. This was a most advantageous position, as the spectators could stand on the rising ground and without unnecessary crowding have a full view of the scene. The procession presented a very imposing spectacle. The King, Master James Singleton, was attended by Master W. Lilley, the crown-bearer, and Master Fred. Wood, the Grand Duke; while the Queen was accompanied by her train-bearers, Miss Edith Broadhurst and Miss Emily Boardman, and her maids of honour. The Queen, a pretty intelligent-looking girl, was attired in a snowy-white muslin frock, stockings and shoes of equal whiteness, a scarlet cloak trimmed with white fur, and a white rosette for a head-dress. The other girls were dressed in white frocks trimmed with blue and pink, and each wore a wreath of flowers on the head. The King wore a crown on his head, carried a sceptre in his right hand, his feet were covered with patent leather slippers with yellow buckles, and over all he had a long robe of ermine velvet trimmed with white.

The boys were neatly attired for the occasion, and several of them carried a small tricoloured flag. The girls who belonged to the Mount Schools, were under the direction of Miss Shaw, Miss Hankey, and Miss Bennett; while the boys were under the superintendence of their master, Mr. Dewhurst, of the National School, Church Street. On arriving at the halting point, the children were arranged in a circle around the throne, upon which the King and Queen took their seats. Immediately on getting into position, Master Singleton raised himself to his feet, swayed his sceptre with an air of diffidence, and in a clear and distinct voice addressed his "subjects" in the following words:—

My Loyal Subjects,—By God's providence we are met to celebrate another anniversary. To-day is a doubly auspicious one, as I, the King of your schools, am here to crown my Queen before you. First let me congratulate you on taking part in this morning's ceremony. You have, by the munificence of the Right Hon. Colonel Patten and George Crossfield, Esq., become possessed of a Town Hall and Park. May you live long and enjoy them [cheers]. Our worthy Mayor, too, deserves a cheer [cheers]. In our little scholastic spheres vast improvements have been made for our benefit, and I trust we are wiser and better than when we last assembled [cheers]. And now, my loving subjects, I crown her (whom you have chosen for diligence and good conduct) my Queen, and may peace and happiness still reign in our little dominion [cheers].

The coronation was now completed, and their majesties resumed their seats with becoming dignity and grace. The King retained the sceptre in his right hand, while his consort held a white pocket-handkerchief in her right hand and a scarlet Geranium flower in her left. The beauty of the scene was now at its climax. There sat enthroned before you the finely-robed King

and the newly-crowned Queen with obedient attendants at their feet; encircling them were a lot of pretty boys and girls with countenances beaming with happiness and delight; and the higher ground for some distance was covered with spectators of all ages and sizes, amongst them being a large number of ladies whose gala attire dazzling in the setting sunshine, contributed greatly to the gaiety of the scene. The coronation was followed by some singing, the songs selected being the following:—"Long may Life and Health be Spared Us," "Away, Away, to the Woods Away!" "Harvest Time," and "Home, Sweet Home."

Three cheers were then given for the rector (the Rev. W. Quekett), Mrs. Quekett, the curates (the Revs. J. Tedman and J. P. Petty), the churchwardens and sidesmen, the subscribers to the schools, and for the King and Queen. Their majesties acknowledged the compliment with a gracious bow.

ROYAL BOTANIC SOCIETY'S SHOW.

JULY 9TH.

THE last Exhibition for the season was held yesterday, and we have no hesitation in saying that it was one of the poorest ever witnessed at the Regent's Park. Hitherto we have been accustomed to have a fine display of fruit at the July Show—fruit there was none. Its place was usurped by an exhibition of table decorations, very meritorious it is true—light, airy, and elegant, with but few exceptions; but we are sorry to see such things encouraged at the expense of cultural skill. Flowers are beautiful to the eye, many of them delicious in scent, but fruit combines with these qualities flavour as well; it is an important article of food, and one which greatly contributes to the preservation of health. Surely something should be done by our leading societies—in fact, by horticulturists generally, to bring back fruit from the cold shade of neglect with which it is overlaid. The Veitch prizes given last week were a step in the right direction, but we must not leave these things to individual effort—united action should be taken. After all, the most beautiful table-arrangement is but an adjunct to the viands, and these, whether fish, flesh, fruit, or vegetable, must be produced, and it is more to the national benefit that they should be produced well and abundantly than that such undue prominence should be given, and so much time and money expended on the passing fancy of the hour. Many a gardener would rejoice at their restriction within the narrowest bounds, for the demands made in many instances on the gardener for time and flowers for these decorations are something enormous. Whilst making these remarks we by no means wish to advocate the neglect of the elegancies of the table, but we merely utter a protest against their encouragement at the expense of legitimate horticulture.

Stove and greenhouse plants in flower were but few, and on the whole not remarkable for quality. Mr. J. Wheeler, however, exhibited a good half-dozen in the amateurs' class, whilst in that for nurserymen Mr. Williams, of Holloway, to whom the Show was indebted for most of its best features, contributed a fine specimen of *Acrifolium odoratum* majus, *Cypripedium barbatum* superbum, and *Anthurium Scherzerianum*, the last somewhat tarnished.

Of fine-leaved plants Mr. Bull, of Chelsea, had a very fine *Cycas revoluta*, a large *Latania borbonica*, *Draecena lineata*, and a fine *Eucalyptus*; he likewise exhibited the best four *Draecenas*—viz., fine plants of *Shepherdia*, *Cheloni*, *Regina*, and *grandis*; Mr. Bester, of the Pine Apple Nurseries, and Messrs. Carter & Co. having the next best. Among *Caladiums* we noticed excellent plants of *Canartii*, *Chantini*, *Max Kolb*, and others from Messrs. Jeal, Ritchie, and G. Wheeler; also good *Canas* from the last-named and Messrs. E. G. Henderson. *Palmæ* came from Mr. Bull, Mr. Croucher, gardener to J. Peacock, Esq., Hammersmith, and Mr. G. Wheeler; and a fine group of six exotic Ferns from Mr. Williams. Of hardy Ferns good collections were exhibited by Messrs. Ivory, James, and Wheeler.

Of *Fuchsias*, Mr. Walker, gardener to H. Atkinson, Esq., Acton, had fine specimens of *Rose of Castile*, *Reine Blanche*, *Compiègne*, and *Souvenir de Chiswick*, Messrs. Weston, Wright, and G. Wheeler also showing well. Mr. Turner, of Slough, sent a splendid lot of new Show *Pelargoniums*, most of which have been noticed before; *Protector*, *Ruth*, *Duke of Cambridge*, and *Prince of Wales* were very striking. Mr. Weston and Mr. Burley had good *Zonal Pelargoniums* in flower; and fine collections of *Tricolors* came from Mr. Pestridge, Cambridge, Mr. Turner, Slough, and Mr. Wright, Leam. An unfortunate accident happened to those of Mr. Turner, which caused their removal from the tent.

Messrs. Lane, Great Berkhamstead, exhibited in a collection of six hardy *Combers* nice plants of *Thymopsis dolabrata*, *Juniperus liberica* compressa, a very compact sort of erect growth; *Retinospora squarrosa*, very handsome; *Cryptomeria elegans*; *Retinospora leptoclada*, forming a lovely, bright green column; and *R. plumosa aurea*. The same firm also sent the only group of hardy evergreens that we noticed.

Among miscellaneous groups foremost must be mentioned those of Mr. Williams and Messrs. Robinson, consisting of *Orchids*, *Palmæ*, *Ferns*, and other stove and greenhouse plants,

that from Mr. Williams being especially remarkable for its number and excellence. From Messrs. E. G. Henderson came a group of *Tree Carnations*, *Tricolor* and other *Pelargoniums*, *Coleuses*, &c.; from Mr. Ware, Pentstemonus, *Delphiniums*, bedding *Violas*, and blooms of *Carnations* and *Picotees*; from Messrs. Carter & Co. a pretty lot of *Lobelia* named after the three Christian graces; and from Messrs. Veitch, splendid boxes of cut blooms of *Roses*. For three trusses of forty-eight varieties Messrs. Paul & Sou were first, Mr. Turner second, both exhibiting remarkably fine trusses; and for yellow *Roses* Mr. Webb, of Reading, took the first place with *Maréchal Niel*.

Botanical certificates were awarded to Messrs. Veitch for a Japanese *Elaeagnus* with pale rose-coloured fruit; to Messrs. Carter for *Campylobotrys Ghiesbreghtii variegata*, and *Lilium Kramerii*; to Mr. Croucher for *Agave Verschaffeltii variegata*, *A. Corderoyii*, and *A. perbella*; to Mr. Williams for *Phaius Marshallii*; to Mr. Ware for *Acantholimon venustum*; and to Messrs. Dixon & Co., Amhurst Nurseries, also to Mr. Forsyth, Stoke Newington, for *Lobelia pumila grandiflora flore-pleno*, which has been reported upon before as a fine, compact, double blue variety.

OLD DOUBLE WHITE ROCKET.

SOME inquiries having been made of late about this favourite of olden times, and as it happens to be in flower at present I may add that those who have been looking far and wide for this now almost-lost ornament of the gardens of our forefathers, will, on finding it, be somewhat disappointed, for it is certainly inferior to the tall Rocket for the generality of purposes for which a white Rocket is wanted. Dwarfier it certainly is. The spike I send you was taken from a plant growing in good ground, and was fully a foot high—about half the height of its taller brother. Its foliage is also smaller and of a brighter green, less inclined to be downy; but in other respects the plants are much alike, except in one point, and that to me an important one—the taller one is by far the easier to grow and manage. The dwarf one has a tendency to die-off at all times of the year, even sometimes when just throwing up its flower-stem; and it is, as most sickly plants are, of such uneven growth, that I cannot recommend it with so much confidence as I do the taller kind. Perhaps the soil here may not suit it; or as a variety, which I presume it must be considered, it is worn out. Certainly it is not very common, for after having lost sight of it several years before the first Reform Bill became law, I did not see it again until, some five or six years ago, I met with it in a very old-fashioned garden in Lancashire; but I am somewhat disappointed in it, and cannot give it that character for general utility I would like to do. As a white it is more pure, perhaps, than the tall kind, quite as double, the flower-spike more densely set with flowers, and a prettier foliage decks the stem, but the tendency of the plant to die-off unexpectedly counterbalances these advantages in my idea. Perhaps, however, in the fine sandy soils that margin the coasts or are found in many inland districts, it may do better. I think I have been told of its doing well about Preston in Lancashire, but I may be wrong. Perhaps those having it in a thriving condition will tell us its whereabouts and other particulars.—J. ROSSON.

AMERICAN WILD PLUMS.

A WRITER recently, when giving an account of his travels in a region called Kansas, or Arkansas, states that an arid sandy desert in that part of the world produced in great abundance a Plum tree not so large as a Gooseberry bush, bearing very large and luscious fruit. I want to learn if any such desirable shrub is known to our horticultural experts. Is there any account or mention of it in any authentic work on American trees, if there be any such book? Without doubting the veracity of the writer, "E. A. C.," I have often been struck with the fact that when travellers stumblé upon some wondrous novelty a long way off, by some unaccountable neglect they omit to bring a specimen home or seeds thereof. The introduction of such a plant would be a small fortune to the discoverer, since, if not hardy enough for out-doors, it would obviously be specially adapted for an orchard house, now so common. I have no doubt that there are yet many wild fruits in the American wilderness which might be successfully introduced here.

I enclose a small twig of *Shepherdia argentea*, now laden with flowers; each, as you will see, is trumpet-shaped, like a Cowslip. As there is no thorn or prickly spine on it I cannot see the use of it as a fence. It is so brittle, that in trying to take off a twig I broke off a large branch. Would you oblige me by stating what sex you think my plant is, and how I am

to get hold of the opposite one, so as to raise a breed of "Buffalo Berry?"—JACKSON GILLEBANKS.

[Your plant is bi-sexual, and would be fruitful under favourable circumstances.—Ers.]

SHADES AND SHELTERS.—No. 2.

I now come to the second part of my subject—viz., shelters or protections against excessive rains, winds, frosts, &c. I do not include glass shelters or wall copings, but merely some of the common means employed to protect garden plants and flowers that are cultivated in the open air.

The fickle climate of this country necessitates the use of many things for protection, and it often happens that the simplest means saves a crop from entire destruction by frost. What would gardeners do without Fern fronds, dry litter, or fresh straw or hay? Either of these materials when scattered thinly over Gooseberry and Currant trees, early Potatoes, Peas, Kidney Beans, salading, and other tender subjects, will do wonders in the much-dreaded spring frosts. The object to aim at is to keep a stock of these things in hand, and when they are wanted the work of applying them is trifling. Then there are branches of evergreens not to be despised as a means of shelter. They can be used in many ways, particularly among bedding plants at the time of planting-out. When a bed is finished stick the branches among the plants; they greatly shelter these from cutting winds and hoar frosts. I do not think it safe to bed-out without this precaution, for if frosts and winds do not prevail the branches are a protection to the plants in the change they undergo. These branches, too, or Fern fronds and straw, may be put on to wooden frameworks of different sizes, to be used as shelters for any tender subject as circumstances may require. Lengths of netting, frigi domo, or canvas may be likewise stretched on a slight framework to be used in a like manner, or for fruit trees against walls. Any material, however, that will admit a sufficiency of the rays of light for the plant's progress is much better than anything causing too much darkening.

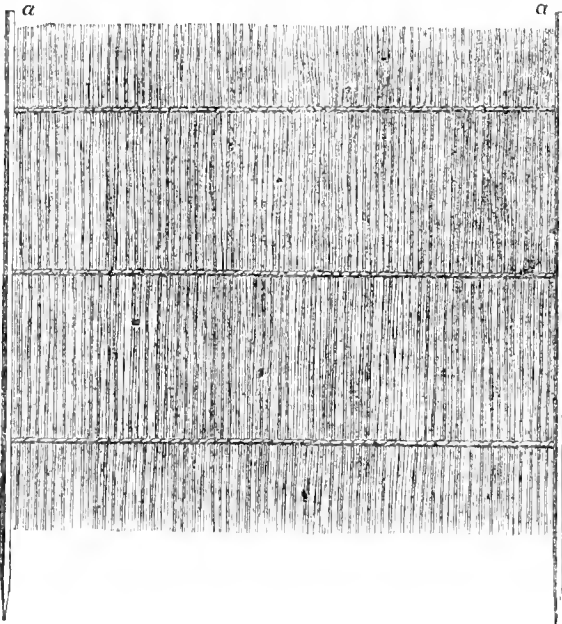


Fig. 5.

A very useful fruit-tree protector is that shown in *fig. 5*. It is a very light framework of deal or other wood. The two upright pieces have small cross-bars of the same material fixed into them. To these bars is threaded a very thin layer, two or three straws thick, of clean straight straw; it is cut off even at top and bottom, is made to any height required, and is set into the ground in front of the tree it is intended to protect. This is not put forward as the only means of fruit-tree protection, but it is worthy of more general adoption. When used for wall fruit the top of the uprights, *a, a*, go just under the wall-coping, and the bottom part from a foot to 18 inches from the

wall. From 6 to 8 feet is a convenient width; two men can then put these shelters up or take them down very quickly.

Figs. 6 and 7 are a wall-shelter called the Waltonian. It is a framework of wood (*fig. 6*) made to span the top of a 9-inch wall $3\frac{1}{2}$ inches down, and has a projecting piece 3 inches from the wall, with an augur-hole at the end; these spanners are placed

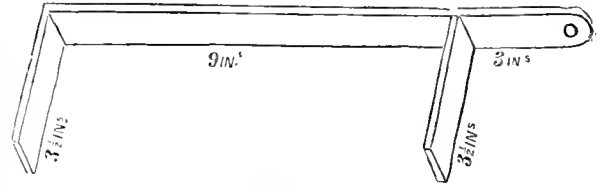


Fig. 6.

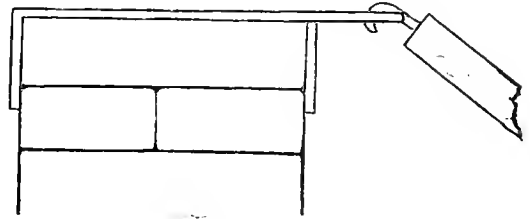


Fig. 7.

at regular distances along the top of the wall, and the shelter-board, about 18 inches wide, is provided with iron hooks at corresponding distances, inserted as shown at *a*, thus taking the weight of the board and holding it in position. This shelter is easily fixed, and has proved to be remarkably efficient in throwing-off heavy rains, heavy dews, and for keeping-off hoar frosts while the trees are in bloom. After all danger is past the boards can be taken down as well as the wall-spanners, and put under cover.

Fig. 8 shows a means of protecting newly-planted trees from heat; it is simply straw or hay hands wound neatly round



Fig. 8.

the stem as high up as where the first branches diverge. Some first place a thin layer of straw round the body of the tree, and finish it off as shown in the woodcut. Such a plan as this is very suitable to apply to trees that happen to be planted late in the spring, or for such trees as are impatient of removal, as Hollies and Evergreen Oaks, and where they are particularly exposed to the action of the sun. I well remember once seeing two clumps of Sycamores planted on two mounds during March; a dozen trees were planted in each clump, but whatever happened to prevent, there was one clump

only with the stems covered with haybands as above described; and, strange to say, eleven out of the twelve grew, while only two out of the corresponding clump made a growth. Several others attempted to do so but died, and my impression at the time was, that if the stems had also been covered most of them would have lived. It is an excellent plan to assist plants to recover the effects of a removal, for it keeps the pores of the rind open for the absorption of moisture, and the bark plays its part in the elaboration of sap as well as the leaves. If dry weather set in after planting, these strawbands or protections should be frequently saturated with water, as well as the branches syringed with the garden engine or any other suitable contrivance for scattering water. Some planters fix a sort of collar round the stem at the top of the haybands, which, if close-fitting, serves to convey the water down between the stem and its covering. This is not a bad idea.—T. RECOM.

LETTERS FROM JAPAN.—LIFE IN THE INTERIOR.—No. 4.

Shisoko, near Toyahi, March 21st, 1873.

In my last letter to you, dated December 22nd, I intimated that some weeks would elapse before you heard again from me, as I was going into the interior, where there were no postal arrangements, and very imperfect means of travelling. But my silence has been much longer than I had anticipated, arising from causes beyond my own control.

You will be sorry to hear that I have been very ill since I left Tokio. I took cold, and have been laid up for seven weeks, and had to send for an English doctor from Yokohama, which is 275 miles distant from here. It has been a very severe attack of pleurisy on my left side. Until I got the doctor I adopted the best means I had, and with the help of God I am now nearly all right. I have had the greatest attention paid to me by the Japanese. I hope to get to Yokohama about the 1st of May, when I am to be removed to Simonsaki, which has the finest temperature in Japan. My Japanese interpreter has been most kind and attentive. I applied mustard and poppy poultices until I could get medical advice. The Japanese shot me two deer, as there was no other kind of European food which I could eat. I also obtained jellies in bottle from Yokohama. The doctor gives me credit for my treatment of myself. He said if I had not pursued the course I did I could not have survived, for he was three weeks in getting to me from the time when I sent a messenger in request of his aid.

I have made some "notes by the way" of the people and the country, but I do not yet feel strong enough to undertake the task of reproducing them in a form suitable for your columns.—J. TASKER POSTER.—(By the favour of the *Writer's* Father, Editor of the *Yorkshire Gazette*.)

THE FRUIT PRODUCE OF SPAIN.

In being summer time the beds of the rivers are quite dry; every streamlet and summer spring aids in supplying the irrigation canals. The force of the winter torrents is plainly evident from the terrible disturbance of their rocky beds; indeed, one of the most interesting features of these mountainous districts is the picturesque scenery of their river channels. In the valleys all is luxuriousness. Thousands of acres of Orange trees, under careful culture, displaying trees white with blossom, side by side with others bright with abundance of golden fruit. In other parts of Spain, as in Cordova and Seville, we have seen Oranges growing in profusion; but the traveller must visit eastern Spain to find the real Orange-growing country, which supplies our home markets so plentifully. Immense farms produce nothing but Oranges. Station after station along the railway marks the importance of the trade; trucks stand on sidings laden with boxes already packed, and carts discharge their freight of ripe fruit upon the ground in different station-yards. Hampers of delicious blossom await despatch to Barcelona and other places, for making the much-sought-after Orange-water of the toilette; all these evidences denote unmistakably that we are now travelling through the chief Orange-growing districts of Spain. To a visitor from the colder climate of England there is a special charm about such a country.

There are many varieties of Oranges, but the chief kinds for supplying the export market are the Bitter and Seville Orange. The former is largely exported for manufacture into marmalade, and large shipments are made to Scotland, particularly to Dundee. This Bitter Orange is also used for flavouring the

much-esteemed liqueur curaçoa. Orange trees flower in the spring. Neither the blossom nor fruit has a quick growth, and for many weeks the air is filled with the perfume of fulling blossom. In the evening the atmosphere is so impregnated with it that it becomes quite overpowering and sickening. The fruit commences to turn yellow late in the autumn, when that required for exportation is gathered, and after being wrapped in paper, is packed in cases. Oranges for home use are gathered as they are required; and be it observed, that to enjoy Oranges to perfection, they should be eaten fresh from the tree, and the most luscious fruit is that which hangs upon the trees until the new blossom appears. Throughout the Valencia districts we see new plantations of young trees and other plantations of various ages of growth. Trees begin to bear fruit about the sixth year; the fruit continuing to improve in quality for sixteen or twenty years, after which the Oranges degenerate, the rind becomes thick, and they are unfit for exportation to foreign markets, for which purpose only the choicest fruit is selected. Orange trees attain a great age, and still bear fruit. In the celebrated gardens of the Alcazar at Seville there are trees pointed out as having been planted in the time of Pedro the Cruel (1369), which are of immense size, and are still fruitful.

Expert chests contain from 700 to 1000 Oranges each, and are worth to the exporter from 25s. to 30s. each; they have open bars, so as to allow a circulation of air through them. Oranges are packed before being quite ripe; they ripen, however, upon the voyage, though at the same time the skin toughens, and they lose much of the tempting lusciousness of newly-gathered fruit. During the flowering season much blossom is collected by nuns and others for the purpose of making into sweetmeats.

To convey an idea of the importance and extent of the trade in these eastern provinces, it will suffice to mention that there is grown in the immediate neighbourhood of Blanca (province of Murcia) an average of 25,000 boxes a year.

Next in interest to the Orange plantations are the Rice fields. The cultivation of Rice is entirely dependant upon the valuable system of irrigation. All along the lines of canal there are well laid out and carefully prepared allotments of land, which are first levelled and then banked up with puddled clay walls, over which the water is allowed to flow to a depth of a few inches. In these flooded fields we see teams of horses (not oxen) ploughing the saturated earth, the seed being scattered broadcast by labourers who toil ankle deep in water. Some crops are already growing, and the pretty bright green shoots of the Rice plants are so thick as to nearly hide from view the water which still covers the roots. The valuable results of irrigation works in Spain are sometimes wonderful. Spaniards owe the adaptation of this valuable principle to those long-departed shrewd men of intellect, the ancient race of Moors. Indeed, the very works in Valencia which irrigate over 50,000 acres of land were constructed by them more than a thousand years ago. Kings of Spain, in subsequent times, have extended the system through other parts of the kingdom, but it is marvellous that the Spaniards have not had sufficient energy to carry it throughout the whole country. There are thousands, indeed millions, of acres of land which might be watered in this manner in the valley of the Douro, the Tagus, the Guadiana, and the Guadalquivir. English enterprise is doing something in this way for Spain; extensive works are in progress by an English company for irrigating 60,000 acres of land; and doubtless, if Spain would create confidence and assure protection for capital, any amount of English money might be found to increase such useful works. Land in Spain thus irrigated increases twelve times in value. Farms in the neighbourhood of Valencia are worth from £200 to £100 sterling per acre, and some in the adjoining province of Murcia even £500 per acre. These rich lands will grow corn, Rice, Olives, Vines, Oranges, Citrons, Pears, Pepper, Prickly Pears, and numberless other fruits, and the genial climate ripens two, three, and even four crops in a year. The value of water is of course very great, and many curious and interesting matters are worth noticing in connection therewith. In Lorca the water is sold every day by auction, and the value of the stream of water which supply the district may be estimated from the fact that a stream of water discharging a cubic foot per minute is worth an annual value of upwards of £2000. (*Ston's Tour through Spain with Cook.*)

FUMIGATING WITH LITTLE TROUBLE.—The following is for a house 20 feet by 12:—Take a sheet of blue paper and

soak it well in a strong solution of saltpetre; then thoroughly dry it, roll up in it 1 oz. of common tobacco, and place the roll on a flower-pot turned upside down. Set fire to it at one end, leave it to burn, of course shutting the house up first. Do not roll the paper up too tightly.—F. W. H.

NOTES AND GLEANINGS.

If there is one place more unlikely than any other in London where gardening would be pursued, it is in the dome of St. Paul's Cathedral, yet there, at an elevation of somewhere about 200 feet, we saw one of the officials tending his four small pots, the tenants of which were a Fuchsia, a Geranium, and two Musk plants. They were to him during his solitary door-keeping what the little weed which sprang up between the cell's pavement stones was to the prisoner—something to hope about and to benefit.

— THE thirtieth Anniversary Meeting of the GARDENERS' ROYAL BENEVOLENT INSTITUTION was held at the London Tavern, Bishopsgate Street, on the 2nd inst., Lord Henry Gordon Lennox, M.P., in the chair. Many leading horticulturists were present, including Mr. Alfred Snee, Mr. T. Moore, Mr. Marnock, Mr. J. Lee, Mr. B. S. Williams, Mr. J. Cutbush, and Mr. Andrew Henderson; and the eloquent appeal of the Chairman was responded to by subscriptions amounting to upwards of £400. As usual, the room was decorated with plants from the establishments of Messrs. Veitch, Williams, Lee, Rollisson, and others.

— THE *employés* of Messrs. James Carter & Co. played their annual game of CRICKET on the 29th of June. Those of the wholesale department were defeated by their brethren in the retail department.

— A HORTICULTURAL exhibition in aid of the funds of the WALSALL COTTAGE HOSPITAL—intended to be the first of a series of annual fêtes for the same laudable object—will, by the kind permission of Mr. W. H. Duignan, be held in the grounds of Rushall Hall, on the 6th and 7th of August. The prize list has just been issued, and is sufficiently comprehensive to give promise of a large and interesting display. The first division applies to cottagers only—that is to say, "persons not possessing a greenhouse, cultivating their own gardens, and not paying income-tax," to whom will be appropriated prizes for window plants; for cut flowers—namely, Dahlias, Roses, Asters, Marigolds, Hollyhocks (six blooms of each), and Pansies (twelve blooms); for collections of wild flowers made by children; for collections as well as single dishes of fruit; and for vegetables. The second division is for amateurs and professional gardeners; first prizes varying in amount from £1 to 5s., and second prizes varying from 10s. to 3s. 6d., being set down for stove, greenhouse, and bedding plants. In a third class for cut flowers prizes are respectively offered for twelve Roses (distinct), six Carnations, six Peonies, twelve Pansies, twelve Dahlias, six ditto, twelve Gladioli, Verbenas, six varieties (one truss each), twelve varieties of Hollyhocks, twelve China Asters, twelve French Marigolds, twelve African Marigolds, six varieties of Phlox, three ditto, six spikes of Stocks, vases or groups, bridal bouquets, hand bouquets, designs for table decoration, and collections of wild flowers made by children. There is likewise a fourth class for Pines, Melons, Grapes, Gooseberries, Raspberries, Currants, Cherries, Peaches, Nectarines, Apricots, Plums, Apples, Pears, Cucumbers, collections of fruit, collections of vegetables, and salads. The Honorary Secretaries are Mr. W. Bayliss, Wednesbury Road, Walsall, and the Rev. F. G. Littlecot, Rushall Vicarage, to whom applications for schedules or information should be forthwith made.

— THE eighteenth and last volume of "PRODROMUS," the great work on which three generations of the De Caudole family have been engaged for half a century, aided by the most eminent botanists all over the world, will shortly be published. Altogether the work will contain descriptions of about 59,000 species of plants, exclusive of Monocotyledons, to which it is not intended to extend it.

— PREPARATIONS are now being made for HEATING the whole of the forcing houses, &c., now in course of erection in the new gardens at Hatfield Park, Herts, the seat of the Marquis of Salisbury, on COWAN'S COMPENSATING SYSTEM, which consists in the combination of a lime-kiln and hot-water apparatus. A new kind of boiler is in course of manufacture expressly for the occasion. We believe Mr. Bennett had at one time decided to use either the Witley Court or Gold-

medal boiler, but wishing to give Mr. Cowan every possible chance of success, a boiler invented by the latter will be used.

— WE regret to have to record THE DEATH OF MR. J. A. GORDON, Superintendent of the grounds at the Crystal Palace, a post which he filled with great credit during the last twenty-one years. He had long been suffering from consumption, which terminated his life on Midsummer-day. He was in his forty-sixth year. Mr. H. OGLEE, for upwards of twenty years gardener to the Earl of Essex, at Cashiobury Park, also died on June 23rd, aged fifty-six.

— WE are glad to announce the publication, at the office of this Journal, of a THIRD EDITION OF MR. PEARSON'S "VINE CULTURE UNDER GLASS." This valuable little treatise has been revised by the author, who has made additions both to the letter-press and engravings. Among the latter we notice illustrations of several forms of vinery not figured in the previous edition.

TEACHERS OF CULTURE.—No. 2.

SIR ANTHONY FITZHERBERT.

UNTIL the time of Henry VII. (1485-1509) no power had the great proprietors to alienate or to divide their vast landed estates. At the Conquest the whole realm was carved out among the followers of the Norman invader, and the feudal system established. Each lord of the soil—so destitute of learning as to be unable to read, and without any occupation but the sports of the field by day and revelry by night—depended solely for subsistence upon the rents of corn, cattle, poultry, and other produce rendered by the serfs who cultivated the small parcels of ground permitted to be filled in each domain. Permitted to be filled, is not too strong a term, because the feudal manners of the time were all tending to foster and provide good hunting grounds for the lords of the soil. William I. strictly restrained within small limits the lands to be cultivated by a monastery he founded; and his son William Rufus laid waste cultivated lands to enlarge the hunting grounds where he met his death. These vast baronial domains descended inalienably to the heirs, and it was not until the time of Henry VII. that this fettering of landed property was loosened. Laws were then enacted enabling the nobles to alienate their lands, and these found ready purchasers among those wealthy men who then had accumulated and risen in influence—the mercantile classes. The birthtime was then of the country gentlemen, a class destined to improve and elevate our country with a rapidity not appreciable but by those conversant with the domestic history of the Middle Ages.

It was to aid the country gentlemen that Sir Anthony Fitzherbert wrote two books which entitle him to be placed as our first English teacher of land-culture. Neither the sons of the owners of the great baronial domains, nor the mercantile purchasers among whom the domains were parcelled, possessed the knowledge that was needed for their cultivation, and to impart that knowledge Sir Anthony wrote these books. How much they were needed is proved by eleven editions of the volume relative to cultivating the soil being published within fifty years after its first appearance.

That Sir Anthony's object was to impart this knowledge he tells in the "Prologue" to the volume, where, after referring to another volume previously published on the game of "the Chesse," in which the pawns he likens to "the yemmenne," he adds—"And in so moche the yemen in the sayde moralytyes and game of the chesse be set before to labour, defende, and maynteyne all the other hyer estates, the whiche yemen represent the common people as husbandes and labourers; therefore I purpose to speake fyrste of husbaudrye."

Sir Anthony also saw clearly that now lands were divisible into smaller and many parcels, it was needful that their owners should have due knowledge as to the preservation of their boundaries and rights, and for this he published his volume entitled "Surveyinge," because, as he observes, "It is necessary to be knowen, howe all these maners, lordeshypps, landes, and tenementes shulde be extended, surveyed, buttred, bounded, and valued in every parte: that the sayd estates shulde nat be decoyed, defrauded, nor dysherited of theyr possessions, rentes, customes, and services, the which they have to theym reserved, for mayntenance of theyr estates and degrees, and that there be no parcell thereof loste nor imbesolded."

How much such a work was needed or appreciated is proved by six editions being published between 1523 and 1567.

The orchard Sir Anthony assigns to the husbandman's care,

but the garden and Flax culture were the wife's portions of labour. Two brief extracts on these heads will suffice.

"It is necessarye, profytable, and also a pleasure, to a housbande, to haue Peares, Wardens, and Apples of dyuerse sortes. And also Cheryes, Filberdes, Bulleys, Dampsons, Plummes, Walnuttcs, and suche other. And therfore it is conuenyent, to lerne howe thou shalt graffe. Than it is to be knowen, what thynges thou must haue to graffe withall. Thou muste haue a graffynge sawe, the whiche wolde be very thynne, and thyeke tothed, and bycause it is thynne, it wyl cut the narrower kyrfe, and the cleaner for brusynge of the barke. And therfore it is sette in a compasse pece of yren, syxe inches of, to make it styffe

and bygge; thou muste haue also a graffynge knyfe, an incho brode, with a thyeke backe, to cleue the stocke with all. And also a mallet, to dryue the knyfe and thy wedge in to the tree; and a sharpe knyfe, to pare the stockes heed, and an other sharpe knyfe, to cutte the graffe cleane. And also thou muste haue two wedges of harde wood, or cyles of yren, a longe small one, for a small stocke, and a broder, for a bygger stocke, to open the stocke, when it is clouen and pared; and also good tough claye and mosse, and also bastes or pyllynge of wethy or elme, to bynde them with, &c."

"And in the begynnynge of Marche, or a lyttell afore, is tyme for a wyfe to make her garden, and to gette as many good sedes



SIR ANTHONY FITZHERBERT.

and herbes as she cunne, and specially suche as be good for the pottle, and to eate: and as ofte as nede shall requyre, it muste be weded, for els the wedes wyl ouergrowe the herbes. And also in Marche is tyme to sowe Flaxe and Hempe; for I haue harde olde houswyues saye, that better is Marche hurdes than Apryll Flaxe, the reason appereth: but howe it shulde be sowed, weded, pulled, repeyled, watred, washen, dryed, beaten, braked, tawed, hecheled, spon, wounden, wrapped, and wouen, it nedeth not for me to shewe, for they be wise ynough, and therof may they make shetes, bordclothes, towles, shertes, smockes, and suche other necessaryes, and therefore let thy distaffe be alwaye redye for a pastyme, that thou be not ydle."

The garden crops seem to have been scanty both in quantity and variety; and the same deficiency evidently characterised the gardens even of royalty, for in 1537 we find in the privy

purse expenses of Mary, afterwards Queen, that Apples, Cucumbers, "Strawberes," "Pescoddes," "Cherice," "Peyres," "Fylberdes," Wardens, "Scalet rotes" (Skerrets), "Hartichoks," "Medlers," and "Pepins," were brought to her as acceptable presents, the donors being often poor persons, but often friars, and the prior of the Charterhouse.

Fuller, in the century succeeding Fitzherbert's death, says that his publications are "monuments which will longer continue his memory than that flat blew stone in Norbury church under which he lieth interred;" and this prophecy is true, for the inscription is now illegible, although in Neve's time it was readable as follows:—"Of youre charitie prey for the soule of Sir Anthony Fitzherbert, one of the Kinges Justices of the Common Benche, and sometyne Lord and Patrone of this

towne, and Dorithie his wyfe, daughter of Sir Henry Willoughby, Kut., and dame Mawde his last wyfe, one of the daughters and heyres of Richard Coton of Hampstall Rydware esquier, by which he had five sonnes and five daughters, which Sir Anthony deceased the xvii. of May, an' Dni. 1538, and the said Mawde." That inscription did not even record, as is usual, the date of the deceased's birth, nor has there since been published any memoir worthy of him who was the author of some of the best of the early law books, who was the unflinching opponent of the despotic measures of Wolsey when at the zenith of his power, and, as we have noted, the earliest writer on tillage. It is not within our province to detail all the dates and events of his biography, but as we have searched for and gleaned them fully, we will record a few of the principal. Although the sixth son, he survived all his brothers and succeeded as the fourteenth lord to the manor of Norbury. He was appointed Justice of the Peace of Leicestershire, Lincolnshire, Staffordshire, and Warwickshire during the years 1509 and 1511, Serjeant in 1514, King's Serjeant in 1516, Justice of Assize on the northern circuit in 1518, and a Judge of the Common Pleas in 1522. He was one of the visitors of monasteries, but he opposed their sequestration, and on his deathbed exhorted his children not to accept or purchase any of the abbey lands.

The titles of his two works entitling him to our notice in these pages are, "A new tracte or treatyse moost pryfytale for all husbāde men;" and "The boke of surveyenge and improvemētes."

In the Exhibition of National Portraits was one of Sir Anthony Fitzherbert. It is the property of Sir William Fitzherbert, Bart., of Tissington Hall, Derbyshire, and from a photograph of that portrait our engraving is taken.

APHIS, OR GREEN FLY.

The various species of Aphidæ differ very considerably both in colour and form, but taking the Rose aphid as a type, we find it of flask-like form, somewhat resembling a minute animated soda-water bottle set upon long and slender legs. Its head is small, deformed beneath, and closely set upon the thorax. The proboscis, which is placed so far back as almost to appear to be attached to the thorax, is somewhat indented, and is composed of the mandibles and maxillæ, which are very slender and elongated, inclosed in the labium, which is formed into a canal of four joints, the last of which is well adapted to piercing vegetable tissues. The labium is long and pointed. The antennæ are long, composed of six joints: the two basal stout and oblong (the first stoutest, the second short and stout), the third longest with irregular warty projections. The remaining joints are shorter than the third, and do not differ materially from each other in length; the last is slightly forked near the base. The eyes are entire, prominent, and semi-globose, consisting of about two hundred and fifty facets, and containing a dark red pigment. The simple eyes (when they exist) are three in number, and form a large obtuse triangle; but in many species I think the simple eyes are absent, especially in the wingless members of the species, whilst in winged females, if not absent, they are often very rudimentary. The thorax is oval, with the prothorax forming a transverse collar. The abdomen is "elongate-conic," and on the fifth segment is furnished with an elongated tubercle or pap on either side; these tubercles are somewhat sealy towards the termination, the end is trumpet-shaped, and from them there at times exudes a clear, alkaline, saccharine fluid. Situated by the anus I believe there is an organ which I should be inclined to look upon as a pygidium; in some species, however, this is more marked than in others. The legs, six in number, are long, especially the hindmost pair; the tarsi are two-jointed, the first joint being shorter than the second, at the end of which are two hooked claws. By far the greater number of aphidæ are wingless. The winged members are usually (though irregularly) more marked with black, especially on the thorax and abdomen; the thorax is larger, and projects more above the abdomen, which is usually smaller, even in the winged females. The wings are four in number, the anterior pair much larger than the posterior; when at rest they are placed nearly perpendicularly on the sides of the body. The anterior have a strong subcostal nerve terminating near the apex in a broad stigma, and giving off three oblique nerves, the last of which is forked twice: on the posterior edge is a membrane, to which, when in use, three minute hooklets, situated near the apex of the posterior wing, attach them-

selves. The posterior wings are small, with two oblique nerves and the hooklets just mentioned.

Much has, I believe, been said and written upon the reproduction of these insects; but, as far as I am aware, all authorities are agreed that in the spring, the warming sun, and atmosphere generally, act upon the minute red or black eggs laid by the insects on twigs and branches in the previous autumn. In due course the eggs are hatched, and the young aphid emerges wingless: after changing its skin some three or perhaps four times, it commences, without interposition of a male, to give birth to living wingless young, who in their turn become mothers, and so the lineage descends to the tenth generation. I believe some difference of opinion prevails as to the number of generations that may transpire before a winged member appears. I am inclined to look upon the number as irregular, but have given the number which I have bred myself, which I think corresponds with Bonnet's observations. The tenth lineal descendant, at its birth, appears similar to its predecessors, but at the last change but one of its skin it possesses rudimentary wings, whilst on the final change taking place, the wings become fully developed. The general impression appears to be that the winged insects are the perfect male and female, appearing only in the autumn, and that the winged females produce eggs only, and that after having intercourse with a male. I believe this is correct so far, that winged insects are usually more numerous in the autumn, and at that period many of the females are unproductive until they have intercourse with a male, after which they lay eggs. But winged females do exist throughout the summer, though possibly less numerous than in the autumn, and they do not lay eggs, but produce living young without the interposition of a male; moreover, they produce young during the larval and pupal stages, the young never becoming winged, but living and multiplying in the manner usual with aphides. I have known eggs to hatch the same autumn that they were laid, in consequence, I believe, of warm weather setting in after some weeks of cold. As aphides die off in cold weather, I regard the laying of eggs simply as a means of preserving the species for the following year; the times when these eggs are laid I consider to be dependent upon temperature and atmospheric changes. The multiplication of these insects must naturally be very large, although different statements are made as regards the average rate at which young are produced; one authority says it is about three per diem, whilst another authority states the average rate of production to be fourteen per diem. Schrank, starting from Bonnet's observations, calculates the progeny of a single aphid during one summer at 23,740,000; whilst Réaumur says the offspring of a single aphid will amount to 5,904,900,000. I will offer no comment on these large figures, but as regards the daily average I may say I have never observed any aphid that produced young every day, those I have watched having brought forth litters, if I may be allowed the expression, at intervals of from three to five days, the litter consisting of from eight to fourteen individuals; and I believe the periods of production and number of young, are considerably influenced by temperature, &c. In wingless females I have frequently counted from thirty to fifty young in various stages of development, whilst twenty to thirty appears to be about the limits of young in the winged individuals.

Aphides are generally looked upon as being exceedingly stupid, and devoid of maternal feeling. Although general appearances are against their possessing much attachment for their young, I have seen instances where their actions would seem to show at least some care for their offspring. When the sap fails in any particular branch or leaf upon which a family has been feeding, I have seen the parent emigrating with her family on her back and clinging to her antennæ. I was rather curious to see if this was at the will of the parent, the caprice of the children, or by mutual consent; and to this end I took a mother, who was walking along with four of her children on her back, and placed them separately on a glass slip on the stage of my microscope, parent and offspring being close together. The mother immediately extended one of her front legs, so as to form an inclined plane, by means of which the little ones mounted, three to her back, and one climbed on to her antennæ. With a fine camel's-hair brush I then removed two of the young from their resting-place. The mother, apparently as soon as she became aware of the loss she had sustained, commenced walking in a serpentine manner across the slip, with her antennæ close to the surface of the glass; she shortly found her lost little ones, when the same process of as-

ending to a place of safety was gone through: the parent then set off in a straight line, waving her antennæ in the air with the peculiar motion common to aphides, seeking some locality more congenial to aphidian taste.

Wherever there is vegetation—roots, branches, leaves, flowers, or fruit, it is more than probable that aphides will occur, although I have no doubt exceptions to the devastations of this tiny plague of the field and garden may be found. Amongst the most destructive of these insects may be mentioned the Hop and Potato fly, both of them akin to our type, the Rose aphid. There would appear to be as much variety in the insects as in their habitat—long and short antennæ; long and short legs; winged and wingless; long tubercles, short tubercles, and no tubercles; these features will be found subject to innumerable modifications as well as form, size, and colour of head, proboscis, eyes, and body. A very peculiar form of insect from the Walnut tree is remarkable for the hairs on the head and legs; its appearance would almost induce one to suppose it to be a form intermediate between that of the Rose aphid and the well-known leaf insect; but the peculiar life-history of the latter would cause it to be reckoned as an abortion rather than a natural form of aphid. A very peculiar form of hind-leg will be found on several varieties of aphide living at the roots of plants. The tibia is as short as, or in some cases shorter than, that of the front legs, the first joint of the tarsus is short, but the second is exceedingly long, almost as long as the tibia. The hind leg of an aphid taken from the root of the Endive shows this peculiarity. The too-well-known American blight belongs to a class of aphide, distinguished by their wool-bearing bodies, and the absence of tubercles. This class is generally said to be wingless in all its stages, and dependant upon the wind for transportation to new homes. I have, however, captured a woolly aphid with wings, but cannot name its habitat, as I took it on the wing.

I can find no difference in appearance between insects taken from widely different trees; for example, one taken from the Oak was found to correspond with another taken on the Larch. Hence, speaking of insects as oak-aphid, &c., leaves one in a certain amount of doubt as to the individual insect spoken of, and in consequence of the classification being in so crude a condition it is very difficult to enumerate the number of species and varieties. I have, however, found aphide presenting more or less distinctive features on the Apple, Milfoil, Oats, Wych Elm, Walnut, Sow-thistle, Lime, Calceolaria, Larch, Plum, Maple, Thistle, Barberry, Scotch Pine, Potato, Oak, Spindle tree, Sycamore, Juniper, Dock, Goranium, Honeysuckle, Canary Grass, Rose, Willow, Fir, Sow-thistle root, Hop, Mallow, Privet, Parsnip root, Pea, Birch, Endive root, Cabbage, Wheat, Poppy, and Grass root, and I believe 326 species are catalogued and described at the British Museum.

The affection and care shown for aphide by ants are well known; where the "green fly" is numerous, bodies of ants may often be seen carrying them away to the captors' underground dwellings, the ants holding their prisoners by the skin of the upper part of the thorax or abdomen; some assert that it is only one species of aphid that is thus cared for by the ant, but this I am inclined to doubt. I rather think it depends very much upon the locality of the ant's nest, and what tree or plant-roots run through the habitation. This one staunch friend is however amply compensated for by innumerable enemies; a group of aphide is a dainty dish for most small birds, who search them out and nibble them up with evident gusto. Many of the Ichneumon flies seek the aphid to lay their eggs in. The stricken aphid usually separates itself from the herd, and as the larva of the fly grows, it swells and becomes gouty in appearance; ultimately it dies, as the fly is ready to leave its host, which has then become a distorted horny shell. Many people mistake the cast skin of the aphid for the corpses of those attacked by the fly; it seems odd that such mistakes should be made, as the one seems to me no more like the other, than a dead Daniel Lambert would resemble a suit of cast-off clothes. Ladybirds, both in the larval and perfect state, feed largely upon Aphide, but perhaps the worst insect enemy they have is the larva of the Lacewing fly: this is a near relation to the Ant-Lion, bearing some relation to it about the jaws, which gives it a hungry, cruel, and malignant look, although its appearance in no way belies its character. I believe the aphid has another and most deadly foe in disease. I was astonished at the rapidity with which a brood I had died-off, so I carefully watched one of them to try

and discover the cause. I found (that usually after changing a skin) the aphid was more pearly-coloured than usual, then changed to the colour of pale ultramarine ash, and then to a dirty reddish yellow; the opaque green layer or middle skin of the insect appeared to be absorbed, and the blood could be seen circulating in the interior of the insect. Red-coloured globules then appeared in the fluid, after which a slight down covered the outside of the skin, and the aphid shortly tucked its legs under it and died. I will not pretend to say positively that the disease was caused by a parasitic fungus, but I am strongly inclined to think such was the case.

After all, perhaps the most inveterate enemy of the aphid is the gardener; he fumigates, powders, syringes, dips, and brushes his plants, but still does not entirely rid himself of his pests; although when the area is limited he meets with partial success; still in the Hop garden and Potato field but little can be done to check these rapidly multiplying destroyers of the cultivator's profits. Where the result is most disastrous, the less appears capable of being done to check the ravages of this tiny destroyer. Fumigation, from its very nature, cannot be put into practice, and other methods of destruction may be considered as of little use where large quantities of plants are close together; the probability then is that the best mode of securing ourselves against the damaging attacks of the aphid is to encourage the preservation and multiplication of insects that prey upon them, such as the Ladybird and Lacewing fly.—(*English Mechanic and World of Science. Extracts from a Lecture by Mr. E. P. Pett.*)

WORK FOR THE WEEK.

KITCHEN GARDEN.

The weather during the past week has in many parts of the country been particularly favourable for planting out the main autumn and winter crops. Where Broccolis are planted between Peas a narrow space should be dug for them if the ground is very hard; the rest of it can be dug and the intermediate rows of plants put in when the Peas are off. As the heads of *Artichokes* are taken the stems should be cut close to the roots; clear the stools from decayed leaves, and loosen the surface of the soil about them with the hoe. No time should now be lost in getting out those varieties of *Broccoli* which come in during the autumn; they may now take the place of the early Peas. Earth-up the *Cauliflowers* that were planted at the beginning of last month; plant more for use in the autumn. The main crops of *Celery* should now be planted out; loosen the earth about the early crop, and give it good supplies of water if there is not sufficient rain to keep the soil quite moist. Keep the linings of the *Cucumber* frames made up, so as to afford a gentle warmth through the bed, for however warm the weather may be, this is necessary to procure fine handsome fruit. As soon as the tops of *Garlic* and *Shallots* begin to die pull up the roots; after allowing them to remain on the ground a day or two to dry, tie them in bundles, and hang them in a root-cellar. Another sowing of *Lettuce* should be made in drills where the plants are to remain; a little of the Paris White and Bath Cos may be sown at the same time. Save and prepare horse droppings for *Mushroom* beds to produce through the autumn and winter; take care that the newly-made spawn bricks are thoroughly dry before being laid by. Sow a few rows of *Spinach* to keep up a succession, thin the preceding crop, and keep it watered in dry weather. Thin-out the last sowing of *Turnips* to a foot or 15 inches apart, and as the weather is now favourable, the main autumn crop may be sown.

FRUIT GARDEN.

Protect fruit from birds by covering the trees with nets. Where Currants and Gooseberries are required to be kept on the trees late in the season, they should be matted-up. Finally thin wall fruit. Keep the shoots of the trees neatly laid in. Do not uncover the fruit more than is necessary. Give espalier trees their summer pruning. Keep fruit borders frequently hoed and raked. Pinch out the point of the present year's wood of the Fig before nailing-in. Stop and nail-in Vines, and continue to carefully watch the progress of the green fly. When new Strawberry plantations are intended, prepare the ground by deep trenching and well manuring with rotten dung. Layer into 3-inch pots a sufficient number of the desired kinds of plants for the purpose. This little trouble will be amply repaid by the quantity and quality of the first year's crop.

FLOWER GARDEN.

The recently-planted beds will still require watching to get the plants in them fairly on the start. The heavy rains of the last month have chilled the ground, and some of the more tender or badly-rooted plants look sickly. As the grounds and shrubberies are much frequented by company at this season, pay

more attention in keeping the greatest neatness and order in every part where there are hands to admit of it. Flowering shrubs as they go out of bloom should have their dead flowers, &c., removed, and be slightly cut back. For the same reason remove the seed pods from Rhododendrons, tree Peonies, &c. These little attentions (where they can be given without infringing on more important matters) will be attended by an increased growth of the plant, and a greater certainty of their blooming every season. The propagation of Carnations, Picoetes, Cloves, &c., should not be longer delayed. As cuttings of the young grass will succeed at this season, a slight hotbed should be made, on which place a few inches of very sandy compost; Select the weakest grass for cuttings, and place an air-tight hand-glass over them. The strongest shoots left will answer for layering. The present is the favourable time for putting in cuttings of all the more showy herbaceous plants, selecting for the purpose the small shoots not furnished with bloom. A north border is a suitable place to strike quickly. Pansies for autumn blooming may be treated in the same way. Hedges should be well cut-in with the shears. As a deciduous plant for hedges, nothing is better than the Turkey or hybrid Lucombe Oak; and *Taxodium sempervirens* will be found a most eligible plant for making evergreen hedges, as it grows quickly, bears the knife well, and has an agreeable appearance. Push Dahlias on by watering freely when the weather is dry, also assist them by mulching the ground with decayed stable manure. Take care that the plants do not chafe where attached to the blooming-sticks.

GREENHOUSE AND CONSERVATORY.

During the time when house climbers are in an active state, make it a rule to go over them frequently, that they may not grow into a confused state. The same may be said of climbers in pots, which require attention for the same reason every few days. Any shoots which have done flowering should be cut back and a crowded growth avoided. A number of hardwooded plants which were cut back some weeks since will now have recovered themselves and be commencing a fresh growth. This is the proper time to shift into larger pots any plants requiring it. Carefully loosen the outside roots with a small pointed stick. After potting keep the plants closer for a few days and syringe them daily, but avoid giving any more water to the roots than is sufficient to preserve the old ball moist. To prevent watering so quickly after potting, mind the roots of the old plants are well moistened before being potted. The greenhouse plants out of doors will require the canvas or tarpaulin being drawn over them during heavy rains. Those still remaining in the house must have abundance of air. Watch narrowly for green fly, which often does considerable damage to such things as *Leschenaultias* before it is found. Fumigate or wash with weak tobacco water wherever there is the least indication of its appearance. Whenever room occurs in plant houses take a few of the most forward *Fuchsias*, Japan Lilies, and *Gladioli* to assist in keeping-up the floral display. *Brugmansias* and other vigorous-growing plants should be frequently assisted with manure water, as they are liable to be infested with insects. Use the syringe freely to keep them under before the plants come into bloom. Orange trees and many large specimen plants require less water about this time, but diminish the quantity very gradually. If the plants in the greenhouse are now all of the true greenhouse kinds, give them as much air as the house will admit; but if, as is generally the case at this time, they are a mixed collection of half stove plants and annuals, you must keep them close at night with a very damp atmosphere, and you may let the house get well heated by the sun before you give air in the morning. Training and staking plants, surfacing pots, and similar routine business, need not be recapitulated.

STOVE.

For the next six weeks or two months, according to the weather, stove plants ought to have more air and light than at any other period. After this time, therefore, shade as little as possible, with the exception of Orchids or young and newly-propagated plants. Seeds of those splendid *Clerodendrons* which make such a fine display at summer exhibitions, should be sown as early this month as possible; they will flower at this time next year or earlier, and seedling plants are much easier to manage than those from cuttings. So far as Orchids are concerned, those showing indications of matured growth may be first removed to the cool end of the house for a few weeks, and afterwards placed in quarters where the temperature and atmospheric moisture will not interfere with the slow progress of the plant towards a state of rest. *Dendrobiums* and others of that class should be grown on till the shoots are of sufficient length. Wash any plants infested with insects with a lather of common brown soap, using a sponge for the purpose.

PITS AND FRAMES.

When rooted cuttings are potted-off they should be removed to a frame by themselves, where they must be shaded until they make fresh roots. Bud Lemon and Orange stocks if the bark runs freely. Put in cuttings of *Chrysanthemums* to pro-

duce dwarf plants. Repot rooted plants as they require it.—
W. KEANE.

DOINGS OF THE LAST WEEK.

SINCE writing last week's doings we have had two refreshing showers; in all 0.88 inch of rain fell. We had just determined to begin watering in earnest, as bedding plants and florists' flowers, as well as Peas in the kitchen garden, were showing evident signs of distress—indeed, not only in the gardens, but in the fields was the want beginning to be felt. Potatoes and other green crops are now making giant strides towards full development. Some of us were grumbling very much at the backwardness of the season; we ought now to be ashamed of ourselves, and be truly thankful for the present propitious weather.

KITCHEN GARDEN.

Although we have been incessantly working amongst all crops, and running the hoe through all the borders, we noticed that some weeds had been left, and where they showed signs of running to seed a man with a basket soon cleared a large space by pulling them out with his hands. We also seized the opportunity, when the walks were wet, to pick out the weeds. It is of little use weeding walks when they are dry and hard; it takes much longer to get over them, and not only so, but many weeds are broken over, and will grow again as soon as rain comes. We also planted out *Brussels Sprouts*, *Savoys*, hardy *Greens*, *Celery*, &c.

The *Asparagus* beds having become full of young seedling *Asparagus* plants, we had them forked out before the beds were too thickly covered with the "grass" of the old plants; the hoe run over afterwards made them right for this season. Much of the early-planted-out *Celery* has run to seed; in some instances whole rows had to be pulled out and replaced with later-sown plants.

FRUIT AND FORCING HOUSES.

Pines.—We have been removing some of the largest plants and those showing fruit from a succession house into the fruiting house, to replace those which have ripened-off their fruit. Where there are only small houses and few of them, the best way to obtain a succession of fruit is to remove a few plants into the fruiting house, keeping those which are throwing up fruit and ripening it off at one end of the house, and placing those that have yet to throw up fruit at the other end, where they can have slightly different treatment afforded to them. Admit air freely into the house where the fruiting plants are.

In the early *vineries* we have had nothing to do but to pinch-out all the young growths as soon as they are formed, and to keep the leaves free from red spider. In the late houses the same attention has been given to stopping the lateral growths. We are particular to stop the growths as soon as they are formed—that is, if the roof of the house is well furnished with leaves; if this is not the case the laterals are trained to the wires to fill up any vacancy. Other Grape-growers have different methods. On one occasion we saw strong canes under and over the hot-water pipes, running over the surface of the ground in all directions, as well as coming down the back wall, while the roof of the house was densely covered with foliage. This treatment was to cause the formation of roots, which no doubt it did, as the more foliage and growth allowed the greater will be the increase in the root-action; but we only mention the system to express our disapproval of it. In the second house we must mention two sorts of Grapes that are good this year—viz., *Golden Champion* and *Royal Ascot*. The first-named has been finer than we ever had it, but, notwithstanding this, it has proved to be so uncertain that we cannot recommend it. *Royal Ascot* has been particularly fine in bloom and size of berry, but it is not so fine in flavour as most of the others, and has the fault of being attacked by red spider sooner than most of the old sorts.

Cucumbers and Melons.—Melons have been generally good this year, although the season has been rather unfavourable for them; this is accounted for by the fact that the system of growing them trained to wires is more generally adopted than it used to be. The old system of planting on a mound of earth over a dung bed in narrow lean-to pits, and the plants trained over the surface, is not good and ought to be done away with. Our first house is done, and the second nearly so; and as they are required for other purposes, we shall not plant again, otherwise had the plants been ready in good-sized pots another crop could have been easily obtained in August. There is one thing should be noticed here, and that is the rapidity with which any insect pest spreads on Melon plants. We have noticed a house of healthy plants, which were apparently free from red spider, in about ten days entirely ruined by this pest. We had a new experience in this during the present season, by having one house attacked by green fly; this of course can easily be destroyed by fumigation. Red spider must be syringed off before it spreads too much. The Cucumbers may be said to be the same thing from week to week, as one house continues to supply us with

fruit from the same plants all the year round; about a dozen fruit are sometimes cut at one time, and laid up in the fruit room, which gives us an opportunity to thin-out the shoots more freely, and to cut off any old leaves that may become infested with thrips or spider. Thrips are very destructive in Cucurbit houses, and are not easily destroyed; fumigating the house two or three times in succession with tobacco smoke will keep them under, but it is best to continue fumigation until they are quite destroyed.

CONSERVATORY AND PLANT STOVE.

There is continuous work here in the way of re-arranging plants, as the flowers are not so lasting as they are in cool weather; but we do not care so much for flowers here, when the flower garden and borders are at their best. We have been re-potting Chinese Primulas, Tree Carnations, and other plants of this nature, to furnish us with flowers when there are none to be had out of doors.

Chrysanthemums also claim attention in the way of sticking and tying-out the shoots of specimen plants. The young shoots had become infested with aphides, which would soon have checked their growth; they were dipped in tobacco water, which effectually destroyed the aphides. Some dry snuff shaken over them would have answered the same purpose, and can be more readily applied. We have also very nearly finished potting all of them in their blooming pots. Those intended for cut flowers were placed three plants in 11 or 13-inch pots, and a few pairs of plants in 9 and 10 inch pots. The specimen plants were potted in various sized pots from 8 inches up to 15 inches inside diameter. The pots are always crocked with oyster-shells, and the same material pounded-down serves to mix with the compost in which the plants are potted.

FLOWER GARDEN.

The beds are now at their best, and much care is taken to pick off all decaying flowers as soon as they appear to fade. The Rose beds and borders must be looked over every third day, as decaying Roses on standard or dwarf plants cannot be permitted. They are free from green fly this year, and the worm which attacks the bud as soon as it is formed has not been so troublesome to us as it is sometimes. Our soil is not adapted for herbaceous plants, as a large proportion of them require a soil of good depth and of some holding power. In our shallow gravelly borders they require much attention, especially as regards watering; if neglected in this particular many of the more delicate die altogether. In all gardens where things are expected to be done in first-rate style, and where labour is highly paid, it is best to have the water laid-on to all parts of the garden, so that hose can be attached and the water spread over the ground easily and quickly.—J. DOUGLAS.

TO CORRESPONDENTS.

•• We request that no one will write privately to any of the correspondents of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed *solely* to *The Editors of the Journal of Horticulture, &c.*, 171, Fleet Street, London, E.C.

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

N.B.—Many questions must remain unanswered until next week.

BOOK (*Fidget*).—Our "Flower Garden Manual" contains the treatment of Pelargoniums, Fuchsias, &c. It may be had free by post from our office for five postage stamps.

FRUIT (*H. P.*).—Write to Messrs. Webber, Central Avenue, Covent Garden Market.

DEAD CEDAR (*G. R. B.*).—The leaves being white at the end of each shoot, it is only a sport, occasioned, probably, by the roots having descended into an unfavourable soil.

VEITCH PRIZES.—Mr. Wakefield, who took the first prize for Black Grapes on the 3rd inst (see page 31), is gardener to F. Gretton, Esq., Bladen House, Burton-on-Trent, not Leamington, whence, however, he sent his entry.

HEATING A SMALL GREENHOUSE (*J. Wilson*).—Any pan-stove with a 9-inch ring of flues, and a tube to carry the fumes into the open air, would be sufficient to exclude frost from a house 12 feet by 9 feet.

STRAWBERRIES (*A. B. G.*).—Even if in perfect order we cannot name Strawberries, they are too slightly differing; but your two berries were reduced to a pulp, and the box streaming with their juice.

ROSES WITH GREEN CENTRES (*M. E. W.*).—Early pruning and cold weather in spring, which give a check to the sap, are often the causes of green eyes in the centre of Roses. There is, we fear, no royal road to prevent it. It is never wise to have early-pushed buds on the plants at pruning time, which may do for the sake of having earlier blooms.

SEEDLING GERANIUM (*M. V. W.*).—It is not equal to many of similar colour and leaf.

SPIDERA JAPONICA AFTER FLOWERING (*Lady Subscriber*).—The plants should be kept in a cold frame if they are out of flower before May, and ought to be kept there with abundance of air and due supplies of water until the middle of that month, or later if frosty. They should then be plunged outdoors, and must be well supplied with water throughout the summer. If the spot is sheltered they may remain until wanted for forcing, and may then be shifted into a larger-sized pot. Ours under this treatment increase in size annually, and as a rule produce double the number of spikes of bloom. They are in large pots—masses giving fifty or more spikes of bloom.

IMPROVING SOIL (*Idem*).—The soil you sent us is very barren, being mostly sand. The insect in it—for we only found one—is the wireworm. To destroy it we would dress the uncropped ground with gas lime at the rate of twenty bushels per acre, and point it in with a fork. To improve the land we should add all the turfy loam we could, and at the same time apply a good dressing of stable or farmyard manure, not more reduced than will permit of its being dug-in. The addition of fresh soil we should most rely on, applying as much of that as you could procure, also of dung. With these applications this autumn, dig-in and throw up roughly for the winter, forking over in frosty weather in February, a good lining in March (100 bushels per acre), and fork-in, we think you may next year put in the various kinds of kitchen-garden crops, as well as flowers, with every prospect of success.

PEAS DISEASED (*A. F. S.*).—The Peas, from your description, are suffering, and have died, from the coldness of the soil and long-continued cold weather. Though ours have not died they have suffered to a considerable extent, having turned yellow, but only those of the Wrinkled Marrow section. The best means of saving the crop in future would be to dress with quicklime in spring, and point it in before sowing. When the Peas appear above ground dust them and the soil with quicklime every week or ten days until earthed. You will not find them die-off next year.

TREATMENT OF TRICOLOR AND BICOLOR PELARGONIUMS (*Fidget*).—The plants are best shielded from powerful sun, hot sun being fatal to good colouring. We would have an awning of tiffany on a roller to let up and down by a cord and pulley, using it only during bright sun. The soil we advise for the Tricolors is fibrous loam, neither heavy nor light, three parts, leaf soil one part, half a part old cow dung, and half a part silver sand and pieces of charcoal in equal proportions, the whole well mixed. Be careful to afford good drainage, and do not overwater, especially soon after potting, and yet they should never be allowed to become thoroughly dry. This applies more particularly to Bicolors. They should be kept near the glass and have abundance of air. We do not advise mixing peat with the soil for these Pelargoniums. The plants from cuttings of last year should soon have a rest by being kept dry, and should then be cut down like other Pelargoniums.

GRAPE BUNCH SHRIVELLED (*Idem*).—The bunch you sent us is shrivelled in consequence of the Vine roots being in soil of a much lower temperature than that in which the leaves are growing; hence the sap is not furnished rapidly enough to meet the requirements of the foliage. The only remedy is to keep the temperature of the house rather low by a free admission of air in hot days in the early stages, or until the Vines are coming into flower, or to apply heat to the border.

CUCUMBER LEAVES SPOTTED (*G. W.*).—We think the leaves have been scorched by the sun, but the spotting may have been caused by the fumigation. They exhibit no indications of insects. We should give a little air early in the day, so as to have the leaves dry when the sun strikes powerfully on them, and in fumigating be careful to deliver the smoke cool and not too strong. Put flowers of sulphur on the hot-water pipes.

IVY CUTTINGS (*F. J.*).—You may put in cuttings of the young shoots of the current year as soon as they become firm, which they will be about this time. It is not necessary to have a portion of old wood, but they may be cut into pieces of 6 inches, and inserted two-thirds their length in light sandy soil in a shady border, keeping moist. We prefer the short stubby shoots 6 or 8 inches long.

MORELLO CHERRIES FALLING (*Idem*).—It is very common this year, which we attribute to the long-continued cold, and this has not conducted to the thorough setting of the fruit, or it may be a result of the wood being imperfectly ripened last year, owing to the cold and wet of the late summer and autumn. With us all kinds of out-door fruits, except Apples, have set very liberally. The pinching of all shoots which you cannot lay-in is right. It would not cause the fruit to fall.

THINNING PEARS (*Idem*).—We should thin-out the fruit in each cluster to two or at the most three, not leaving more than two or three dozen on each tree. The fruit will be finer, and the trees will not be injured by the crop named if you feed them well at the roots.

GALLS ON MALE BLOSSOMS OF OAK (*C. J. G.*).—The galls sent appear to be shrivelled-up Currant galls, as they are formed, caused by the punctures of *Cynips quercus-pedunculata*. The gall dies will appear next spring. Male gall flies are well known.—I. O. W.

GALLS ON ELM LEAVES (*J. E. Skinfold*).—The very numerous excrescences on the Elm leaves are galls formed by a plant-louse, *Aphis gallarum ulmi*, each gall being inhabited by a small brood of the young of these insects.—I. O. W.

STRAWBERRIES FOR SUCCESSION (*A. C. H.*).—Viscountess Héricart de Thury, President, Sir Joseph Paxton, Dr. Hogg, and Frogmore Late Pine. There are no late varieties of Asparagus.

AZALEA and CAMELLIA CULTURE (*A Very Old Subscriber*).—When the growth is made and the buds set, place the plants out of doors on ashes, in a position shaded from the midday sun, taking care that they do not suffer from want of water. The hot and dry conservatory would be altogether unsuitable, also the vinery after the growth is made.

CINERARIAS and CALCOLARIAS (*Idem*).—The plants would thrive much better if placed on ashes on a shady border sheltered from winds, and should be kept moist. A hot and dry conservatory is not suited to them.

TRANSPLANTING VIOLETS (*Idem*).—You may now take off the rooted runners or suckers and make a new plantation, shading them from bright sun, and watering in dry weather. It would have been better to have planted them earlier.

HOSE CHENTNUT AND SYCAMORE LEAVES DRIED-UP (*J. B.*).—Not knowing more than the fact that the leaves are dead, we can only say, that as there are no fungi upon the specimens sent, we surmise that the roots have descended into an obnoxious soil.

GRAPE SPOTTED (*An Orphan Gardener*).—Remove all the spotted berries and water the roots of the Vines copiously with tepid water once a fortnight, and the alternate week with very weak liquid manure.

DISTINGUISHING CARNATIONS, PIOTEEES, AND PINKS (J. W.).—Carnation marks are in flakes or ribbons of colour from centre to edge, and through the edge; and the more dense these ribbons, or stripes, or flakes of colour are, and the more distinct the white ground between them, the better, and the more equally divided as to quantity they are the better. As the petals are broader as they approach the outer edge, so also are, or should be, both the colour and the white. They are divided into classes called Bizarras and Flakes, the former having two colours of stripe besides the white, the latter only one colour. These Bizarras and Flakes are subdivided, there being purple flakes, rose flakes, and scarlet flakes; and among the Bizarras, scarlet bizarras, which have scarlet stripes, and a second colour, which is considered better for a rich contrast of black, and approaches to it; then purple bizarras, which have purple stripes, with a light pink or rose, or some other colour, forming a contrast. The Piotee has the colour only on the edge, and broad or narrow, as the case may be, but ramifying towards the centre; any mark or spurt of colour that does not touch the edge is a blemish. Some, therefore, are only marked round the edge very distinctly, but as narrow as possible; others have a sort of feathering, narrow or deep as the case may be, but feathering inwards from the edge; the outer edge solid, and the inner edge rough or feathery. The Pink is distinct from both these. The lacing, as it were, of a Pink is rough outside and inside, with a portion of white outside the lacing, as if a band of colour had been laid on; besides this, there is colour at the base of every petal, and, perhaps, one-third of the distance along the petal, so that it forms an eye or centre of colour, which is peculiar to itself, and which never occurs in the Carnation or Piotee. A Pink without its lacing all round each petal, and its narrow strip of white outside it, would be worthless as a show flower. The more distinct this lacing is the better; it should look like an even piece of embroidery, just fairly within the outer edge of the white.

GRUB ON PEAR LEAVES (J. C. A.).—It is the slimy grub, of which we gave drawings and full notes in our No. 638, published June 19th. Dust slaked lime over the grubs.

NAMES OF ROSES (H. C.).—The petals were all falling off when we received them; we believe No. 1 is Charles Lefebvre; 20, General Jacquemont; 32, Lord Raglan. It is very difficult to name florists' flowers from single specimens in a flagging state. We are nearly sure of 29 and 32, but No. 1 might be Madame Victor Verdier.

NAME OF FRUIT (C. Smith).—Barcelona Pearmain.

NAMES OF PLANTS (Inquirer).—1 and 6, *Lactuca dilatata* (?); 2, *L. Filix-mas*; 3, *L. Filix-femina*; 4, *Polystichum angulare*; 5, *P. aculeatum* (?). (*F. H.*)—1, *Oxalis incarnata*, a Cape species, and, therefore, certainly not the Shamrock, though what plant was originally so called is open to question. 2, *Eutoca viscosa*, a Californian annual. (*John S.*)—A species of *Cotoneaster*. (*M. M.*)—*Kalmia augustifolia*. (*Young Gardener*).—2, *Sclaginella uncinata*; 1, *S. apus*; 1 and 3, indeterminate without fruit. (*R. H. C.*)—1, *Hypolepis repens*; 2, *Pteris scaberula*; 3, *Cystopteris fragilis*; 4 and 5, *Pellaea hastata*. (*A Subscriber*).—We cannot name florists' varieties, nor plants from leaves only.

POULTRY, BEE, AND PIGEON CHRONICLE.

POULTRY PAST AND PRESENT—THE LAW OF DEVELOPMENT.—No. 3.

In my last paper on this subject I tried to show by the example of the Game fowl, that if the attention of the breeders of a variety be mainly fixed upon one point, or set of points, other points will and must lose, while those sought increase in perfection. It will be found on examination that this law is general, and explains most of those changes of fashion which can be remarked in poultry-breeding. But it will also be found on examination that when perfection, or what is considered sufficient perfection, is once reached, other points can be attended to without much depreciation of the points already gained, provided only these last are not, as often happens, again comparatively lost sight of.

I have been singularly interested to observe how this simple law is to be clearly traced through the past history of many breeds, as shown by the copious notes which have been placed at my disposal by various breeders for the work on which I am now engaged. A good example is found in the Spangled Hamburgs. Mr. Beldon—than whom there can hardly be a better authority—believes that the original of this breed was the Yorkshire Pheasant, from which, by careful breeding, was made the Lancashire Mooney. In this breed, as is well known, the spangling of the hens was the one point sought, and it was obtained in glorious perfection. But in fastening attention upon this other points were lost sight of, and accordingly the breed deteriorated in neatness of head, in ear-lobe, and in the plumage of the cock, which, there can be little doubt, became hen-feathered through this close breeding to get well-spangled hens, as it is still found that heavily-spangled cocks are the best for this purpose. After awhile the neglected points were required by the judges, but were only obtained at first by such a sacrifice of spangling in the hens that these could not be shown, the Mooney being required to be shown in this sex. By degrees, however, the pullets produced by the cross became better and better, till at length several Hamburg breeders possess strains which breed first-rate Silver-spangled cocks, while yet the pullets produced are little inferior to the old Silver Mooneys, which have consequently almost disappeared. Other instances could be named, but one adequate illustration is as good as many, and I am anxious to come to the practical application of what we have been considering.

If I wished to put that into the fewest words, it would be those

of the old proverb, "One thing at a time," a maxim which deserves writing in letters of gold, so little is it understood by young and inexperienced fanciers. As a rule they will not believe in it till they have tried the other way and lost heavily by it; and many never learn it at all. But I never knew a good breeder of any breed who did not act upon it, whether he thought he did or not. The young amateur, however, goes on a different plan. Having mated his birds and bred his first-year's chickens, he finds he has in his yard, in all probability, some prevalent fault. He buys a cockerel at a good price to remedy this fault, and breeds again. Probably this fault is somewhat better, but some other fault now appears, and he now perhaps buys another bird, or, if not, mates up his own, almost entirely with a view to remedy that, when he finds to his dismay that either the first fault, or perhaps a third, again appears to trouble him, and show that he is as far off perfection as ever; and so he goes on. It has been the experience of hundreds.

Now the reason of all this is, that he has never bred for any point of perfection long enough to really fix it in his yard. He never stays to secure what ground he has already gained, but throws this away while trying to get some more. He has no fixed ideas, which all good breeders have, and he gets the proverbial reward of every man who works without a purpose or a plan. He tries to remedy fault after fault, just as it appears the most glaring of the season to his eyes, and if there be any brief change of fashion in judging, as there occasionally is (generally, I believe, it will be found, these changes of fashion occur in order to counteract the faults of the day), he tries to meet them too. In brief, he fails simply because he does not understand it must be one thing at a time.

Every breed has its ideal standard or model. The amateur must first get this well into his mind; or, if he thinks the understood ideal faulty, he is at liberty to form in his mind a better—if he can. Few men think exactly alike on these things, and hence the differences we see in different strains. Now, having formed his ideal, he has to consider what class of points are at once the hardest to secure, and the most valuable when made permanent. In nearly all varieties these are beyond question the points of colour or feather. As a rule, therefore, these should be the first points bred for, and breeding should for several years be mainly directed to securing them in the highest perfection, and in such a degree that the stock can be depended upon to breed birds satisfactory in this respect. While doing this other points need not be altogether ignored, of course; but they should be kept somewhat subordinate, and only a general kind of attention be given to them to see that they do not become very bad, while the ground being more specially cultivated is made thoroughly secure. Then, when so much has been done, comparatively little care will be needed to preserve the points thus attained, and from the chickens bred from the strain thus far formed such may be selected as present other points desired. Crossing, or at least a thoroughly alien cross, should very rarely be ventured upon, nearly always doing much harm from a mere fancier's point of view, for the simple reason that you can never be sure the bird selected has been the product of a similar "course" of breeding to your own yard, and if not, he will introduce an element of uncertainty which is undesirable, and often dangerous. But by steadily persevering with one stock, working steadily towards a definite object, and securing all ground really gained, a gradual but sure approach to excellence will be ensured, and every year will see something evidently gained.

This, then, is what I mean by the law of development. You have simply to breed steadily towards any desired point, selecting those birds which show it best, and you infallibly get it (if the standard you set up be a possible one), if you keep on long enough. While doing this you can pay only subordinate attention to other points; but when done you can pay more to them also, since your fixed strain will give you so many birds with the points you first sought, that you can select from them all you want to secure the next point. It is simple as A B C, and bears the same relation to the whole science of breeding which those letters do to all written language. I am not sorry that the difference between some breeds of poultry past and present has given me occasion for a few words upon it.—L. WRIGHT.

EXHIBITING SINGLE BIRDS.

It is surprising that more has not been said on the single-bird system. However, the number of letters that may appear in print is not always an index of feeling on a subject. I do not exhibit much, but when I do exhibit I prefer those shows where the single-bird system is adopted. Small breeders like myself find it almost impossible to show where the above system is not adopted. A man might possess a good male bird and two good hens, and yet not be able to exhibit a pair. Two birds that did not match might possess greater merit than two that did, yet the latter would win. I bred from thirty to forty chickens (Buff Cochins) during the season, and I obtain two fit to exhibit anywhere, I am more than satisfied and yet how very impro-

bable that the two would match. Even the large breeder finds it difficult to match his birds. How must it be, then, with the majority, who are not large breeders? The small breeder has plenty of disadvantages in competing with the large breeder, without the difficulty of matching. We should have more fanciers, too, who buy birds simply to exhibit, because it would require less capital. Another important item—carriage, would be decreased. Judging, too, would be less difficult with one bird in a pen. Those who possess one good bird would not be excluded from showing. At many of our leading shows the single-bird system is adopted with, I believe, great success, and I hope it will soon become universal.—W. L. PEACE, *Driffield*.

HAVING seen the letters by "IMPARTIAL" and "TYNESIDE" in your Journal, I and many others are of the same opinion, that where the single-class system is carried out, it greatly tends to improve the show. Take, for instance, Thorne. Last year the entries for poultry under the double-class system were 165; this year, on the single-class principle, the entries were 276. The single class gives those a chance of exhibiting who perhaps might be unable to do so in the double class, whilst, on the other hand, it does not interfere with those who would enter in the latter.—CLERICUS.

COTTAGE POULTRY-KEEPING.

In your excellent paper of June 26th there is a short article upon the consumption of eggs, and you remark, "Anyone who traverses the bye-roads and lanes of Sussex, and sees how they are fringed with hen-coops belonging to the cottagers, learns a beneficial lesson, and would impress it as we do upon all our cottage friends." I am residing as rector in a purely agricultural village, and often and often have I spoken to my poorer friends upon the beneficial results in every way of keeping poultry. I quite believe that if only they had some such innocent and profitable little hobby as this, it would keep many a young man from evil company and the public house, &c. Many of them go lounging about, or worse, all these lovely evenings, because they have no occupation or amusement. Old Dr. Watts says, true enough—

"And Satan finds some mischief still
For idle hands to do."

But, now, what is to be done? Every person I speak to on the subject says, "Well, sir, I should very much like to keep poultry, but the farmers won't let us, and we should be turned out of our cottages if we went against them." Now, something like this has been the answer of several this week, to whom I spoke after your article upon the subject. Can anyone suggest a remedy?—Rector.

P.S.—My head gardener, who is my tenant, keeps poultry, and finds it pay.

[The farmer who is so destitute of correct feeling as to forbid a labourer keeping poultry, is a character we are so fortunate as never to have known. In the southern districts of Sussex almost every cottager is a poultry-keeper, and the farmers allow the poultry to have the free range of the fields so soon as the harvest is in-gathered. At other times they are restricted to the road-sides. It may be objected by the farmers of your district that they might then trespass on the growing corn, to which the reply is that of a Sussex farmer, "They never does any injury." The most selfish and flinty of farmers might make a contract with his labourers, that he should have a per-centage on all chickens reared.—EBS.]

BOSTON POULTRY SHOW.

THE general arrangements of this Show were excellent, and the promptitude with which the birds were penned on their arrival, and at the close of the Show despatched to their owners, merits the highest praise. The tent was very spacious, and contained specimens so diverse in character as to greatly add to the general interest of those visitors whose single object was sight-seeing. Besides a good collection of both poultry and Pigeons, the tent also contained a very great variety of Cats, Parrots, Canaries and other singing birds, whilst many excellent classes of Rabbits, and a few cages of black-and-white rats and white mice were not without their respective admirers. Another equally large tent contained the dog show, and as the weather proved fine, an extraordinary attendance of visitors was secured.

But to the poultry. Although some of the classes were exceedingly small in numbers, they were generally composed of specimens sent by the most noted breeders, and hence visitors at the Boston Show had the opportunity of seeing most of the best fowls of the day, without having to examine the accumulation of second class birds, that often tends rather to perplex than benefit an inexperienced amateur. Mr. John Robinson exhibited the only pen of *Dorkings* in the exhibition! They were a really good pair, but it is difficult to say what is the reason of the competition of late in this most useful variety of poultry having so sadly fallen off. Messrs. Lacy and Ansdell sent some remarkably

fine Buff *Cochins*, but the generality of the others betrayed that fatal objection—"mealy wings." Light *Brahmas* were decidedly poor in quality, whether as to colour or conformation. Messrs. Ansdell and Lacy sent the only two entries in the class for Dark *Brahmas*. Both these pens are well known to be excellent. It was generally regretted that the cock in the first prize pen betrayed evident symptoms of falling off from the high condition in which the owner usually exhibits his poultry. The prize pens of *Spanish* fowls were perhaps as closely competing as any class in the Show, and from their high merit attracted the attention of almost everyone. Both Golden and Silver-spangled *Hamburghs* proved first-rate, but the Pencilled ones were very deficient in quality. The *Game* fowls were certainly some of the strongest classes at the Boston Show. Mr. James Fletcher's cup pen of Black Reds were admirable, being shown in faultless condition, and certainly the truest in feather that have been seen for some time past. Some of the Brown Reds and Duckwings were likewise especially well shown. Not by any means without a vigorous competition, however, Mr. Entwisle held his own against all comers in the *Game Bantam* classes; his cup pen of Red Piles being the most faultless in colour and character that have been shown for many years past. Class 48 was exclusively appointed for *French* fowls, and the *Crèves* were singularly perfect. From some cause not easily to be accounted for, a pen of the very best White *Cochins* in the fancy made their appearance in this class, but as a matter of course were disqualified as being wrongly entered. In the Variety class, Golden *Polands* were the successful winners of both prizes. A newly-appointed class, "for the heaviest couple of live fowls, cock and hen, any breed," to the perfect astonishment of everyone present failed to enlist a single entry.

Aylesbury and Rouen *Ducks* were very superior, and in the Variety class one pen only of very well-conditioned Whistling *Ducks* constituted the entry. Both the *Geese* and *Turkeys* were very fine.

The *Pigeons* were unusually good, some of our principal exhibitors and dealers running very close races in nearly every class. The Carriers were, without exception, classes that would add much to the credit of any show. The *Pouters* were a most praiseworthy class, nearly every bird being in fine show condition. The classes for *Barbs*, *Turbits*, and *Antwerps* were such as constituted an exhibition even of themselves.

Rabbits.—The show of these was quite a success as regards their quality, as most of the noted prize and cup-winners were present. The first-prize Black-and-white was a doe of extraordinary properties, with ears measuring 21½ by 5 inches; the second was a nice Black-and-white buck, 22½ by 5½ inches; third a young buck, 21½ by 4½ inches, that will much improve with time. The very-highly-commended doe exhibited fine properties, but the ears were only 20½ by 5 inches. A high commendation was awarded to a nice doe. In this class was shown a good Grey-and-white doe, 21½ by 5½, which, had she been in her right class, would undoubtedly have taken the second prize. Only two animals were shown in the Blue-and-white class, but both were of rare quality. The first prize went to a doe 22½ inches by 5½; the second to a doe 22½ by 5½ in ear-measurement. So close was the competition that the best-matured Rabbit won. The Yellow-and-white was the grand class of the Show. The first honours were taken by a doe with ears 22½ by 5½ inches, and which has a very fine eye, good colour, nicely marked, poorly lopped. The second award went to a splendid Lop doe, 22½ by 5½ inches, fine in shape. The competition was so close that condition alone decided the prizes, the winner being shown in the highest possible condition. Third came a doe of good properties, and closely following it a very-highly-commended buck, ears 21½ by 5½ inches. Of Grey-and-whites there were two entries; the first prize went to a fine buck, 22½ by 5½; the second, from want of merit, was withheld. In *Tortoises*, the first place was taken by a magnificent doe, 22½ by 5½ in ear-measurement, shown in grand condition, taking the cup for the best Lop in the Show. The second prize went to a grand young buck, 23 by 5½ inches, very bad in colour, said to be only six months old. If no older he will make an extraordinary animal in time.

The Self colours, the largest class, contained only three Rabbits of merit, the first of which was a Blue buck, the longest-eared Rabbit in the Show, measuring the extraordinary length of 23½ by 5½ inches, good in size and shape, and perfect lop, poor eye and colour, and in bad condition. The second prize went to a buck, with ears 22½ by 5½ inches; the third to a doe 22½ by 5½ inches. Himalayans were a fair class; first came a buck of that evenness of shade so desirable; second, a very nice buck; third a buck. All the commended Rabbits were good, and their competition very close throughout. Silver-Greys were an extra good class. First came an immense doe, beautifully silvered, taking the gold medal for the best Rabbit in the Variety class; second, a remarkably fine young buck, both having beautifully silvered heads; the third-prize Silver-Grey followed closely, being in grand condition. The highly-commended and commended were good, but a little dark on the head, with beau-

tifully-silvered bodies. For Belgian Hare Rabbits, the first prize went to a very large buck, a little dark in shade; the second to a large good doe; and the third to a nice Rabbit, but too small, being only six months old. In Angoras, a doe of that fine silky character so desirable in this variety was first; the second prize was withheld from want of merit, and the third went to a fair Rabbit in good condition, but too small.

In the Any other variety class first came a good Tortoiseshell Dutch, with a perfectly-marked head and body, a little uneven in the feet, and of the old style of marking; second, a good young Dutch buck, black-and-white, evenly marked feet and head, but defective in the ring; new style of marking; third, a Dutch doe, black-and-white, fairly marked, old style. A black-and-white Dutch doe was very highly commended; grey-and-white Dutch highly commended; Ram or Patagonian highly commended; and a Siberian doe commended. A very fine Belgian Hare was passed by, being in the wrong class. The heaviest Rabbit weighed 15 lbs. 8 ozs.; second, 11 lbs. 1 oz.; third, 11 lbs.

The Rabbits, as a whole, were shown in fair condition, Mr. Ball's being in faultless condition, with the exception of his Dutch Joe, which was far too fat, being a large Rabbit, far too large for exhibition. Mr. Easton's Rabbits were shown in fine condition. Exhibitors should bear in mind that good condition is essential in close competition. There were three Rabbits suffering slightly from ear-gum and scurf, but as a whole they were the healthiest lot of Rabbits it has been our lot to look at. Great credit is due to the Manager and Secretary for the manner in which the wants of the animals were attended to. Good roomy pens were provided, and the animals well bedded with sweet hay, and fed with wholesome food. We have no hesitation in saying that they would return home to their owners little, if any, the worse of their journey.

The show pens were provided by Messrs. Turner, of Sheffield. The Judges were, for poultry, Mr. E. Hewitt, of Birmingham; Pigeons, Mr. J. Ivimy, of Long Sutton; and for Rabbits, Mr. G. Johnson, of Kettering.

Subjoined are the awards both for Rabbits and Cats. We published the poultry awards last week.

RABBITS.—*Lop-ear'd*.—1, J. Flume. 2, Messrs. Weaver. 3, J. Onick. 1, A. H. Easton. 2, W. J. Cantels. 1, A. H. Easton. 2, F. K. Banks. 3, C. King. 1, A. H. Easton. 1 and Cup, F. K. Banks. 2, Shaw & Allison. 1 and 3, F. K. Banks. 2, Shaw & Allison. *Himalayan*.—1, B. S. Rothwell. 2, S. G. Hudson. 3, J. Farrow. *Silver-Groys*.—1, M. dal, and 2, A. H. Easton. 2, S. Ball. *Belgian Hare*.—1 and 2, E. S. Smith. 3, Messrs. Weaver. *Angora*.—1, G. S. Rutton. 2, H. Clarke. *Any other variety*.—1, F. K. Banks. 2, C. King. 3, A. H. Easton. *Hearst*.—1, J. Woollet. 2, F. L. Wass. 3, E. S. Smith.

CATS.—*Tortoiseshell*.—1, H. Cribbitt. 2, E. Horner. *Tabbies*.—1, J. R. Slaton. 2, A. Reynolds. *Foreign or Long Hair*.—1 and Silver Collar, Miss E. Wright. 2, R. S. Clarke.

MR. WOODGATE'S BIRDS AT BOSTON.—As last week you published the prize list of the above Show, and in the awards put my name down as being "disqualified"—that is an ugly word under any circumstances, the facts of the case are these:—I duly entered a pen of White Cochins in their proper class, No. 38, but from some mistake of the Secretary they were entered in the French class, No. 48, and as the label only came the day the birds had to leave, there was then no time for alteration of the classes. But thinking the label had been wrongly classed by mistake, I duly sent my birds; on their arrival, however, they had a disqualified card put on their pen, and were put out of competition—rather an unnecessary proceeding, I think, seeing the mistake was entirely owing to the Show authorities themselves; but they have since behaved very well, for on my writing to them they have sent, not only the carriage expenses and entry fee, but also an extra prize.—REGINALD S. S. WOODGATE.

BARNSTAPLE POULTRY AND PIGEON SHOW.

THE seventh annual Exhibition of this Society took place on the 2nd and 3rd inst. in the large Market Hall, which was very gaily decorated with flags, flowers, &c., for the occasion. There was also a brass band in attendance, stationed near the refreshment stand to enliven the proceedings. They played various selections of music during each day, which, together with the crowing of the cocks and the barking of the dogs (the exhibition of which was held in conjunction with the Poultry Show), made a very inharmonious kind of music. Everything that could be done for the comfort of visitors was done. Seats were nicely arranged on each side of the central part of the building, while a large fountain in the middle threw its water high up and kept the edifice cool and comfortable. The gold fish placed in the large globe at the top were playing around very prettily, and gave the whole a very ornamental appearance.

The arrangement of the poultry pens was very good, but the same cannot be said for the Pigeon classes. These pens were placed above each other in five rows, the top being so high up that it was simply impossible to get a sight of the birds, and the under pens were so near the ground that people interested in the different classes had to go on their knees to see them. How-

ever, I understand this defective arrangement is to be altered next year.

There was an increase of entries this year, and the birds on the whole were much better than on former occasions, especially in some of the Pigeon classes. The feeding and watering of the birds were well attended to—a matter of very great importance to exhibitors, especially with birds sent from long distances.

There were five entries in the *Cochin-China* class, the first prize going to a magnificent pen of Buffs, and the second to a pair of Blacks. Whites were highly commended. The *Brahmas* were a larger class. First came a pen of Dark Brahmas; second a pair of Light. The whole class was good, but in bad plumage. In *Malays* or Indian Game there were fourteen entries. The Black-breasted Red Game were well represented. The Rev. G. S. Cruwys showed a magnificent pen, but they were unnoticed, although I failed to see the reason why. In Game any other variety the first prize went to a pen of good Brown Reds, the second to a magnificent pen of Duckwings. Coloured *Dorkings* were a poor class, and the first prize was withheld. There were only five entries in the *Spanish* class, but they were well represented in quality; the first-prize pen were uncommonly good, while the second pressed them closely. The highly commended birds were also splendid. It must have been a very fine point for the Judges to decide between these three pens of birds. Red-faced *Minorcas* were remarkably good; the first-prize birds were superb, and the second specimens were also fine. In *Andalusians* the prize pens were good. There were only three entries in the *Poland* class. The first prize went to Silver-spangled, the second to Gold-spangled. The other pen contained good birds, but in a very dirty condition. Golden-pencilled *Hamburgs* were one of the best classes, if not the best in the Show. Of Silver-pencilled *Hamburgs* there were but three entries, and the first prize was withheld. In the Any other variety class there was a strong muster; a magnificent pen of *Sultans* carried off the palm. La Flèche took the second prize, Crève-Coeurs the third; several in this class were highly commended. The first prize for Game *Bantams* was won by a beautiful little pair of Brown Reds, the second going to a pair of Black Reds. Brown Reds were highly commended. In the Any other variety of Bantam class, the first and second prizes went to the Rev. G. S. Cruwys for his Blacks and his well-known Silver-laced.

The *Turkeys*, *Guinea Fowls*, *Geese*, and *Ducks* mustered very well, and among them were some very choice specimens.

In the Selling classes for cock birds not to exceed £1 in price, the first prize was taken by a good Black-breasted Game, and the second by a fine young Buff Cochin cockerel. In the best hen or pullet class the first prize was taken with Black Game; a Buff Cochin was second.

In the *Pigeon* classes the first-prize Carriers were Black. The Pouter class was pretty good, but singularly enough all the birds were of one colour, White. The first and second prize pairs were very handsome, good in every respect, well bouted, of good length of limb, and good in points. Tumblers of any variety were anything but a good class; a pair of pretty good Red Mottles were first, Kites second. The Barb class was one of the best; first a pair of Blacks, second Reds. The Owl class was very fine. The first prize was well deserved by the little White African genus which were shown. Foreign Blues were second, and Silvers highly commended. The whole class was well worthy of commendation. In Fantails good Whites were first and second; Yellows and Whites were highly commended. In Trumpeters there were two grand specimens of Black Mottles, by far the best in the class; but some error occurred in the penning, yet they received an extra first prize. Turbits were a very good class; Yellows first, Blues second. Nuns were fairly represented, although trimming was discernible in some of the specimens. The Dragoon class was far from what was anticipated. A good pair of Blues was first, but the second-prize pair had too much of the Carrier's eye. The Antweps which carried off the first honours were very fine Silver Duns, although they did not look to their best, being in moult. The same exhibitor also showed a single Blue cock, which was a grand bird, the mate of which died subsequent to entry. A very good pair of Blues were second; one of them was winner of the first prize at Exeter last year. In the class for Any new or distinct variety a magnificent pair of Blue Swallows were first, Ice Pigeons second. In the Selling classes Frillbacks were first, Yellow Jacobins second. The latter ought to have competed in their own class.

Great praise is due to Mr. Northcote, the Honorary Secretary, for his indefatigable exertions; also to the Committee, in using every effort to make the Exhibition a success.—VOYAGEUR.

COCHINS.—1, S. R. Harris, Cusgarne. 2, H. Feast, Swansea. *hc*, S. W. Probert.

BRAHMAS.—1, H. Feast. 2, P. D. Maddox, Llanneston.

MALAY, OR INDIAN GAME.—1, T. Joint, Barnstaple. 2, W. H. Huxtable. *hc*, Capt. Chichester.

GAME.—*Black Reds*.—1, J. Boyle, Barnstaple. 2, Coon Bros., St. Austell. *Any other variety*.—1, H. Brown, 2nd *hc*, Lev. G. S. Cruwys.

DORKINGS.—1, Withheld. 2, E. Burton, Truro.

SPANISH.—1, Mrs. Tonkin. 2, R. S. Sidways, Southampton. *hc*, S. R. Harris.

MINORCAS.—1, W. T. Evelyn, Buckfastleigh. 2, T. P. Burton. *hc*, B. Leworthy. *C*, F. W. Palmer.

ANDALUSIANS.—1, C. Leworthy. 2, W. Wilday, Cosham.

POLANDS.—1, S. W. Probst, Lostwithiel. 2, U. Feast.
HAMBURGERS.—1, J. C. Woodhead. 2, T. Kinnaird, jun. 3, Mrs. W. H. Wal-
 rod, Newcastle. 4, H. Denham, Silverpenfold. 5, Withheld. 2, H. Feast.
Goldsprangled. 1, J. C. Wood. 2, S. R. Harris. *Silversprangled.* 1, S.
 R. Harris. 2, H. Feast.

ANY OTHER VARIETY.—1, S. W. Probst (Saltans). 2, J. H. Nicholls (White
 Dorkings). 3, H. Feast. 4, S. R. Harris. *hc.* G. Hewitt; W. Littlejohn. c, H.
 Feast.

BANTAMS.—*Game.*—1, W. Carragh, Par Station. 2, F. Scammell, Trobridge,
hc. G. Cause. *Any other variety.*—1 and 2, Rev. G. S. Cruwys. *hc.* W. Willis,
 Larkbar. F. Evans, W. Ford.

SELLING.—1, W. Carragh, Westcott, Barnstaple. 2, G. Paekham, Exeter.
He.—1, Westcott. 2, Miss Solomon, St. Blazey. *hc.*—Marsh; Webb.

TERKES.—1, C. Edwards. 2, J. Heal.
GUINEA FOWLS.—1, Miss K. Snow. 2, Miss S. H., Northcote.
GESE.—1 and 2, J. Heal.

DUCKS.—*Row n or Aylesbury.*—1, S. R. Harris. 2, H. Feast. *Farmyard.*—
 1, 2, and 3, J. Heal.

PIGONS.

CARRIERS.—1, H. Yardley, Birmingham. 2, F. Braund.
POTTERS.—1 and 2, G. H. Roway, jun.
TEMBLERS.—1, H. Yardley. 2, Bullen & Joyce.

BARNS.—1 and 2, Bullen & Joyce. *hc.* H. Yardley; J. L. Smyth. c, H. Yardley;
 J. L. Smyth

JACOBS.—1, W. Penhall. 2, H. Yardley. c, F. Braund.
OWLS.—1, F. Braund. 2 and 3, J. L. Smyth

TRUMPETERS.—1 and 2, J. L. Smyth. *hc.* F. Braund; W. S. Loder; H. Yardley. 2,
 TRUMPETERS—1, H. Yardley. 2, F. Braund. *hc.* Bullen & Joyce; A. A.
 Vander Meersch.

TERRITS.—1, F. Geary. 2, G. H. Gregory. *hc.* J. L. Smyth.
NUNS.—1, Bullen & Joyce. 2, J. L. Smyth.

DRAGONS.—1, G. Paekham. 2 and c, G. H. Gregory.
ANTWERPS.—1, A. Damberel. 2, F. Beck.
ANY OTHER VARIETY.—1, F. Braund. 2, A. A. Vander Meersch. *hc.* W. S.
 Loder.

JUDGES.—Rev. G. F. Hodson, and Mr. Croote, of Heavitree.

LINCOLN POULTRY SHOW.

This was held on the 8th and 9th inst. We subjoin the awards, but must defer our report till next week.

DORKINGS.—*Cock.*—1, J. White, Warley. 2, Henry Lingwood, Parkins, Neotham
 Market. 3, J. Robinson, Garstang. *hc.* R. Pavey, Uppington; 3, Robinson.
Hen.—1 and 3, Henry Lingwood. 2, Rev. E. Parrin, Beckhams-Cool.
hc. J. Watts, King's Heath, Birmingham; c, Rev. J. G. A. Baker, Billeswade.
SPANISH.—*Cock.*—1, J. C. Woodhead. c, Rev. J. G. A. Baker, Billeswade.
FRANCE.—*Cock.*—1, J. C. Woodhead. c, Rev. J. G. A. Baker, Billeswade.
 T. F. Ansell, Cowley Mount, S. Heblins. 3, S. E. Harr, S. Cuscarne St. Day.
hc. W. J. Peace, Driffield; 4, Henry Lingwood (2); W. A. Taylor. *Hen.*—1, Cup,
 and 2, W. A. Taylor, Birmingham. 3, T. F. Ansell. *hc.* W. Mitchell, Birken-
 shaw, Leeds; H. Tomlinson, Birmingham; J. White, Whitley, Netherton,
 Wakefield; H. Beldon, Binley; H. Lacy, Hebdon Bridge. c, Major C. J.
 Ewen, Fulham; W. A. Barnard, Southwell.

COCHINS.—*Any other variety.*—*Cock.*—1, R. S. S. Woodgate, Pembury, Tonbridge
 Wells (White). 2, Mrs. Williamson, Weston (White). 3 and *hc.* W. A.
 Taylor (Partridge). *Hen.*—1, A. D. Rye, Bridgton (Black). 2, W. A. Taylor
 (Partridge). 3, Mrs. Williamson (White). *hc.* T. Asplen, Church (Partridge);
 W. A. Taylor (Partridge); J. White (Partridge); R. S. S. Woodgate (White).

BRAMAS.—*Dark.*—*Cock.*—1 and 2, T. F. Ansell. 3, H. Lacy. *hc.* Horace
 Lingwood, Crofting, Northam Market. *Hen.*—1, 2, and 3, T. F. Ansell. *hc.*
 Dr. J. Holmes, Whitecotes, Chesterfield; H. Lacy. c, J. W. Swan, Stonefield;
 H. Beldon.

BRAMAS.—*Light.*—*Cock.*—1, R. v. N. J. Pilley, Seebury. 2 and 3, Mrs.
 Williamson. *hc.* J. H. Butler, Edlington, Birmingham; Horace Lingwood,
Hen.—1, Horace Lingwood. 2 and 3, Mrs. Williamson.

SPANISH.—*Cock.*—1, R. N. Whit, Knworth. 2, W. K. Bull, Newport Pagnell.
 3, J. Powell, Bradford. *hc.* H. Beldon; J. Leeming, Broughton, Preston. c,
 W. A. R. Butler, Sheffield. *Hen.*—1 and Cup, J. Powell. 2, J. Leeming. 3, G.
 F. Messer, Rawtenstall, Manchester. *hc.* Burch & Boulter; H. E. Cooper, Wal-
 ston. A. Mollons, Standford, Wolverhampton; J. F. Dixon, Cotgrave. c, W. H.
 Bull.

HORDANS.—*Cock.*—1, E. P. Wood, Uttoxeter. 2, H. Feast, Swansea. 3, J.
 Swan. *Hen.*—1, R. B. Wood. 2, G. W. Hibbert, Manches cr. 3, J. Swan. *hc.*
 B. Heald, Mapperley Plains.

CREVECOEURS.—*Cock.*—1, J. Robinson, Garstang. 2, R. B. Wood. 3, W.
 Harvey, Sheffield. *hc.* Mrs. Jarvis, Fulford; Mrs. Cross, Brigg; Major C. J.
 Frog, R. B. Wood. 4, R. J. Mullen, Longwade. 2, R. B. Wood. 3,
 G. W. Hibbert. *hc.* R. B. Wood. 4, R. B. Wood.

HAMBURGERS.—*Golden silver-sprangled.*—*Cock.*—1 and Cup, G. & J. Duckworth,
 Church. 2 and 3, J. Robinson. *hc.* Burch & Boulter; J. Robinson; H. Beldon.
 c, G. & J. Duckworth; H. Feast; J. Walker. *Partridge.*—1, G. & J. Duckworth.
Hen.—1, W. Driver. 2, J. Clark, S. Day. 3, J. Robinson. *hc.* G. & J.
 Duckworth; J. Robinson (2); H. Beldon (2). c, T. Walker.

HAMBURGERS.—*Gold of silver-sprangled.*—*Cock.*—1 and Cup, H. J. Robinson. 2 and
 3, H. Beldon. *hc.* R. B. Wood. 4, J. Robinson, Sunderland. *hc.* J. Nelson;
 Accrington. *hc.* J. Robinson (2); H. Beldon. c, G. & J. Duckworth.

GAME.—*Black-headed Bantam.*—*Cock.*—1, S. Matthew, Stomton-ribe. 2, C.
 Chaloner, Steely, Whitwell. 3, H. Beldon. *hc.* F. W. K. Bullmore, Falmouth.
 c, J. Forsyth, Wolverhampton. *Hen.*—1, C. Chaloner. 2, W. J. Pope, Bugles-
 wade. 3, Dr. W. K. Bullmore. *hc.* A. C. Travers, Falmouth.

GAME.—*Any other variety.*—*Cock.*—1, J. Jekon, Eatham. 2, S. Matthew, 3, C.
 Chaloner. c, J. Nelson. *Cocks.*—1, H. Beldon; W. Hinchcliffe, Farnsley Hill, South-
 well. *Hen.*—1, S. Matthew. 2, J. Jekon. 3, C. Chaloner. *hc.* W. Ball, jun.,
 Ekeston.

ANY OTHER VARIETY.—**SECRET BANTAMS.**—*Cock.*—1, H. Beldon (Polish). 2, J. S.
 Booth (Hesterfield) (Malay). 3, J. Swan (Black Hamburg) *hc.* J. Nelson
 (Polish); W. Harvey; H. Feast (Black Hamburg). c, T. Walker (Black Ham-
 burgh). *Hen.*—1, H. Beldon (Hesterfield). 2, H. Feast (Black Hamburg). 3, J. S.
 Booth (Malay). *hc.* W. Harvey; J. Robinson (Polish).

SECRET BANTAMS.—*Black-headed Bantam.*—*Cock.*—1 and Cup, W. F. Addie, Ful-
 wood, Preston. 2, W. F. Addie, 3, M. E. Robinson, Sunderland. *hc.* J. Nelson;
 W. F. Addie; 2, W. Morris, Rochdale. c, T. W. Arms, Clapham. *Hen.*—1 and
 3, W. F. Addie. 2, T. Dowell, Mill Hill, Sand-rusland. *hc.* W. F. Entwistle, West-
 field, Bradford (2); J. A. G. Tomp, Edworth, Rotherham; R. Swift, Southwell.

GAME BANTAMS.—*Any other variety.*—*Cock.*—1 and 2, W. F. Entwistle. 3, C.
 Chaloner. *hc.* F. Smith, Southwell. *Hen.*—1, W. F. Entwistle. 2, S. Broughton,
 3, Bellinham & Hall, Barley. *hc.* R. Whitton, Lincoln; W. F. Addie; Bellin-
 ham & Hall. c, R. Whittall.

BANTAMS.—*Any other variety.*—*Cock.*—1, H. Beldon. 2, F. Walton
 Silver-lead. 3, R. v. F. Torrie (White). *hc.* C. Reed (Black) (2); W. A. Taylor
 (Black); J. Watts (Dark) (2). *Hen.*—1, E. Walton (Silver-lead). 2, Rev. F.
 Torrie (White). 3, C. Reed (Black). *hc.* W. Harvey. c, W. H. Shackleton
 (Black); C. Reed (Black); J. Waddington (Black); H. Beldon.

LOCAL CLASS.—1, R. Sewell (Spanish). 2, L. Livesey, jun (Buff Cash ns).
 3, W. G. G. jun. (Dorking). c, D. Walker (Partridge Cochins); R. Coney (Light
 Bantam).

SELLING CLASS.—1, S. Booth (Malay). 2, J. Watts. 3, Major C. J. Ewen
 (Cochin). *hc.* Burch & Boulter (Spanish); W. Harvey.

DUCKS.—*Row n.*—1, J. White. 2 and 3, Capt. R. Swan, Aylesbury. 1 and
 Cup, T. P. Carter. 2, J. Walker. 3, J. Robinson. *hc.* S. W. W. Cox (2); J. Hodges.
Any other variety.—1, H. Yardley. 2, H. Beldon. 3, W. P. Jones (Kasarski); *hc.*
 Rev. T. Livesey (Peravian); J. J. Mullen (Black East Indian).

GESE.—1, T. M. Derry (Emblon). 2, F. W. Brook (French).
TURKEYS.—1, Withheld. 2, Mrs. J. Elvidge.

RABBITS.—*Heaviest.*—1, J. Bowdler. 2, P. Clutterbuck. *Lop-ear'd.*—1, F.
 Banks. 2, J. & A. Weaver. *hc.* F. Banks; A. H. Easton. c, H. Gilbert. *Any other*
variety except Lop-ear'd.—1, G. C. Hutton (Austral). 2, A. H. Easton (Silver-
 Grey). *hc.* S. G. Hudson (Himalayan). *Selling Class.*—1, A. H. Easton. 2, J.
 Brown (Himalayan). *hc.* J. Brown; G. Nuthall (Lop-ear'd).

PIGONS.

CARRIERS.—*Cock.*—1, H. Yardley. 2 and *hc.* R. Fulton. *Hen.*—1 and *hc.*
 R. Fulton. 2, Withheld. *Young.*—1, R. Fulton. 2, A. Bilyeald. *hc.* W. Ridley;
 R. Fulton.

POTTERS.—*Cock.*—1, R. Fulton. 2, W. Harvey. *Hen.*—1, W. Harvey. 2, R.
 Fulton. *hc.* H. Yardley; R. Fulton.

TEMBLERS.—*Ground.*—1, W. Harvey. 2, J. Ford. *hc.* R. Fulton. *Any other*
variety.—1, H. Yardley. 2, W. Harvey. *hc.* W. Woodhouse (Balds or Beards).
hc. W. Woodhouse (Balds or Beards); R. Fulton.

BARNS.—1, R. Fulton. 2, H. Yardley. *hc.* W. H. Tomlinson.
RENS.—1 and 2, H. Yardley.

NUNS.—1, Rev. A. G. Brooke. 2, H. Yardley.
JACOBS.—1, J. Blanchard. 2 and 1 *hc.* R. Fulton.

TRUMPETERS.—1, J. F. Loversidge. 2, W. H. Tomlinson. *hc.* J. F. Loversidge;
 W. H. Tomlinson.

TERRITS.—1, R. Fulton. 2, W. Harvey.
TERRITS.—1, J. Blanchard. 2, F. Geary. *hc.* W. Harvey; H. Yardley; J.
 Blanchard.

OWLS.—1, H. Yardley. 2, J. Fielding, jun. *hc.* F. Geary.
DRAGONS.—1, R. Fulton. 2, Croote & Paekham.

ANY OTHER DISTINCT VARIETY.—1, W. Harvey. 2, R. Fulton.
SELLING CLASS.—1, J. Walker (Faintails). 2, J. Watts. *hc.* Rev. A. G. Brooke
 (Red Turbats). c, W. Harvey; J. Blanchard (Red Jacobsins); A. Gould (Barbs).

JUDGES.—Messrs. E. Hewitt, R. Teebay, and F. Esquilant.

FLOORS OF POULTRY HOUSES.

I AM only an amateur poultry-keeper, and very inexperienced, not having kept fowls long. I had a substantial wooden house made for them, with a brick floor laid in cement; now I find they are all more or less suffering in their feet. Where have I erred?—BRENTFORDIENSIS.

[If you had consulted our "Poultry-keeper's Manual" you would have saved yourself much trouble; there you will find the following:—

"Bricks or pavements of any kind we regard as the worst of all materials for the floor; they retain moisture, whether atmospheric or arising from insufficient drainage; and thus the temperature is kept low when warmth is most essential, and disease too often follows, especially rheumatic attacks of the feet and legs. The flooring of a poultry-house should be of dry gravel, and quite loose to the depth of 2 or 3 inches—nothing can then adhere to it; and it is neither necessary nor right to sweep the floor of a poultry-house. A long birch or heath broom may be drawn lightly over the surface. It will remove everything that offends, but if turned over with a spade twice or thrice weekly, the earth decomposes the dung and becomes a good fertiliser in the course of a few months, and has then to be removed and replaced by fresh earth. A mixture of gravel and coal ashes makes an excellent flooring, and in which the fowls delight to busk."—EDS.]

BEES' HATCHING TIME.

MR. PETTIGREW says, on pages 41 and 43 of his book on bees, "Generally the eggs for young queens are set about four days before swarming takes place," and that those eggs will produce "beautiful princesses in ten days," which would make together fourteen days from the time the eggs were set. Now, on Sunday, June 15th, I hived a first swarm, and in about ten minutes it returned to the parent hive; on Tuesday, June 17th, it swarmed again, was hived as before, but returned again to the parent hive. To-day (June 27th) it again swarmed, and is now permanently hived. I want to know from which date I must reckon the ten days, or whether I must take no notice of the swarming on June 15th and 17th, and consider this of to-day (the 27th) as the commencement.

Mr. Pettigrew also states on page 145, that "on the twenty-first day after the first swarm leaves a hive the combs are free from brood, save a few drone cells." I want to be informed from which date—viz., 15th, 17th, or 27th, I must reckon the twenty-one days, in order to find no young brood in the above hive.—GERTRUDE.

[Mr. Pettigrew very wisely uses the word "generally" when speaking of the development of "the eggs for young queens." Everything in this case depends upon circumstances. We have known eggs lie dormant many days before the hatching took place. Much depends on the activity of the bees themselves, which proportionably increases the temperature of the hive, on which hangs so much of its prosperity in every way. Therefore, in answer to your query, we say with Mr. Pettigrew "generally," or perhaps more correctly "under favourable circumstances," the young queens will come forth about the time specified. But here again there comes another qualification. In the case of wet or stormy weather, which in our variable climate sometimes lasts a fortnight or more even at the prime of the year, the young princesses may be prevented from issuing from their cells by the wise forethought of the bees, even though fully developed. It is therefore quite impossible to date precisely the issue of the young queens from the setting of the eggs; but we

should be inclined to take the earliest date you have named, allowing for all sorts of casualties. We have known swarms issue before any eggs had been laid in royal cells; we became aware of this by subsequent examination, as we found "artificially" formed cells, and only such in out-of-the-way parts of the comb.]

OUR LETTER BOX.

BOSTON SHOW.—Mr. W. Woodhouse informs us that he took the first prize in "Tumblers, any variety," with a Blue Baldhead cock.

GAPES (Brahma).—The plan you mention is in all old poultry-hooks. It is a difficult operation and very uncertain.

EXHIBITION PENS (F. B.).—We do not think you can do better than use Mr. Turner's pens of Sheffield. They are very good, and he sends an experienced man with them, who is very useful. You can put yourself in communication with him. We know no one in Bristol. You want troughs only for water. Put sand or gravel on the floor, and throw the food upon it. (F. B.).—We know no place where you can hire pens, except of Mr. Turner, of Sheffield. We think well of them, seeing them often.

LIGHT BRAHMA CHICKENS (R. E. H.).—We give our chickens no Indian corn. It is not good for growing chickens. It does not make bone. We should at once discard pea and Indian cornmeal. Ground oats are in use throughout Sussex, and we have bought them of Messrs. Marsh, Market Place, Kingston, Surrey. Try barleymeal, and mix some dripping with it. Give them meat scraps from the table, and curd made of new milk turned with rennet, and dried by two persons turning a cloth opposite ways.

TURKEY POULTS SICKLY (J. P.).—Are your Turkey poults at liberty? If they are, the probability is the hen dregs them about through dewy or frosty grass till they get chilled. Shut the hen up in a rip—an empty china crate is a good one, with a thatched hurdle to keep off the wind, and another on the top to keep off the rain. If as convenient or more so, you may shut them in any out-house, but they should not be let out till the sun is well up, and the grass dry. Give them some ants' eggs if you can. Feed them on oatmeal with which a small quantity of pea and beanmeal is mixed, and chop-up some onion-tops with it. You may safely give the sickly ones a pill of camphor the size of a garden pea.

COCHINS' FEATHERS COMING LIGHTER (A. Y. Z.).—You cannot prevent the hens from moulting light. You are not safe in interfering with the moulting process. Let Nature have her way, and all be well.

"From Nature's chain, whatever link you strike, Tenth, or ten-thousandth, breaks the chain alike."

GROUND OATS (H. J. L.).—The sample you sent is of crushed oats. Ground oats are as much a powder as is barley meal. The only person whom we know to prepare ground oats is Mr. Azate, Slough Mills, near Crawley, Sussex.

CANKER IN PIGEONS (A. Suberbiok).—A great authority stated in this Journal, that of all things do not attempt to cut the canker out, but dress the place twice a day with a solution of zinc or copper (use the crystallised), about half an ounce to a quart of water. Merely wash the bird's mouth, or wherever the sore is, with a flint feather. The lotion must not be too freely used in the month, a very little is quite sufficient.

FEAS IN A PIGEON LOFT (Bird's Egg).—You have, doubtless, limewashed the place thoroughly. Allow no dust, or feathers, or dirt to lie about. Clean out the corners. The Persian insect powder will do good.

LABRINIANS (J. Mackenzie).—We have no reason to think that you will be dealt with unfairly.

BEES PROFITABLE (Rev. S. A. Brennan).—Bees are profitable, as we can testify from experience, and cent. per cent. is quite within the mark. But where to find a market for honey gathered in Co. Tyrone we cannot state. You are too far from the great market of London to get the high prices which are obtained there, 2s. or 2s. 6d. per lb. But if you got no more than 1s., the profit would still be cent. per cent. on a well-managed apiary. Have you no market in Dublin?

BEES NEAR CARDIFF (Bird's Egg).—The suburbs of Cardiff ought to be no bar to your success in bee-keeping. You must be sufficiently near the open fields to have a fair chance. They have succeeded even in Hibernia. We fear it is not generally a good honey year; but the flowers are late, especially the white clover, which is a grand honey-producing flower. There may still be three splendid weeks in July. But it is impossible to predict. The secret of success in bee-keeping is to have strong stocks and swarms, and to give your bees plenty of room. What sort of hives are you using? and what spurs, if any? Tell me how this we cannot advise when or how to "take it off."

BEES CLUSTERING-OUT (C. M. Major).—It is almost too late in the season for swarms to do much good, or we should advise your driving out all the bees of your cottage hive into an empty butt, which is to be left on the old stand. The Neighbor's hive should then be moved to another part of the garden, and the hive from which the bees have just been expelled be put in its place. The bees returning will, with those rapidly being hatched out of the cells, make a good stock, and will raise royal cells. Taking the advanced state of the season into consideration, we should be inclined to recommend either fixing the hive on a nail, or else, or cutting out a 4-inch hole in the top, lining on with a ring of soft putty, a board of suitable size, clamped at the ends to prevent warping, with a 3-inch hole, and giving the bees a super. The bees outlying would soon go up, and even if they do not fill the super before winter, some combs may be built which will be useful the following season. Bees clustering out in this way without swarming, proves that the hive is not ready or disposed to go. In such cases the bee-master should prevent such waste of valuable bee time, by compelling them to swarm as soon as they begin to cluster out. You will need no personal advice if you have any of the works published relative to bee-keeping.

WAXEN (Noriel).—Queries 1, 2, 3, 4. White deal will do for hive-making, but better is not deal. Screws are the best fasteners. Bees do not like zinc used as a plate such as you have in view. 5. Can any of our readers say where machines for the manufacture of straw hives can be procured? Or will anyone kindly furnish a drawing of such? We think you might make one easily with a little ingenuity to suit the size and shape you wish to give your hives. C. No. 7. No. 8, 9. Dr. Dugbar has been dead many years; so has Mr. Golding. We know not where their books can be bought. Can any of our readers tell us? 10. Dr. Bevan's original work is now out of print. It has been recently edited by Major Munn, but we question if our old friend Dr. Bevan would own the work now published in his name, so many have been the alterations introduced, and the liberties taken with his almost exhaustive treatise. 11. We do not know Dr. Mackenzie's work on bees. 12. Perhaps Mr. Pettigrew can tell us "what are the dimensions of the largest straw hive that a good

queen would be capable of filling in a good season." We have only tried such a hive as would hold a bushel of wheat or a little more.

BEEES CLUSTERING-OUT BUT NOT SWARMING (J. Badger).—You will find an answer to another correspondent which meets your case.

CAT (P. M. R.).—We could not publish an answer. Ask any veterinary surgeon.

NEWFOUNDLAND PUPPY (Canine).—The symptoms are some of those which characterise the distemper. Give five grains of blue pill, and five hours after a table-spoonful of castor oil. Foment the eyes by means of a sponge with a decoction of poppies. This disease has too many complications for us to analyse further. If the dog declines in strength he will require tonics, but consult a veterinary surgeon, or buy Merrick's little book on "House Dogs and Sporting Dogs," and follow his directions.

SILK FROM SILKWORMS.—"K. E. B." asks, How should the silk be wound to make it available for use? There must be an immense amount of wasted silk among the thousands of silkworms kept by young people, and many would be glad to make the amusement a useful one. When suitably wound where would it be disposable?

[We shall be much obliged by information in reply to the above.]

METEOROLOGICAL OBSERVATIONS,

CAMDEN SQUARE, LONDON.

Lat. 51° 32' 40" N.; Long. 0° 8' 0" W.; Altitude 111 feet.

Table with columns: DATE, 9 A.M., IN THE DAY, and Rain. Rows include 1873, July, and various weather observations with temperature and wind data.

REMARKS.

- 2nd.—Rather cloudy morning and evening, but very fine in the middle of the day.
3rd.—Dull morning; fine at noon, clouding over in three or four hours; sharp shower at 8 P.M., then fine.
4th.—Thunderstorm at 2 A.M., fine after; rather cloudy about noon, then fine, but two or three slight sprinkles of rain; a fine evening and night.
5th.—Showers in morning; fine afternoon, but still not summer-like.
6th.—Much rain in the night, but a lovely day after the morning.
7th.—A beautiful summer day, and splendid moonlit night.
8th.—Much warmer, and a very fine day, though rather cloudy at night.
Mean temperature much the same as previous weeks; but the range somewhat greater, the maxima being higher and the minima lower.—G. J. SYMONS.

COVENT GARDEN MARKET—JULY 9.

We have nothing fresh to report.

FRUIT.

Table listing fruit prices: Apples, Apperotts, Cherries, Currants, Figs, Filberts, Gooseberries, Grapes, Lemons, Melons, Mulberries, Nectarines, Oranges, Peaches, Peas, Pine Apples, Plums, Quinces, Raspberries, Strawberries, Walnuts.

VEGETABLES.

Table listing vegetable prices: Artichokes, Asparagus, Beans, Broad-beans, Cabbages, Caper-squas, Carrots, Cauliflower, Celery, Coleworts, Cucumbers, Endive, Fenel, Garlic, Herbs, Horseradish, Leeks, Lettuce, Mushrooms, Mustard & Cress, Onions, Parsley, Parsnips, Peas, Potatoes, Kidney, Round, Radishes, Rhubarb, Salsify, Savoy, Scorzona, Sea-kale, Shallots, Spinach, Tomatoes, Turnips, Vegetable Marrows.

POULTRY MARKET—JULY 9.

We have still a small supply, and the demand is quite up to the average. These prices can no longer be depended upon.

Table listing poultry prices: Large Poultry, Smaller ditto, Chickens, Goslings, Green Geese, Ducklings, Pheasants, Partridges, Hares, Rabbits, Wild ditto, Pigeons.

WEEKLY CALENDAR.

Day of Month	Day of Week	JULY 17-23, 1873.	Average Temperature near London.			Rain in 43 years		Sun Rises.		Sun Sets.		Moon Rises.		Moon Sets.		Moon's Age.	Clock before Sun.	Day of Year.		
			Day.	Night.	Mean.	Days.	m.	h.	m.	h.	m.	h.	m.	h.	Days.				m.	h.
17	TH	Royal Horticultural Society's Polargonium Show closes.	74.3	51.3	62.8	16	5	af	4	7	af	8	38	11	22	1	23	5	50	198
18	F		74.7	50.2	62.5	21	6	4		6	8	57	11	42	2	24	5	54	199	
19	S	Clackheaton Horticultural Show.	73.2	49.9	61.1	23	7	4		5	8	morn.		2	1	25	5	58	200	
20	SUN	6 SUNDAY AFTER TRINITY.	73.2	50.2	61.7	22	9	4		3	8	22	0	18	5	26	6	3	201	
21	M		74.0	50.8	62.4	19	10	4		2	8	54	0	26	6	27	6	6	202	
22	TU		72.2	51.4	61.8	21	11	4		1	8	38	1	23	7	28	6	8	203	
23	W		74.0	51.4	62.7	21	13	4		0	8	32	2	7	8	29	6	10	204	

From observations taken near London during forty-three years, the average day temperature of the week is 73.7; and its night temperature 50.7. The greatest heat was 94, on the 17th, 1834; and the lowest cold 32, on the 23rd, 1863. The greatest fall of rain was 1.37 inch.

AT A ROSE SHOW.



WONDER if these few notes will be accepted. If they are, so much the better; if not, no harm done.

I have recently been exhibiting at several Rose shows, and thought I would send a few lines descriptive of the delights of showing to our most excellent JOURNAL OF HORTICULTURE. I know not what is pleasanter or jollier than taking one's blooms to one of the great shows. From first to last it is to me an unbroken pleasure. Even the early rising, the jumping out of bed at 3 A.M., when all the rest of the world are fast asleep, is pleasant; for you know what a glorious sight you will presently have. When dressed and out of doors, how lovely your Roses look! every petal frosted with dew, every leaf glittering with moisture; and whilst cutting your finest blooms and staging them, how grand is the sight that gradually unfolds itself! The sun rising in a quiet summer's morning, the eastern horizon at first suffused with rosy light suddenly changed to the brightest of ambers, and, before you have half done your work, with one leap the sun has risen.

Then the journey to the show, how pleasant it is! Even the railway people at your own station, how pleased they seem to see your boxes, and how willingly they help you to put them carefully into the guard's van; and when you come to a junction, and some friend whom you knew would meet you there, appears with his bright green boxes, how delightful the meeting. And here let me tell a short anecdote. Two nurserymen were overheard talking at a show about myself and my great (and, alas! generally victorious) Rose rival. "Yes," one said, "they always show at the same places, and yet they are friends." "Aye," said the other, "and I have heard, and I believe it is true, that they visit each other's houses." Then the next morning, when we arrive at the tented field, to see the hundreds of Roses being prepared, what a grand sight it is, and how real lovers of the Rose delight in it! Think of being placed near one of the great Rose monarchs—a Paul, a Turner, or a Keynes, and others! You can see him stage, and observe, without anyone to crush you, or policeman to shout, "Please pass on," to what a state of perfection each Rose, so familiar to you at home, really can be brought; and most delightful of all, because most flattering, sometimes to be asked by the cultivator of tens of thousands which of three blooms you would say was the best for his seventy-two.

And when your own boxes are ready for the judges, and just before the tent is cleared, how can words describe the scene which we are privileged to see? The great nurserymen's boxes all uncovered, each bloom a picture, every Rose we have tried to bloom at home here shown at its best, everyone we have longed to see, shown in trebles and singles. Morren, Castellaine, Nicol, Amand, &c., all shown without a spot on their petals, and perfect as to form and colour.

And now we leave, but not for long; soon we shall be

re-admitted, and then we shall know our fate; and in the meantime there is a very satisfactory way of spending our time. We are as hungry as horses, and just as we are thinking of breakfast a hearty voice shouts out, "Come and breakfast with me, old fellow," and our great rival, the king of the amateurs, lays hold of us, and carries us off to his hotel; and there we talk of our chances over the best of breakfasts, with, perhaps, a glass of champagne to keep up our spirits, and before we have well done it is time to rush off to the show again. We present our pass, we enter the tent, we make to our boxes, and then—well the writer of these lines was successful; but if he had not been so—and he often has not—he would enjoy it nearly as much, and at all events would have congratulated his friend as heartily as he in turn was.

But we have not done yet with the delights of the show. What pleasanter to stand near your box and hear the remarks the visitors make upon your blooms? Sometimes they are flattering, sometimes the reverse, and now and then wonderfully cruel. "I could have shown much better blooms than that." "If I had known there were no better Roses to be shown, mine ——" "Pass on, ladies and gentlemen, pass on." "I wish you would pass them on, constable," says a rather portly old woman, "for they have been pushing me all round the tent like a catapult." Then the meetings of friends, and the introductions to people whose names are as familiar to you as the flowers that they grow. The pleasant greetings, among others, of your old friend and correspondent, "D., Deal," and the valuable information he imparts to you on this year's new Roses which he has seen exhibited for certificates at Kensington. In fact, there is no pleasanter place than a Rose show, there are no better fellows than the exhibitors of Roses, whether they be amateurs or nurserymen, and there is nothing which delights me more than the conviction that each year the Rose is more popular, and the exhibitors more numerous.—JOHN B. M. CLARK.

TRACHELIUM CERULEUM.

ALTHOUGH *Trachelium ceruleum* has been cultivated in this country for more than two centuries, it is far from being generally known. I have frequently met with persons whose knowledge of the plants of the day extended to countless varieties of each species, but who acknowledged their ignorance of this handsome plant.

It is a native of the south of Europe, and though moderately hardy, it suffers from unusually severe winters, therefore it is desirable in most cases to preserve a plant or two under glass; but it is easily raised from seed, and seedlings flower the same season. Allied to the *Campanula*, it, nevertheless, differs from the most of that genus in its habit of growth; it does not throw up suckers like most of that family, but produces side shoots, which make excellent slips or cuttings. It also differs from most of the cultivated *Campanulas* by its flowers being collected into a flattened umbel, often 5 or 6 inches across. Although the individual flowers are small,

they are very numerous, and in colour a rich violet blue in some plants, while in others they are of a bright lavender, and I have occasionally had plants with white flowers. The latter, however, are not so desirable as the darker-tinted kinds, excepting for the sake of variety. The height is about 2½ feet, and few plants present such a mass of bloom as this, and still fewer of the ordinary herbaceous plants remain longer in beauty; while in dying-off it never presents an untidy appearance, for the flower-stem looks well to the last, and when removed a neat plant is left, more or less plentifully supplied with shoots, from which slips or cuttings are easily obtained. These, if put into a cold pit or under a hand-glass, where some protection can be afforded them in winter, make good plants in the following spring. We often put in a batch of cuttings in September at the same time as Pentstemons, Santolinas, and even Centaureas, and they rarely fail to strike.

Our plan is to insert the cuttings in rows in a cold pit in sandy soil, and to shade them for a time if necessary, but always giving them the benefit of the heavy dews that are common then. The plant, as already stated, is also freely propagated by seed, which, however, requires to be sown in pots or pans, as it is very small—perhaps one of the smallest of all garden seeds, being much smaller than that of the *Calceolaria* or *Lobelia*; but it is obtained in any quantity, and I have raised seedlings in the open ground often enough. Seedlings, I need hardly say, make the sturdiest plants, besides giving the chance of variety, but a few cuttings insure a continuance of a favourite kind, and, besides, there is some uncertainty in so minute a seed being lost in the ground, or the young plants falling a prey to insects or other enemies, so it is desirable to secure a stock from cuttings.

I have sometimes grown the plant in rows along with other herbaceous plants of similar habit, as *Phloxes*, double *Rockets*, and *Catchflies*. It likewise makes an excellent plant for the mixed border; the question, "What is this?" being often asked when its numerous heads of flowers form a sort of balloon or beehive, and this, too, without the aid of sticks or artificial support. It is also sometimes met with as a pot plant, and supplies a colour not at all plentiful in the conservatory. I am not partial, however, to growing anything in the conservatory that will succeed out of doors, unless it come in at a particular season. To those who are not acquainted with it I unhesitatingly say, Procure it at once; they will not regret the adoption of my advice.—J. ROBINSON.

POTATO PROSPECTS.

I OBSERVED a statement in the *Journal of the 3rd Inst.*, on the authority of the *Yorkshire Gazette*, that the Potato disease had appeared in North Yorkshire, and that the early American kinds were most affected. Last year the early American kinds, especially *Early Rose*, were free from the disease, and happy should we be had we no greater disease to contend against than that which has shown itself in the June of the present year in the early American kinds in North Yorkshire. The disease to which our north-country papers refer is what is known all over the country as the curl, which has no relation to the Potato disease that begins at the haulm and then attacks the tubers.

The American *Early Rose*, though not quite free from disease last year in North Yorkshire, was the least affected, excepting *Red-skinned Flourball*, which was quite free of disease. This year *Early Rose* has been much affected with curl, a disease quite as virulent as that which attacks the Potato at a more advanced stage. The curl presents itself as soon as, or very shortly after, the haulm is above ground. What is it but the undecayed growth of a diseased tuber, the consequence of planting a diseased set? Did you ever try to get a crop of Potatoes by removing the set as soon as the haulm was a few inches above ground and note the result? No Potato affected with curl comes to anything; no Potato from which the set is early removed produces a crop, for in both cases the plant is deprived of the support which it requires. Even a diseased Potato will make an effort to continue its kind if the eyes be not destroyed, but the growth is weak.

Now that we have to deal with the curl, permit me to say that I last autumn pointed out that the Potato disease is not hereditary, and cannot be reproduced either by planting a diseased Potato or by contact with diseased haulms or tubers. Plant a diseased tuber with sound eyes, and it will grow weakly; the haulm and the whole haulm will be speckled with dark brown spots. The curl will be manifested by the leaves curl-

ing; and the plant, if the set has not been much diseased, may make an effort at flowering, but sound though small tubers, capable of continuing their race, will be formed. The disease has been thrown off, and will not again return until the plant be in a fitting state for the development of the spores of the Potato fungus. It will be found in most cases that the Potato plants infested with curl have the sets partially or wholly decayed; but the curl, though generally resulting from a diseased tuber, is not always to be traced to that beginning. The removal of the sprouts once or twice before planting, after allowing these to grow several inches long in "pies" or "hogs," or on dry shelves or floors, is a taking-away of the life-blood of the set, and to such an extent is this sometimes carried that many kinds, especially the earlies, do not make a second growth after being planted, or if they grow, the growth is weak, and they begin to form tubers early. They then curl up their leaves as all Potatoes do when forming tubers, and growth is at an end, simply because the set can afford no more support. To have sound full crops we must plant plump, healthy sets.

I may remark that Potatoes in Cleveland present a very healthy appearance. In gardens, though admitting the curl in the early American kinds, especially *Early Rose*, which, in my opinion, has no claim to special mention, I have not seen them finer. We have taken up *Ashleaf*, *Myatt's Prolific*, and *Veitch's Improved Ashleaf* from the open ground, and they are fine and dry, even floury when cooked; and the later sorts, of which I have upwards of twenty, are very promising, especially *New Hundredfold Fluke*, *Red-skinned Flourball*, *Late Rose*, *Excelsior*, and *Willard's*, the last three American sorts. I may also mention that Potatoes come from self-sown seeds here. We have cut and pulled up thousands within the last few days. They came up even on trenched ground; the kind is evidently the old *Pink-eye*, a variety of the finest quality. In the fields the Potato crop promises well, especially where a change of seed had been secured.

The disease mentioned by your excellent correspondent Mr. Bichant in No. 639 as occurring in an orchard house, was, I grant, the disease proper. It would be interesting to know if the Potato haulms were syringed after they had attained their full growth and when tubers were forming, or if the trees were. Was not the haulm of the Potatoes wetted twice a-day? From the cold of the past spring and early summer it is likely the house would be kept closer than usual. I had similar experience in a vinery. All went well until the haulm was full grown; then, from syringing the house, the haulm was wetted, and it was clear that either the foliage of the Potatoes must be kept dry or the crop would fail. They were not wetted, and the crop ripened, but not well. In houses and in frames I have not had a diseased tuber where the plants were not wetted overhead after the tubers were well advanced, but kept only moist at the roots. Continued dampness of the haulm of Potatoes when ripening deteriorates the quality of the tubers, and generally results in disease.—G. ABBEY.

GREENHOUSE GLAZING.

I HAVE practised the method described by "J. P.," of York, in your number of July 3rd for several years past, and I question if any of the patent processes will bear comparison with it for cheapness and efficiency; in fact, a more simple, inexpensive, and neat method could scarcely be devised. Your correspondent very accurately describes the *modus operandi*, which, however, I think I can slightly improve upon in one or two particulars. In the first place an eighth-of-an-inch play on each side of the glass is too much. If the rafters are put quite true, and the glass cut true, an eighth of an inch will be ample space to allow for expansion of rafters, which, I may remark in passing, is never so much as is generally supposed; in fact, if the glass goes in easily and freely all will be well. Then, again, if large panes are used (mine are all 12 by 20) a tack will be required on each side at the end of the pane to prevent its slipping down, and another close to it at the extreme point of the lower corner (not upper, as described by "J. P.") to keep the glass in its proper place; thus one tack holds both panes. Nothing is better than long tin tacks. I am confident that no one who gives the plan a trial will ever return to the old system of facing-off with putty.—WILLIAM WINDMANN, *Bevois Mount Nursery, Southampton.*

THE AUCUBA.—It is probably not known that the male plants raised from seeds of the old female *Aucuba* come into flower

at the same time as the old females, whereas imported or purchased males flower considerably earlier. This has been found here, without exception, to be the case, and is looked upon in these gardens as a valuable discovery.—G. H. COOK, *The Gardens, Penarth, Merioneth.*

FORCING THE ROSE.

Most varieties of the Rose are capable of being forced; but the Hybrid Perpetuals are much to be preferred as a whole, and it is of them that the great bulk of our stock is composed. A few of the old Cabbage and common Moss Roses are desirable on account of their fragrance and delicate colours—besides, the Moss makes the finest button-hole Rose; they are also both very prolific bloomers. A few also of the summer-blooming Roses are indispensable, such as *Coupe d'Hebe*, Charles Lawson, Paul Ricaut, Maiden's Blush, and a few others. But it is among the Hybrid Perpetuals that the grandest Roses are to be found and the greatest variety selected. *Baroness Rothschild* is a magnificent light-coloured Rose for forcing, and a strong grower; *Duke of Edinburgh*, a dark Rose, also fine; *La France*, a superb Rose; *Miss Poole*, *Jules Christin*; and of older Roses, *Jules Margottin* is very prolific; *Sémateur Vaisse* and *Général Jacqueminot* are two old Roses of fine scent and colour; *Souvenir de la Malmaison* is a sure and distinct Rose; but selection is scarcely possible; they are nearly all equally suitable—at least we find them so. Many of the Tea-scented Roses are also first-rate for forcing, cutting them when just about to open. It is needless to name varieties, as the whole of them are suitable for pot-culture. If plants are received from the nursery they must be examined at the roots to see if drainage is all right and the soil in a healthy condition. Any plants with the pots full of roots should be shifted at once; those not demanding shifting should remain until some growth has been made, standing the plants in a cold pit for a time with plenty of ventilation.

By the first week in June, when the sun is getting hot and powerful, they should be plunged in the full blaze of his rays out of doors. This is the time when we repot all our stock of pot Roses; till the first week in June they have been resting after the flowering period, attention being paid to them in watering and not overcrowding them in some sheltered place out of doors. Those in small pots are shifted on if the pots be full of roots and the soil healthy; others may require partial shaking-out and repotting in the same sized pots; none of them are in larger than 11-inch pots, which is large enough for early-forced Roses, and fine large plants can be grown in pots of that size. We do not cut or prune Hybrid Perpetuals at this stage, believing that they should have all the foliage left to ripen the wood and enable them to make roots; much fresh growth after this is not desirable on Roses to be forced early. We, however, cut out any old exhausted wood from the Tea-scented Roses.

The Rose in the open ground thrives best in strong loam whose basis is clay; for potting, however, a lighter open soil is to be preferred: a light, yellow loam of a sandy texture is what we use, well-enriched with rotten farmyard manure. Light manures, such as leaf-mould or old mushroom-bed dung, are not of much use for Roses—they like more substantial fare. The soil should be chopped up rough, and a sprinkling of crushed bones will much improve it, and a few over the cracks will serve the double purpose of drainage and manure, which the roots soon find out. Pot firm, and drain well. When firmly potted the soil is not so liable to become waterlogged, or the drainage disarranged. Roses want a deal of water in the summer. When all are potted as they require, arrange the plants in rows according to size—the tallest at the back, and giving room to those which require it, without any attention as to the distances being uniform—in a turf pit facing the sun, in a warm sheltered place, and fill-in between the pots with sawdust, which keeps the roots equable as to temperature and moisture. The sawdust absorbs the heat of the sun through the day, and Pine-wood sawdust is also obnoxious to worms when it is fresh. Here they will now require very little attention throughout the summer, except watering, and an eye to suckers from the stocks if the Roses are worked plants. Those known to be well-rooted should have weak liquid manure at all times when watered. We sometimes top-dress the whole with sheep's or other dung, as it is useful at a rainy time. When the water-pot is not required, the rain washes the manure into the soil. All flower buds are picked off the plants as they are formed, and sometimes a few plants may require staking, but

not often, unless a strong shoot gets top-heavy, catches the wind, and unsettles the whole plant in its pot. About the end of October we remove the whole to the Peach cases, where there is abundance of air night and day. Here they are allowed to become comparatively dry at the root, when the foliage will soon begin to turn yellow and fall off, a sign of ripeness of the wood. Water may now be withheld entirely.

By the middle of December they may be pruned. This we do to the whole at one time. It is not at all necessary to leave those unpruned which are required later. They will start as required, just as Vines in pots will. The difference in flowering is effected by the time the plants are pruned, but by this time they get introduced into heat. The first lot may be selected and started at once; the most mild temperature of a Peach house just started suits them well. Here they will have the syringe daily, and for a time plenty of light, and a minimum of fire heat. If a low span-roofed forcing house can be devoted to them, so much the better; they can be better attended to as regards ventilation, and will have the benefit of all the sunshine possible, better than under Vines or Peach trees. One good soaking of water will be sufficient for a time; the syringe will keep them moist enough until they have developed a foliage. The chief points to be attended to now will be to husband the sun's heat, to ventilate freely when the weather will allow, but avoid draughts, which will injure the tender foliage and induce insects. The object must be to get strong growth; spindly drawn growth ruins the plants for future use, as well as yielding poor unrecognisable flowers. Fumigate on the least appearance of aphid, and watch for the Rose grub, which curls up the leaves and eats out the buds. Force slowly with as little fire heat as possible, the thermometer ranging from 50° to 65°, or 80° with sun heat.

The plants must be gradually hardened before removing to a cool house, else the buds may turn yellow and drop off. If the conservatory be warm they will not feel the change, especially if the forcing has not been rapid, and the pots not been plunged in heat. Water with liquid manure as soon as the buds begin to show, and continue until all the flowers are out, after which the same routine of ripening, and resting, and potting begins for another year.—THE SQUIRE'S GARDENER (in *The Gardener*.)

THE NEW STRAWBERRY DWARF TOMATO A DECEPTION.

AMONG the announcements of vegetable novelties for the present season there appeared the following taking description of a "New Strawberry Dwarf Tomato!"—"An entirely distinct variety, of novel form, and totally different in appearance to all other Tomatos. The fruit has a juicy pulp of a pleasant Strawberry-like flavour, with a certain degree of sweetness and acidity. With the addition of lemon juice it is frequently preserved like Plums, as well as stewed like Cranberries, if kept from the frost till spring." To give still greater force to this announcement, it was further stated that the variety, with some others, had "been recently introduced by us from America, and can be highly recommended." Like many other gardeners I gave sufficient credence to a statement so attractive, and hearing such an appearance of truthfulness, as to order a packet of the seed—not of the introducers, but of another leading and highly respectable firm, who were deceived equally with myself. The seed was sown, the plants raised and cultivated, and the result is that the so-called novelty proves to be—not a Tomato, but our old friend *Physalis edulis*, the Cape Gooseberry! Now, the cost of the seed and its cultivation was so trifling that one would hardly be at the trouble of complaining if nothing more were involved, but it is the feeling of distrust that such faulty practices engender that is most to be deplored. Willingly do I ascribe to enthusiasm the highly-coloured, often-exaggerated descriptions which herald the advent of many new plants and flowers; but when an old plant is pressed under a new name upon the public, it becomes a matter of duty to expose it and all such practices.

It is always painful to publish strictures of this kind, and I venture to hope that the matter may be explained to the satisfaction of all concerned, on this side of the Atlantic at least.—E. LUCKHURST.

PROPAGATION OF THE MISTLETOE IN WALES.—Two years since some seeds of the Mistletoe were rubbed upon, not inoculated into, an old Apple tree here, a large original Ribston Pippin. Last year the only symptoms of vegetation which any of these

seeds showed was throwing out two or three "tentacula," or claws; but this year one of the seeds has vegetated, and has now thrown out sprouts of more than an inch long. It was quite despaired of that the seeds would vegetate. This information may be useful to anyone who may wish to propagate this parasite in our, as in many other districts almost unknown.—G. H. COOKE, *The Gardens, Peniarth, Merioneth.*

FLOWERS FOR OUR BORDERS.—No. 10.

POTENTILLA MENZIESII.—MENZIES' CINQUEFOIL.

THE order Rosaceæ, to which the genus *Potentilla* belongs, may be regarded as one of the most important of the vegetable kingdom; for it includes within its limit not only some of the handsomest of our garden flowers, but also comprehends all the most valuable of the fruits of the temperate regions, such as the Apple and Pear, and the different varieties of the Peach, Plum, Apricot, and Cherry. Leaving aside, as foreign to our present purpose, the fruit-bearing genera, we may claim for the *Potentillas* a high rank among the ornamental plants of the order.

Of the 150 species and varieties known, all, with scarcely any exceptions, are interesting plants, and a considerable number of them are indeed scarcely inferior in beauty to any of the hardy perennials.

Most of the highly-coloured varieties now so common in gardens are hybrids; the flowers of the wild species being, with very few exceptions, yellow or white.

Among those species most deserving of cultivation may be named *P. rupestris*, with pretty pure white flowers produced in May; *P. pyrenaica*, also an early bloomer, of dwarf habit, yielding bright yellow blossoms in profusion; *P. mollissima*, with primrose yellow flowers; *P. Richardsonii*, also yellow, with foliage silvery beneath; *P. atrosanguinea* and *P. formosa*, two Nepalese species, the former with deep purple, and the latter with pale cherry-coloured flowers. These two species are not only interesting for their intrinsic beauty, but also as being the parents of many of the numerous hybrids which have adorned our gardens for years past. As one of the earliest and best of these we may name *Russelliana*, formerly a very popular plant, but now superseded by varieties with greater breadth of petal and brighter colours, of which *P. Menziesii* may be regarded as the type. Equally desirable are the varieties *Hopwoodiana*, *Macnabiana*, *Smontii*, *Striata multiflora*, all more or less distinct in colour. But beautiful as these are, they are eclipsed by the numerous double and semi-double varieties of recent introduction, which have the advantage of not closing their flowers so completely as the single-flowered, and their blossoms are also of longer duration. Some of the best of these are *Louis Van Houtte*, large, deep crimson; *Belisaire*, bright vermilion; *William Rollison*, reddish yellow and orange; *Rosaflora plena*, rich velvety vermilion, edged with yellow; and *Vase d'Or*, canary yellow, all first-class plants, worthy of being added to the most select collection of perennials.

All the species and varieties we have enumerated are perfectly hardy, and of the easiest cultivation, though it cannot be said that they will flourish in any description of soil. They succeed best in a good rich earth of some depth, and require, in summer, a plentiful supply of water, especially about the time the flower stems are thrown up. We have never seen the *Potentillas* grown in beds, but we think that such an arrangement would be exceedingly interesting, if a proper selection of plants were made. For the centre of the bed one of the shrubby species, such as *fruticosa*, or *floribunda*, both with yellow flowers, and growing about 4 feet high, would be well adapted; and around these might be grouped the erect-growing herbaceous species and varieties, reserving the trailers, of which there is a fair sprinkling, for the outer circle.

They are all readily increased by dividing the roots early in spring, and as these descend to a considerable depth, care must be taken that the fibres are not broken. Many of the species ripen seeds, from which new varieties may often be raised, and all the seedlings would flower the second season after sowing.

A wide field is here open to the amateur florist, and, with a little care and attention, he could scarcely fail to originate some valuable additions to this ornamental family.

There is an allied genus, of which a few species are occasionally found in gardens, and which fully equal in beauty the *Potentillas* we have named; we allude to the *Geums*. They are distinguished from the *Cinquefoils* by their lyrate leaves,

reflexed calyx when in fruit, and more particularly, by the style of the numerous little granular seed-vessels being jointed. (*Geum coccineum* (the *G. Quellyon* or *chilense* of some authors), is an extremely handsome plant.

The properties both of *Potentilla* and *Geum*, as well as of *Tormentilla*, another allied genus, are very similar. Many of the species of the three genera are astringent and aromatic, and all are perfectly innocuous. The common *Potentilla anserina*, or Silver Weed, has been used by tanners; and *P. reptans*, another English species, of which a pretty double-flowered variety is sometimes met with in gardens, was formerly employed as a febrifuge.



Potentilla Menziesii

The generic term, *Potentilla*, is derived by some authors from *potens*, powerful, or *potentia*, power, in allusion to the medicinal properties of the species; but as these are undoubtedly very weak, we incline to agree with those who consider the reference to be to the Latin diminutive, signifying little power.

The popular designation, *Cinquefoil*, alludes to the arrangement of the leaflets, which are often in fives, but by no means exclusively so; for many of the species, including *Menziesii*, have ternate foliage, and it is not rare to find on the same plants, leaves with segments varying from three to six in number; a few species have even pinnate leaves.—W. THOMPSON, *Ipswich.*

PORTRAITS OF PLANTS, FLOWERS, AND FRUITS.

PRIMULA VERTICILLATA var. *SINENSIS*. *Nat. ord.*, Primulaceæ. *Linna.*, Pentandria Monogynia.—Native of Abyssinia. Flowers primrose-yellow. "*Primula verticillata* has been long cultivated in Europe, having been raised from seed brought, I believe, from the Sinaitic Peninsula; but the Abyssinian variety is of recent introduction into England by Messrs. Veitch. It flowered in the Royal Gardens in March of the present year; it grows freely on rockwork."—(*Bot. Mag.*, t. 6042.)

MENINIA TURBIDA. *Nat. ord.*, Acanthaceæ. *Linna.*, Diandria.—Native of Cochin-China. Flowers white, reticulated with pink nerves. It flowered at Kew in April. The plant is a powerful febrifuge, called *Thuong-son* by the natives.—(*Ibid.*, t. 6043.)

CRASSULA PROFUSA. *Nat. ord.*, Crassulaceæ. *Linna.*, Pentandria Monogynia.—Native of South Africa. Flowers white tinged with pink. "A free-flowering and remarkably ramous species of *Crassula*, sent from the Graaf Reinet district of the Cape Colony by Harry Bolus, Esq. The structure of the leaf is very curious. The margin, which is quite entire, is edged with a narrow band of chestnut-brown, within which is a series of orbicular, slightly convex, punctiform disks. These disks, when highly magnified, are found to consist of a very dense cellular tissue, that terminates downwards in a conical form, and communicates with the peripheral ends of the nerves, in the

loose parenchymatous substance of the leaf. The surface of the disk is studded with excessively minute stomata, of a different form from the other stomata on either surface of the leaf; the guard-cells of these stomata further contain on their outer edge a row of minute chlorophyll granules, giving them a most beautiful appearance. It was raised from seed received in 1871 from Mr. Bolus, and now forms a profusely flowering mass of branches and leaves, 2 feet in diameter; it flowered from March to June of the present year."—(*Ibid.*, t. 6014.)

RHODODENDRON MALAYANUM. *Nat. ord.*, Ericaceæ. *Linn.*, Decandria Monogynia.—Native of the Malayan Archipelago. Flowers crimson. "Dr. William Jack, of the late East India Company's service, a very able botanist and author of the 'Malayan Miscellanies,' was the first to make known this fine plant (in about 1823), which he discovered on the summit of Gunung Bunko, a remarkably insulated mountain, commonly called by Europeans the Sugar-loaf, in the interior of Bencoolen, Sumatra. Dr. Jack observes of this mountain that, though estimated at only 3000 feet in height, the character of its vegetation is decidedly alpine, a fact which he attributes to the form and consequent exposure of its sharp conical peak. *Rhododendron malayanum* has since been gathered repeatedly on Mount Ophir, Malacca, at an altitude of 1000 feet."—(*Ibid.*, t. 6045.)

BORONIA MEGASTIGMA. *Nat. ord.*, Rutaceæ. *Linn.*, Octandria Monogynia.—Native of south-west Australia. Flowers maroon-purple outside and pale yellow inside. "It was introduced into Kew by seed originally received from Baron von Mueller, and subsequently living plants were presented by M. Thozet. The somewhat aromatic fragrance of the flowers resembles nothing known to me; it is most delicious; and though not overpowering, soon fills a large room; and should it be capable of being obtained as a perfume, I may safely predict its being in great request. In these respects, of delicacy of odour accompanying a singular brown-purple colour, it resembles the *Tinnæa æthiopia* of Tropical Africa, and like the *Tinnæa*, the *Boronia* is very easy of cultivation, if treated like a Heath in an ordinary greenhouse."—(*Ibid.*, t. 6045.)

OPHALODES LUCILLE. *Nat. ord.*, Boraginaceæ. *Linn.*, Pentandria Monogynia.—Native of Asia Minor. Flowers some pink and others blue. "This beautiful plant has hitherto been found only in two localities, which are very distant from one another, in Asia Minor—namely, Mount Sypilus, near Manesis (the ancient Magnesia, north-east of Smyrna), where it was discovered by Ancher Eloi; and in the Eastern Taurus Mountains of Bulgar dagh, in the province of Cilicia (now Itschili), adjoining the Gulf of Scanderoon. In both places it inhabits considerable altitudes, attaining 8000 feet. It is decidedly the most beautiful species of the genus, and is well adapted for rockwork cultivation, remaining in flower for a considerable time in cool weather, and presenting all shades of colour in the corolla, from a pale pink-purple to azure. The specimen here figured was presented to the Royal Gardens by James Atkins, Esq., of Painswick, and which flowered profusely for a second time after arrival."—(*Ibid.*, t. 6017.)

ROSE—Mademoiselle Cécile Berthod.—"This pretty new Tea Rose is from the collection of Mr. W. Paul at Waltham Cross. The variety has been shown at some of the spring metropolitan exhibitions, and won a first-class certificate, being, as we think, very deservedly rewarded. The Rose is of good free habit, blooming abundantly, and the flowers are large and full, of a fine pure sulphur-yellow colour, the backs of the petals being almost white. Our collections of Tea Roses have received some very useful accessions during the last year or two, and amongst the novelties thus obtained we believe the variety now figured will be found to hold a foremost place, and will not disappoint those who cultivate it."—(*Florist and Pomologist*, 3 s., vi., 115.)

THE ROSE-SCENTED GERANIUM.—Some forty years since, or more, the "old Rose Geranium" was much prized, not for its flowers, for they are quite insignificant, but for the delicious fragrance of its foliage, which, like the Sweet Verbena (*Aloysia citriodora*) retains the scent when dried and kept in the pocket. My employer some three weeks since informed me that many years back he recollected, at Peper Harrow, the beautiful seat of Viscount Middleton, the then, as far as he knew, only remaining plant of that Geranium. I immediately wrote to Mr. Thompson, the gardener at Peper Harrow, and was happy to find that the old plant is still in existence, and Mr. Thompson

has been kind enough to send me some cuttings of it. It is well worth preserving.—G. H. COOKE, *The Gardens, Peniarth, Merioneth.*

VALUE OF FRUITS AND FLOWERS.

FRUITS and flowers have too often been considered only as the luxuries of life; but the more we use them, the more we are associated with them, the nearer shall we approach a refined and healthy temperament both of body and of mind. It is therefore our duty to develop these wonderful resources of nature, and to increase and improve them to their utmost extent. No employment is more consonant with the refinement and happiness of a rational being, none better calculated to develop the purest sentiments of our moral nature. "They are," said Mr. Webster, "a constant field where all sexes and ages, and every degree of taste and refinement, may find opportunity for gratification."—(*Extract from a Lecture by the Hon. Marshall P. Wilder to the Massachusetts Horticultural Society.*)

ROYAL HORTICULTURAL SOCIETY.

JULY 16TH AND 17TH.

On one of the finest days we have enjoyed this summer, but by no means hot, the Zonal Pelargonium Show opened, and it is to be continued this day. The flowering specimens are dazzling in their colours, and those whose memories stretch back to the old Tom Thumb would marvel indeed at the size both of pips and truss that is here to be found, not in one variety only, but in dozens. The Tricolors, on the other hand, which but a short time ago were all the rage, are dull, and present a great sameness. Notwithstanding the absence of exhibitors who had entered, but did not come forward, Mr. Eyles evoked at the last moment a very good arrangement in the conservatory corridors, where the Show is held, and by a more rigid adherence to time, in which respect the reins must be drawn tighter still, we believe it will be possible to have yet better effects in the future. Exhibitors entering a number of plants and then not coming forward at the last moment, render all preconceived plans futile.

Class I is for eighteen Zonal Pelargoniums in 6-inch pots, novelty and shape of flowers taking the precedence of size and training. Here Mr. George, gardener to Miss Nicholson, Putney Heath, is first with A. F. Barron, a fine scarlet, with a white eye; Edward Bennett, deeper in colour; Queen's Messenger, very large truss; La Grande Marque, fine truss; Lord Lonsborough, scarlet; Congress, fine orange scarlet; Circulator, free-flowering rosy scarlet; Lucretia, white, with pink eye; Polly King, salmon rose; and others all of his own raising. Second come Messrs. Bell & Thorpe with a collection not one of which is named except on tallies in the pots, but nearly all of them are beyond reach. The same remark applies to the third-prize lot from Dr. Denny, of Stoke Newington. Mr. Cannell, of Woolwich, also exhibits in this class.

In Class 2, for twelve Nosegays or hybrid Nosegays in 6-inch pots, novelty and shape of flowers again taking the precedence of size and training, Mr. George also takes the first position with a group, in which Grand Coup, bright rosy scarlet, is very fine. Mr. Cannell is second with a group in which Frank Miles, magenta crimson; Undine, deep scarlet; Mrs. Flyte, intense rose; Mrs. Turner, magenta rose; Mrs. F. Burnaby, pink, white at the base of the upper petals; and Matilda, are conspicuous. Third comes Mr. Goddard, of Twickenham. Messrs. Bell and Thorpe, Stratford-on-Avon, Mr. Turner, of Slough, Dr. Denny, and Mr. Rowe, The Rookery, Rochampton, also exhibit in this class.

For six specimen Zonal varieties Mr. Catlin, gardener to Mrs. Lermite, Finchley, is first with plants in splendid bloom, some of which measure 5 feet in diameter. The kinds are Monsieur Rendatler, Prince of Wales, Pioneer, Lord Derby (magnificent), Virgo Marie, and Leonidas.

In the nurserymen's class for six hybrid Nosegays, Messrs. Bell & Thorpe are first with an unnamed lot. For twelve double Zonals the same firm are also first with fine examples of Marie Lemoine, rose; Victor Lemoine and Charles Glym, scarlet; Mr. Gladstone, rose scarlet; and Siguet, together with Alba plena, a very poor white, and others. Second come Messrs. Wright, Lee, Kent. In the amateurs' class Mr. R. Watson, gardener to T. H. Bryant, Esq., Airlie Lodge, Surbiton, is first.

Golden Tricolors are exhibited in considerable force. The best eighteen come from Mr. Pestrige, Greenway Nursery, Uxbridge, and consist of finely-grown excellently-coloured plants of Prince of Wales, Mrs. Headley, Sophia Dumaresque, Mr. Rutter, Lady Cullura, Peter Grieve, Mrs. Turner, Florence, Salamander, Sir Robert Napier, Acme, Mrs. Dunnett, E. R.

Benyon, Vale of Evesham, Achievement, Sophia Cusack, Lucy Grieve, and Brilliant. Mr. H. B. Smith, Ealing Dean Nursery, is second with, among others, excellent plants of Jetty Lacy, Defiance, and Lady Cullum. The third prize goes to Mr. Wright, of Lee. For six Mr. Watson is first; Mr. Goddard, Twickenham, second; and Mr. Goddard, gardener to A. Chancellor, Esq., Richmond, third. In the class for the same number of Silver Tricolors the prizes go to Mr. Pestridge, Mr. H. B. Smith, and Mr. Wright. Among the plants shown are excellent specimens of Lass o' Gowrie, Miss Burlett Courts, Mrs. Roushy, Mrs. Col. Wilkinson, Italia Unita, and Silver Cloud. For four Mr. Beach, gardener to E. R. Pettie, Esq., Riverhead, Sevenoaks, takes the highest place; and the remaining prizes go to Mr. G. Goddard, Twickenham, and Mr. J. Goddard, Richmond.

Of the Golden Bronze Bicolors there is but a small exhibition. Mr. Pestridge is first for six in 8-inch pots with Black Douglas, W. R. Morris, Earl of Roslyn, Crown Prince, Reine Victoria, and Sybil, remarkably well grown but not in good colour. Second and third come Mr. Watson and Mr. Wright. The best group, however, is that from Mr. Beach, but these, having been grown in pots less than 8 inches in diameter, were disqualified; Mrs. John Lee, Countess of Kellie, and Earl of Rosslyn are very good.

In Class 13, for six Zonal varieties not in commerce, the prizes were offered by Mr. Cannell, of Woolwich. Mr. George is first with A. P. Barron and Edward Bennett, both of which received first-class certificates from the Floral Committee, and are very fine varieties; Mrs. J. George, very large truss, orange scarlet, fine form, first-class certificate; La Marque, and two others. Messrs. Bell & Thorpe are second, and take a first-class certificate for Czarina, white, tinged with rose at the eye.

In the next class, for six Nosegays or hybrid Nosegays not in commerce, the prizes are likewise offered by Mr. Cannell. Mr. George is first with Lustrous, fine dark scarlet (first-class certificate); Dr. Masters, magenta-flushed; Teresa, Beauty of Surrey, and The Shah, all large-trussed varieties.

For three plants of a new variety Mr. G. Smith is first with Santley, scarlet, white eye; Mr. George second with Mrs. J. George; and Mr. Smith, Edmonton, third. Mr. Turner sent three fine baskets of stage Pelargoniums, Protector, Ruth, and Giant.

For three plants of a new Nosegay or hybrid Nosegay Messrs. Bell & Thorpe are first with Happy Thought, with the centre of the leaves variegated with white, and having besides a dark zone surrounding the variegation, and the whole of the margin green, whilst the flowers are magenta crimson, but narrow-petaled. Mr. George shows Achievement, crimson scarlet; and Mr. Turner, Duchess of Marlborough, pink, white eye. For the best new Golden Tricolor, Mr. Pestridge is first with Mrs. H. Little, having a broad, clouded crimson band; Messrs. Bell and Thorpe are second, and Mr. Turner is third with Miss Morris. The best Silver Tricolor is Dolly Varden from Mr. Turner, the second best Mrs. J. Marshall from Mr. Pestridge, Uxbridge.

The best new Golden Self exhibited is Golden Banner, from Mr. Pestridge. The second prize was awarded to Messrs. Bell and Thorpe for Sulphureum, and the third to Mr. Turner for Golden Lover, a beautifully-coloured kind.

Mr. Pearson, of Chilwell, offered prizes for twelve distinct varieties of seedlings, not variegated, raised and sent out by him, in pots not to exceed 8 inches, the plants to be grown with as little training as possible. Mr. W. Brice, gardener to J. H. Lemitte, Esq., Knighton, Finchley, takes the first prize. His plants are in good health, the trusses very large, and the flowers splendid in colour. The most notable sorts are Bayard, Rev. C. P. Peach, Florence Durand, a very fine pink flower of the semi-Nosegay section, the flowers large, well-shaped, and the trusses remarkable; Amaranth is another fine pink flower, the colour very rich; Lord Belper, Lady Egerton, Thomas Speed, and Corsair. Mr. J. Catlin, gardener to Mrs. Lemitte, sen., East End, Finchley, comes second; Mrs. Vincent, Chumder Sen, and Mrs. Saunders, are fine.

For Dr. Demy's prize for a collection of plants, consisting of two plants of each of his seedlings that were sent out by Mr. William Paul in the spring of 1871, pots not to exceed 8 inches, plants to be grown with as little training as possible, Mr. J. Scott, gardener to Mrs. Howatt, Enfield, is first. The plants in this class were not to be subjected to much training, but the trusses were tied-out with sticks placed conspicuously in the pots. Wellington, Sir J. Moore, and Sir C. Napier are very fine. Messrs. Bell & Thorpe, Stratford-on-Avon, come in second with small plants.

For Mr. G. Smith and Mr. J. George's prizes for twelve varieties of Pelargoniums, raised by Mr. J. George, to be shown in pots not exceeding 6 inches, quality of flower to be the primary test of merit, Mr. E. Rowe, The Rookery, Roehampton, is first. In this class the plants are necessarily small, but Mr. Rowe's plants are very neat, and the trusses good. Circulator, Dr. Livingstone, King of the Forest, and Master Harry are fine. Mr. G. Goddard, Twickenham, is second with nice plants; and Messrs. Carter & Co., of High Holborn, have a collection.

Prizes were offered for *Disa grandiflora*, but no one came forward to claim them.

Of six *Liliums* in pots, nurserymen, Mr. T. S. Ware, Hale Farm Nurseries, Tottenham, has the best, and Mr. C. Turner, of Slough, is second. Mr. Ware has *L. auratum*, *L. longiflorum*, *L. croceum*, *L. excelsum*, &c. Mr. Turner's are principally *L. auratum*.

The successful exhibitors of Delphiniums, Pentstemons, and hardy perennials are Mr. Ware, of Tottenham, Mr. Porter, Isleworth, and Mr. Parker, of Tooting; the latter, in particular, contributes a very fine group. In Carnations and Proteas all the prizes go to Mr. Turner, of Slough, Mr. Norman, and Mr. Pizzey, Mr. Turner's blooms being remarkable for their beauty; but we have not time just now to do more than render a well-deserved meed of praise to the exhibitors of these old favourites.

The prize for the best collection of Lettuces was awarded to Mr. Osman, of the South Metropolitan Schools, Sutton, who has large examples of numerous Cos and Cabbage kinds.

Among miscellaneous subjects, which are less numerous than usual, we must mention a fine group of the beautiful crimson *Spiraea palmata* from Mr. C. Noble, of the Sunningdale Nurseries; a fine lot of Balsams from Mr. Smith, of Ealing Dean; a good mixed group from Mr. Aldous, South Kensington; and a remarkably fine collection, both of Tricolor-leaved and flowering Zonal Pelargoniums, from Mr. W. Paul, of Waltham Cross. In this genus, rose, edged with white, and Marathon, Nosegay, brilliant crimson flushed with magenta and orange, received first-class certificates. Mr. Keynes, of Salisbury, had a cultural commendation for boxes of new Roses of 1872, in which President Thiers, Etienne Levet, Anguste Rigotard, and Princess Beatrice were conspicuous.

FRUIT COMMITTEE.—Alfred Smee, Esq., F.R.S., in the chair. Mr. Harris, gardener to Mrs. J. H. Vivian, Singleton, Swansea, sent three very handsome Queen Pines, one of which weighed 6½ lbs., and was a remarkable specimen. They were awarded a cultural commendation. Mr. G. Westland, The Gardens, Witley Court, sent four Queen Pines, weighing in the aggregate 22 lbs. They were awarded a cultural commendation, but they were not equal to those shown by Mr. Harris. Mr. G. Ward, gardener to T. N. Miller, Esq., Bishop Stortford, sent two fruit of Moscow Queen, under the name of "Queen." Mr. T. Farrow, gardener to T. Batters, Esq., Enfield, sent a seedling Grape, called Golden Drop, raised between the Black Hamburgh and Canon Hall. It was not considered of sufficient merit to receive a certificate. Messrs. Standish & Co., Ascot, exhibited two bunches of Ascot Citronelle Grape, which received a first-class certificate last year. The flavour was a fine brisk Muscat-Citron flavour. A letter of thanks was awarded. R. B. Postans, Esq., of Brentwood, sent a collection of nine sorts of seedling Strawberries:—Boz, a medium-sized fruit, similar in shape to La Constante, was passed; Dr. Lindley was also passed; Chancellor was also passed; Princess was a large variety, but not of good flavour; Pomona was of superior flavour to the preceding, and the Committee requested to see it again; Nabob is a large handsome variety, but the flavour inferior; Sylvanus is also a large variety, and the flavour inferior; Excelsior is a large handsome variety, and, as it was not quite ripe, was asked for again; Exquisite is large and well coloured, and the flavour good; it was asked for again. These were fine handsome-looking varieties, but the recent heavy rains had diluted the flavour. Mr. William Paul, of Waltham Cross, sent a seedling Strawberry of medium size, very firm and compact, with a red flesh throughout, and with a fine Pine flavour. The opinion was that it was a good Strawberry, but too small. Mr. T. Stevens, gardener, Wray Park, Reigate, sent a seedling Melon, which was passed. Mr. Johnston, The Gardens, Glamis Castle, N.B., also sent a seedling Melon, which was passed. Mr. Bennett, The Gardens, Hatfield, sent sprays of Peaches and Nectarines laden with fruit, to show the abundance of the crop on concrete wire walls. Mr. P. Dancer, of Little Sutton, Turnham Green, sent sprays of Monarch Gooseberry completely studded with fruit, showing its wonderful prolificacy. Mr. W. Child, The Gardens, Pool Bank, Birkenhead, sent a seedling Melon of good but not remarkable flavour. Mr. D. Piccirillo, Wigmore Street, sent three very large Flat Red Tripoli Onion, grown at Naples, which were of enormous size.

FLORAL COMMITTEE.—W. B. Kellock, Esq., in the chair. The subjects submitted to the Committee on this occasion were but few. Of new Roses, Messrs. Paul & Son, Cheshunt, exhibited S. Reynolds Hole, dark maroon scarlet, fine form, and received a first-class certificate. A like award was made to T. Laxton, Esq., Stamford, for Empress of India, another dark variety of fine form. Mr. J. Walker, Thame, likewise received a first-class certificate for Beauty of Thame. Mr. H. B. Smith, Ealing Dean, sent Golden Tricolor Cesareva with finely-coloured leaves. A first-class certificate was awarded to Mr. J. Cocker, nurseryman, Aberdeen, for Phlox Miss Robertson, a fine white variety. Mr. J. Gee had a certificate for Gloxinia Grand

Monarch, large, erect-flowering, purple; Messrs. Cripps & Son for hybrid Clematises Guiding Star, violet purple, with a purplish crimson band, and for Louis Van Houtte, rich violet-blue, quite novel in colour. Azara microphylla, a hardy ornamental shrub from Chili, shown by Messrs. Veitch, of Chelsea, had also a first-class certificate.

From Messrs. Barr & Sugden, Covent Garden, came a basket of Lillies, Ixias, and other bulbous flowers. Mr. Ware sent a large collection of hardy plants, of which *Acantholimon venustum* was awarded a first-class certificate; Messrs. Carter & Co. one of double and single-flowered Zonal Pelargoniums, together with Lobelias, of which Charity—purplish pink with a white eye—had a first-class certificate, also *Clarkia integrifolia limbata*, purple edged with white, very pretty. Mr. Norman sent a number of new Carnations and Picotees.

From Messrs. Bell & Thorpe came Zonal Pelargonium Mrs. Carr, with double rose-coloured flowers, and leaves variegated with creamy white: this received a first-class certificate, as did also Pelargonium Princess from Mr. W. Paul, and Lustrous from Mr. George. Mr. Bull had also a first-class certificate for *Dipladenia Barclayana*, with splendid deep-coloured flowers; and Mr. Kimpton one for *Coleus Mrs. Knatchbull Hugessen*, cream-coloured.

FLOWER-SHADE.

SEEING an article in your No. 640 on shades and shelters, in which your correspondent talks of "home-span shades," brought to my recollection a flower-shade used by a great florist near Dublin for shading Tulips and Carnations, which, to my mind, is as cheap and efficient as anything can be, and also easily made. I therefore send you a description of it. It is made of any old pieces of oilcloth, such as is put down in halls, &c., which may be knocking about a house, and are generally looked upon as rubbish, and either thrown away or consigned to the lumber-room. A circular piece of any dia-

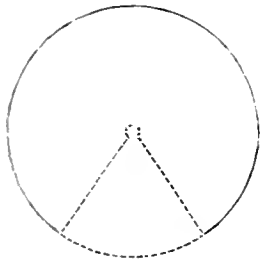


Fig. 1.

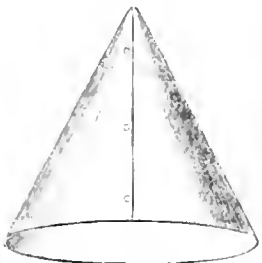


Fig. 2.



Fig. 3.

meter required is cut out, as in *fig. 1*; from this a triangular piece is cut out, as shown by the dotted lines; the two edges are then overlapped, and a couple of nails driven through and clenched inside complete the shade (*fig. 2*). The apex of the cone is then cut off, which leaves a small round hole in the centre of the cap. When a Carnation is in flower a small hole is drilled in the stick, to which the plant is tied at the required height, a nail (brad) passed through, and the cap slid down the stick until stopped by the nail; a small wedge is inserted in the hole between the stick and cover, and the whole is firm (see *fig. 3*).

This, I think you will say, is as cheap and easy to make as the painted canvas shade, and would stand more knocking about and last longer too. —F. T. B.

THE SHAH OF PERSIA.—We are informed that Messrs. James Carter & Co. attended at Buckingham Palace to receive His Majesty's commands for a considerable supply of seeds of all

kinds. We are very glad that the Shah is an encourager of the culture of the soil. Persia vastly needs improvement in this. A Scotchman said the country's soil is of two kinds—sand mixed with salt, and sand without salt.

THE BEAUTIFUL AND USEFUL INSECTS OF OUR GARDENS.—No. 6.

THE number of insects killed by mere accident is pretty considerable, and, if there existed an accidental death insurance company among these six-legged individuals, I suspect the rate of premium would need to be rather high! Man, too, is destructive to insect life without as well as with intention, though he has but two legs against an insect's six, and many of these creatures possess wings as an additional means of locomotion. Some species seem to have a fatality for blundering along, so as to get upon pathways or expose themselves to the perils of fire and water; and despite their tough wing-cases, the human foot puts an end to the existence of various beetles, as was noticed long ago by Shakspeare. As I narrowly avoided treading upon a newly-emerged cockchafer recently (for this occasional foe to the gardener seems to be coming out rather briskly this year), I recalled with some amusement the different meanings which have been drawn out of the observation, perhaps hastily penned, that

"The poor beetle that we tread upon,
In corporal sufferance finds a pang as great
As when a giant dies."

The two extremes of the deductions drawn from this are: one, that in reality giants do not feel any more than beetles, only imagination leads them to think they do; and the other, that beetles have as acute sensibilities as men, therefore we should be chary of taking their lives or inflicting injuries upon them. The ordinary human individual, however, regards these insects with disgust sometimes amounting to alarm, and does not at all hesitate to terminate their lives with or without provocation so to do. I believe the gardener for the most part is neither excited to indignation nor admiration by the name "beetle," except it may have happened that the too-well-known black beetle—no beetle really—has paid him an unfriendly visit.

There are some beetles injurious to our gardens in their larval stage, and some, again, as perfect beetles; yet only here and there are these recognised by the horticulturist and their true character known. They are most usually grouped under the indefinite terms of "the flea," "the fly," or "the grub." True it is that the non-scientific man might with justice assert that the scientific giver or collator of names is at times unacquainted with the habits of the insects he examines, and very much at a loss to suggest a remedy when they are injuriously abundant; yet he who devotes his time to the driest of technicalities connected with entomology may still do the horticulturist good service, and also the general naturalist, for what is many an observation worth unaccompanied by the means of identifying the species to which it attaches? This may be deemed to be a little beside our subject, but there is still at times an unfriendliness showing itself between those who ought to be at one, since they are students, though in a different way, of the same branch of natural history. We cannot expect to find many Admirable Crichtons in entomology, who shall be learned alike in anatomy, classification, habits, and geographical distribution.

"Returning to our mutton," or rather to our beetle-flesh, not to that of sheep: it should be stated that we have a goodly number of beetles which are of decided utility in our gardens and orchards, and their services form a set-off against the undeniable injuries done to us by other species. We see, I believe, much less of our beetle-friends (excepting the universal lady-birds), than of our foes, and hence are scarcely aware how much we are indebted to them. Besides those which are predatory in their habits, hosts of beetles act as scavengers, being engaged in destroying or decomposing matters which are thereafter salutary to the ground instead of remaining noxious to the atmosphere, as they would be if undisturbed. In this particular work the Staphylinide are largely engaged, and they may often be detected under leaves putrescent or decaying; though the beetles of this family are indeed well-nigh omnivorous in habit and active enough at night, but frequently apt to conceal themselves in the daytime. Many Staphylinide are carnivorous in the larval as well as in the imago condition, and it is hinted they feel no compunction in devouring a juvenile relative.

Under the popular name of "Cock-tail Beetles" several Staphylinide are included, and the most familiar of these is

that represented in the accompanying figure called *S. (Goërius) olens*; and it can certainly be very odorous if annoyed, being furnished with an apparatus by which is given forth an offensive liquid. Sometimes it will also exude an acrid fluid from the mouth, apparently of a similar nature. This and other species allied have also been designated Rove Beetles from their propensities, and the common species specially has attached to it the epithet of the "Devil's Coach-horse." A modern naturalist justifies the appellation, for he says that he made a "coloured drawing of the head of this insect, representing it with its jaws widely opened as if in the act of seizing its prey, and the light glancing from its polished eyes. It was a perfectly faithful sketch, drawn by the help of the camera lucida, but yet almost

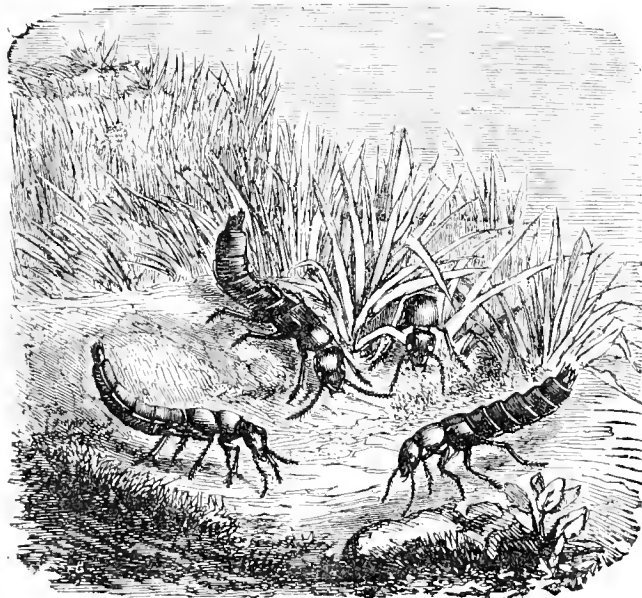
Wood points out, the beetle is at times baffled by the earth worm's practice of dragging down leaves to some depth into the openings it has made—a practice which has been accounted for in a variety of ways. These leaves are just as likely to be those of living plants as not, and hence one decided objection the horticulturist has to a multitude of these creatures in his domain. But these leaves impede the progress of *O. olens* in pursuit of worms, though perhaps the insect would be more determined in the chase were it not capable of feeding on so great a variety of substances living and dead.

The larva of *O. olens* is, of course, devoid of wings, yet quite as capable of providing for itself as when fully matured. It is predacious even when quite young, and, though darkling in its habits, comes into view sometimes, and may frequently be detected under stones and logs. How it wriggles into some of the situations where we find it is surprising. Many of the small insects and other creatures killed by this larva are not actually eaten up; the juices having been extracted, the larva often quits its prey and renews its search for more. The pupa is quiescent and usually concealed under the earth, contrasting strangely with the restless larva and imago.

The Tiger Beetles claim a passing notice, as at least occasionally certain of the common species are to be found on the wing in gardens situate near waste or heathy land; and even when flying or running in other spots, they kill insects which are at times frequenters of gardens, though bred elsewhere. The familiar *Cicindela campestris* is a good representative of the tribe; it is an insect wonderfully active, though it takes but short flights for the most part. Decidedly different in appearance from the species under our notice just now, with a rather elegant outline, and displaying pleasing colours, it is quite as ferocious as the repulsive *Staphylini*. At its front it bears a deadly weapon, resembling in miniature two sickles crossed at the points, and poor are the chances of any insect that has the misfortune to come in the way of these. For its own security, and to assist it in its pre-

dacious excursions, the Tiger Beetle has eyes so situated that an object approaching from any direction is at once seen. Like wasps and others of the Hymenopterous order, the *Cicindelidæ* rarely devour their victim; partially dismembering it, they remove the soft contents of the body. An alarm will make them fly off with anything they are grasping, but they have not strength of wing to carry it far. A specimen of *Cicindela campestris* held between the fingers leaves an odour which has been compared to that of a crushed Verbena leaf: it is not disagreeable. In some species of *Cicindela* we notice a perfume resembling that of the Rose or Sweet Briar.

The larva of this species cannot emulate the rapid movements of the imago. It has short legs and a body not adapted for locomotion. But what it cannot secure by force it obtains

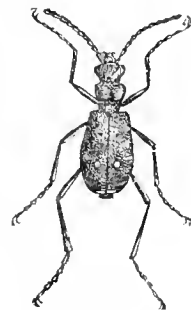


Oecypus olens.

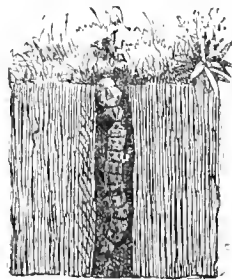
everyone who saw it for the first time thought that it was a fancy sketch for an imp." With regard to the pugnacity and courage of the insect, the same author observes that when he was out with a party of friends a cock-tail beetle brought the group to a standstill. The ladies shrank back, but the naturalist advanced stick in hand. "I kept the creature fighting me for about ten minutes, its determined attacks and the fierce looks which it put on exciting general applause. Even when at last I allowed it to retreat, I had only to strike the end of my stick on the disputed ground to provoke another attack." The rights of the quarrel were evidently not on the side of the naturalist, but on that of the beetle. The bite of this species and of other *Staphylinidæ* should be avoided, however, as it has been known to inflame the skin considerably.

The menacing aspect of *Oecypus olens* is, as Kirby remarks, increased by the mode in which, scorpion-like, it turns up the abdomen, as if about to strike its foe. This is, however, only a threat, and the flexible abdomen subserves other purposes in the insect's life. The observer who is no entomologist can see at a glance that the wings are of good size, and the elytra or wing-cases are small. In many beetles the latter are of service in folding-up the organs of flight, but in *O. olens* the delicate membranes could not be packed away without other assistance, which is afforded by the hind segments. After an excursion in the air (should one of these beetles be noticed in the act of coming to rest), a cock-tail beetle gives its wings a flourish, and then by the help of the tail puts them under the elytra, and is all ready for a run. The operation is performed with great rapidity.

Besides destroying insects, this common beetle helps to reduce the number of earth worms in the garden. It does not find any difficulty in pursuing the slippery annelid, since its long body and powerful structure enable it to follow its prey along the tracks beneath the ground, though, as the Rev. J. G.



Cicindela campestris.



Ambush of larva of *Cicindela campestris*.



Larva of *Cicindela campestris*.

For this and the other illustrations to the present article we are indebted to Figuer's "Insect World," published by Messrs. Cassell.

by stratagem. In sandy ground we may expect to find the ingenious pitfalls constructed by this larva, which suggest to us the oft-described traps made by the ant-lion, not a native of these islands. The pit sunk by the larva of *Cicindela cam-*

pestris is more rude, though going to some depth; and the immature Tiger awaits its prey, usually near the opening, wedging itself there by means of hooklets, with which it is furnished for this very purpose. Having seized some by-passer, the larva drops with it to the bottom of the pit. The digging-out of this is accomplished by the legs and horny head; and

the insect has a natural hod, in the form of a hump, upon which it rests the sand or earth as scooped out, and ejects it near the mouth of the pit, not often troubling itself to remove the rubbish to any distance. The change to a pupa takes place within the same burrow, the mouth being then carefully closed. Here the insect remains from autumn until spring.—J. R. S. C.

ORTHOSIPHON STAMINEUS.

This is a very pretty and interesting member of the Labiata, and is well deserving of the attention of growers of stove plants; for, coming into full bloom about the end of July, it becomes extremely valuable in a decorative point of view,

servicing to enliven the plant stove just at the time when there is somewhat of a dearth. As a genus, *Orthosiphon* is closely allied to *Ocymum*, *Coleus*, and *Plectranthus*, but its inflorescence reminds one of a *Clerodendron*.



Orthosiphon stamineus.

Orthosiphon stamineus is herbaceous in habit, and forms neat little bushes, which if required may be had in bloom when only about 6 inches high. Most cultivators will, however, prefer growing it to a larger size before allowing it to flower, and, therefore, when any bloom buds which are not required to develop make their appearance, they must be picked off. The stems and branches of this elegant little plant are furnished with light purple hairs; leaves sharply oval, toothed on the edges, and dark green on the upper side, but glaucous beneath, the veins in addition being sparingly clothed with short white hairs. The flowers are produced in terminal racemes, as the illustration kindly lent us by Messrs. James Veitch & Sons, will show, although it fails to convey an adequate idea of the plant's beauty. The corolla is about an inch in length, bluish-lilac in colour, having the stamens much exerted, which adds materially to the beauty of the raceme.

The culture of *Orthosiphon stamineus* is really of the simplest nature, which is another feature in its favour, inasmuch as any amateur possessing a cool stove may take it in hand without the slightest risk or fear of failure. Drain the pots well; for soil use about equal parts of peat, loam, and good leaf mould, adding a little sharp river or silver sand to the

whole so as to make it feel gritty when taken in the hand, and during the growing and flowering season supply the plant liberally with water. It appears to be widely distributed over India and through the islands of the Indian Archipelago, but was introduced to our collections from the neighbourhood of Cape York in north-east Australia, by the late Mr. J. G. Veitch. —EXPERTO CREDE.

ESCALLONIA MACRANTHA.—I can with much pleasure endorse every word Mr. Robson has said with respect to the beauties of the above plant. I have one planted in the south-east corner of a sunk-fence brick wall about 6 feet high, which is at the present time one complete mass of bloom, borne upon the young wood of last season's growth in sprays from 12 to 18 inches long. It has almost assumed the character of a shrub, as it has been nailed in very little; so the growth it makes during the summer is left to ramble as it likes, which is probably the cause of its blooming so profusely. The young growth it is now making above the top of the sunk fence will again flower late in the autumn, but not so profusely as it does in the summer. It is planted in a rich stiff loam, which appears to suit it in every way, as it makes shoots from 18 inches

to 2 feet long, with rich shining green foliage as large as that of the Laurel.—W. MCP., *Ashbourne, Derbyshire.*

PLANTING-OUT FORCED STRAWBERRIES FOR A MAIN CROP.

For the last nine years we have planted out our forced Strawberry plants in a systematic way, for a main crop of fruit, and have never in one instance failed in securing a most abundant crop. I am aware it is a common practice to plant-out forced plants as a kind of auxiliary crop, most dependance being placed upon the permanent plantations; but where Strawberries are forced in any quantity I would advise the planting of them out in a regular way for a supply of fruit for preserving and other purposes. Such plants bear excessively the first year, and never fail. The second year they will bear a heavy crop again, but after this they should be trenched down. Besides, the plants are soon enough if they are planted out in August. We follow our second early Potatoes with the Strawberries, and have been as late as September in finishing, but the last-planted plants bore just as well as the first in the following season.

Our practice is to put the plants out in a sheltered corner as they have done bearing: if the pots are wanted, the plants are turned out and the balls packed closely together, filling up the crevices with a little fine soil, and in this way they are left till they can be planted out, not forgetting, in the meantime, to water them abundantly. If the ground has been manured heavily for the Potatoes, it is just dug over and the Strawberries planted at the same time, 18 inches apart between the plants, and 2 feet between the rows. This is ample, for forced plants do not make such growth as permanent ones: neither do they root deeply, for which reason they are somewhat apt to suffer from drought; but a thick mulching of half-rotted stable litter put on early in spring prevents any risk of this kind, and works little less than a miracle in swelling-off the fruit and promoting the general health of the plants. We have often gathered more than 1 cwt. of Black Prince from a piece of ground of less than half the extent that permanent plants would require to produce the same, for we plant this variety (forced plants) 1 foot apart between the plants, and 18 inches between the rows. Last year we began planting about the middle of August, and the plants are now perfectly smothered with bloom, and the forced plants of 1871 are but little behind them.

I ought to state that when the plants are put out, the old leaves which have been developed in the forcing-house should be shorn clean off, and the balls should be buried as deeply as is possible without burying the crowns altogether. Plants of which the surface-roots are left exposed to the air never do so well.—J. SIMPSON (in *The Gardener*.)

NOTES AND GLEANINGS.

It has lately become the fashion to visit the sins and delinquencies of the ROYAL HORTICULTURAL SOCIETY on the head of the SUPERINTENDENT OF SHOWS. Because a good deal went wrong, and some people were dissatisfied, at Bath, it has all been laid to the charge of the Superintendent. Now, although we do not regard the Superintendent as infallible, we do say that, so far as regards the breakdown at the Bath Show, he is no more to be held responsible for them than Tenterden steeple is for the present condition of the Goodwin Sands. Has it ever occurred to the minds of fault-finders what it is to have the responsibility of such a show, with all its conflicting interests and ramifications, at a time when the Society was all "sixes and sevens," with an inexperienced Council and Secretary, and with limited powers placed in the hands of the Superintendent? It is easy to find fault when the facts are unknown. Mr. Eyles can no more make bricks without straw than other men can; and when those who enter collections of plants for exhibition do not send them, nor give timely intimation of their intention not to send them, it cannot be wondered at that the "big tent" should look thin, and that the grouping and disposition of the plants which had been decided upon days before should have to be hastily reconsidered at the eleventh hour, when there are fifty other things to be attended to. If exhibitors make application on Monday morning to be permitted to alter their entries, and if they crowd the office and harass the clerks for their cards all the forenoon, when the judging ought to have commenced, it is

hard that any individual person should be made responsible for the shortcomings consequent upon such conduct.

Until the Council take the matter in hand, and lay down irrevocable rules which all must adhere to, and the whole thing is properly organised under their authority, we fail to see how any person can be expected to be held responsible for the failures which have taken place. Hitherto there has been no direct action of the Council, and the Superintendent has not had a staff given him adequate for carrying out such an undertaking successfully. There has been far too much cast upon his shoulders, and we trust that in future, if the shows are to pass off successfully, a properly-organised staff distributed over the various departments, and under the direction of a competent head, will be appointed. It has always been a marvel to us how any single individual could possibly direct the varied details of such an exhibition.

— THE POST OF ASSISTANT SECRETARY TO THE ROYAL HORTICULTURAL SOCIETY, vacant by the resignation of Mr. Richards, is succeeded to by J. S. Davenport, Esq., who has been elected out of 395 candidates.

— A VERY handsome plant for a single specimen on a lawn is FERULA TINGITANA, its large, deeply-cut, feathery-looking foliage and large yellow flowers producing a fine effect in such a situation.

— MR. W. CARRUTHERS has just issued his official report for 1872, of THE DEPARTMENT OF BOTANY IN THE BRITISH MUSEUM. The additions to the herbarium during the year are spoken of as large and important, rendering more and more pressing the necessity of increasing accommodation for the arranged herbaria. The species included under several of the natural orders, both in the general and in the British herbarium, have been entirely re-arranged during the year; and much use has been made of the herbarium by botanists preparing monographs for a number of different publications. Numerous interesting additions have also been made to the structural series, both in the fruit, the fossil, and the general collection.—(*Nature*.)

WORK FOR THE WEEK.

KITCHEN GARDEN.

At the time of planting Celery, Endive, or any other culinary vegetable, they should by no means be deprived of any portion of their leaves. This practice is still continued by some persons, but it is evidently a bad one, and may be proved as such by trying both methods. In planting, great care should be taken to press the soil close to the roots. Plant out some of last month's sown Cabbage for use in the autumn as Coleworts; make a sowing about the end of the week for the first main spring crop. The Capsicum plants should be kept watered during dry weather; if a little litter be laid round them they will not require water so often. There is a frequent complaint of their not fruiting sufficiently early to ripen; I know not how it can be expected when the plants receive no attention whatever, and consequently do not begin to grow till the autumnal rains set in. Thin the late-sown crops of Carrots; loosen the earth between them where they have been sown in drills. The earliest-planted Celery will now require to be gone over and be divested of the small lower leaves and side shoots. The trenches should afterwards be thoroughly soaked with water previous to the plants being earthed-up, which should be done the following day as soon as they are quite dry. As the Cucumber plants on the ridges spread, cover the soil with short grass; this will keep the earth moist and the fruit clean. Transplant a few more Endives, and make another sowing; a few days' difference in transplanting at this season sometimes proves of great advantage. A last sowing of Dwarf Kidney Beans should now be made in a sheltered situation; the drills should be watered if the soil is very dry. *Hyoscyamus* for drying or distilling should be cut before the flowers expand, as they afterwards lose those qualities for which they are most valued. *Sorrel* should be cut down if required for use in the autumn.

FRUIT GARDEN.

Proceed with the thinning of Peach-tree shoots where they are too thick, taking off the laterals, and exposing to the action of sun and air all the wood you mean to retain for next season. On old trees of Cherries and Plums lay-in a succession of young wood in all parts of the tree, which, being kept close to the wall, will in a few years furnish finer fruit, and produce more plentifully than old unsightly spurs will do. Shorten the side shoots of Gooseberries and Currants, if this has not been already done; on plants previously shortened, the points of the leading shoots may now be taken off with advantage. Keep the late sorts of Strawberries, such as the Elton, well mulched with grass or straw to keep the fruit clean. Look after the runners of Keens' Seedling and other early sorts. Where time and labour are not

overtaxed, it is a good plan to layer each runner in a pot, and to cut it from the parent plant when the pot is full of roots; or rich compost may be strewed between the rows to encourage the rooting of the runners. The method generally adopted is to choose a situation with a good aspect, dig it finely, supply it with a good dressing of old Mushroom dung or other manure; cut off the runners as soon as they have made two or three leaves and are beginning to protrude roots; prick them out on the prepared ground 3 or 4 inches apart; shade until they begin to grow, and lift with balls of soil for forcing or making fresh plantations as wanted. The advantage of this system is that you can clear away all the runners and the superabundant plants almost as soon as a plantation has finished bearing, thus affording free exposure to those buds which you expect to bear fruit next season.

FLOWER GARDEN.

Flower gardens are at last becoming a little cheerful, and the plants are making-up for the time lost in the spring. Look over the beds of Scarlet Pelargoniums, and stop the leading branches wherever a flower bud is perceptible. This will tend to keep the plants dwarf, and the flower buds will be much increased in size by the concentration of sap. Beds of Petunias and tall-growing Verbenas are generally much disfigured by being broken about in the stormy weather. To avoid this, provide some strong pieces of birch branches and place them in the bed, so that after they are covered they will support the branches and prevent their being blown about. Attend assiduously to the removal of all decaying flowers, especially on profuse-flowering Verbenas; this will tend to prolong the season of growth and bloom. Roll, mow, and sweep the grass and walks at least once a-week. Prepare a temporary pit in the reserve garden, either by building turf walls, or excavating the earth a few inches deep, and forming an embankment round the sides, for the propagation of Scarlet and other Pelargoniums, indeed for all free-striking plants. This pit may be covered with Whitened or oiled canvas, and if there be 3 or 4 inches of light sandy soil for the cuttings to strike root into it will answer admirably. Heartsease, Penstemon, and most plants which make branches near the surface of the ground, may be readily increased by placing some light sandy soil about the young shoots, into which they will strike root, and then may be removed into nursery beds.

GREENHOUSE AND CONSERVATORY.

Some of the stove plants that have recently been brought into the conservatory will require attention to prevent their being injured by damp during cloudy weather, and it will probably be necessary to use fire heat occasionally for the purpose of drying the atmosphere of the house. The propriety of this will largely depend upon circumstances, for in small well-ventilated houses damp will hardly be troublesome; whereas in lofty houses with but little ventilation, and the roofs overgrown with climbers, it may be very troublesome. But at this season there is nothing to fear from cold, and air should be freely admitted on every favourable opportunity, using every care to keep the atmosphere of the house as dry as possible, and keeping the plants clear of decaying flowers, &c. Considerable care will also be necessary in watering recently potted specimens, whether of the soft-wooded or hardwooded class, as in the present state of the weather they will require little water, and will be speedily injured by a careless supply. Continue to carefully regulate the growth of climbers, but avoid tying them too closely, and allow them to grow according to their natural habits as much as circumstances will admit. Examine the border plants frequently for insects, which, if allowed their own way at this season, soon injure the young tender growth. The *Lunulias* are matches; subjects for the conservatory borders and are deserving of every attention, but they are very subject to black thrips, and if this pest is in the house it will soon disfigure their noble foliage unless kept under by some means. Tobacco smoke is the most effectual remedy for this pest, and repeated washings with the engine the next best; but there must be no trifling with this enemy, otherwise the beauty of the plants will be sacrificed for the season.

PITS AND FRAMES.

These structures are now partly stocked with plants which are coming forward for another season. Prepare a slight hotbed for a frame, and begin to increase such plants as you require a large stock of next season. Mangles and other variegated Geraniums are generally tardy strikers if left till late in the season, therefore begin in time.—W. KEWE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

In this department, except in hoeing the ground to destroy weeds, little has been done but gathering small fruit for preserving. It is abundant this year, and is being gathered in excellent condition. Raspberries we have never had in such abundance. Fastolf and Carter's Prolific we think the best bearers.

Strawberries in our light soil require to be planted every year, and with plenty of manure added to the ground they yield abundantly. Black Prince and Kears' Seedling are the sorts most esteemed in the kitchen. We have grown more varieties this year than we ever did before. Late Prince of Wales, kindly sent by Mr. Record, is worthless as regards flavour, and not for a moment to be compared to Frogmore Late Pine or La Constante, nor does it bear more freely than those two excellent varieties.

Peas.—We made a rather large sowing on the 9th. The ground is well prepared, and we sowed both early and late sorts on trial. We had equal quantities of Laxton's Alpha, Taber's Perfection, and Kentish Invicta. We shall continue to grow the first two sorts, but Invicta must give place to that finest of all early Peas for exhibition, William I. Although I mention it as being valuable as an exhibition sort, it is equally valuable for kitchen purposes. The dried seeds are blue, and the plant is in the way of Invicta more than Alpha. A succession crop of Peas just forming pods has been attacked by thrips. Can any correspondent suggest an easily-applied remedy for the destruction of this pest on the Pea? After dry weather sets in, we find much difficulty, owing to the thrips, in obtaining crops from this most useful of all vegetables to us.

FRUIT AND FORCING HOUSES.

Pines.—We have some strong suckers on the Queen and Charlotte Rothschild Pines; these we shall pot at once, and place them in the house from which succession plants have been removed. They are potted in 6, 7, or 8-inch pots, according to the size of the suckers; from these pots they will be shifted at once into the fruiting-pots. We do not wish to have a quantity of fruit at a time, as with the limited means at our disposal, it is not possible to secure a constant supply; but we manage to do the next best to this, and that is, instead of having a glut at one time and no more for weeks, or even months, we produce a continuous supply, only one or two fruits ripening at a time, and by a little forcing or retarding we have a fruit or fruits at the time required. We plunge the newly-potted suckers at once into a bed of fermenting material, and if the bottom heat is 100 or 110 the formation of roots will take place more quickly. It is not safe to plunge them in such a strong heat after the roots have reached the sides of the pots, as the young rootlets would in all probability be injured. We give air freely night and day when fruit is ripening, and maintain a rather dry atmosphere in the house.

Vines.—In the earliest vineyard all the Grapes have been cut, and, as soon as they were cleared off, the Vines had a thorough drenching with a garden engine; the water was thrown with some force against the under sides of the leaves to cleanse them effectually from red spider. We read of a clever gardener, one that grew Grapes well, who, when he fancied the growth on his Vines was over-luxuriant, instead of cleansing the leaves from this pest, allowed it to increase in order to check the over-luxuriance. We do not fancy the red spider about our houses anywhere, nor do we give it any rest until it is destroyed. We also with strong force send the water into corners and crevices of the walls to wash out spiders, &c. These are also troublesome in a vineyard. One will sometimes establish itself in the centre of a compact bunch and spin its web amongst the berries. It is very difficult to dislodge them from this position, but a slender piece of wood thrust amongst the berries where the insect is concealed will accomplish it. As the wood is well ripened, all the ventilators are kept open night and day. In the late houses the Grapes are showing signs of colouring, the necessary treatment being plenty of ventilation with less moisture in the house. The lateral growths do not now require stopping so often, but they must be gone over occasionally. There is one thing we would notice here: A man should not go into a vineyard to thin Grapes, pinch off laterals, or perform any other work amongst Vines, if he has been working in houses or amongst plants infested with red spider. Young men are sometimes careless in a matter of this kind, and the hint may be useful.

Orchard House.—We continue to surface-dress all pot fruit trees that require it, using a rich compost of horse droppings and loam in equal proportions, thrown together in a heap until it ferments. All the trees are bearing good crops of fruit and growing freely. In dry hot weather they are freely syringed, and watered at the roots twice daily, but only clear water is used. We have given them manure water, but this caused many of the leaves to become spotted and to fall off. That the manure water was the cause of this there was no doubt, as on discontinuing its use the plants regained health and vigour. Plum trees had become much infested by aphides, and the Peach and Nectarine trees were not free from them. Syringing is of no avail, but a thorough fumigation with tobacco soon cleared the trees.

CONSERVATORY AND PLANT STOVE.

Azaleas are making their wood, and require daily syringing and the house to be shut up at four in the afternoon. We used to place the plants in a pit by themselves, but now they are too large. This necessitates the shutting-up of the greenhouse

earlier, and the rather moist atmosphere does not suit the flowers; but as plenty are to be had out of doors, it does not so much matter.

The stage *Pelargoniums* have been turned out of doors, and they are cut over according to the time they are required to be in flower. We have plenty of plants coming into flower which will keep up a succession in-doors. Although they are plentiful outside, it is not possible to cut them good enough for button-hole and other bouquets, or for furnishing the vases. Double Zonal *Pelargoniums* are valuable for many purposes, especially such sorts as Madame and Marie Lemoine. These we have in a cool pit with *Picoetes*, late-flowering stage *Pelargoniums*, *Roses*, &c.

In the plant stove there is continuous work. Climbers require attention once a-week at least. The growing shoots of such plants as *Hoya carnea* and *Stephanotis floribunda* twine tightly round each other and the wires, and should not be allowed to remain so, but be untwined and tied up loosely to the wires. Such *Orchids* as *Lælia purpurata* and some of the *Cattleyas* are making vigorous root-growth; all re-potting that may be necessary must be performed at once. We have just done ours, using very turfy peat, with a little sphagnum moss added to it. Cool *Orchids*, such as the *Masdevallias*, *Odontoglossum Alexandræ*, and a few others, require very cool treatment in the hottest summer days. Ours are grown in a small span-roofed house with the end to the south, but the heat is too much for them, unless double shading is put over the glass, and this causes them to become drawn. As we have no other suitable accommodation for them they are removed to a cold frame under a north wall until the end of August. Amateurs and others who can only grow a few plants would do well to try this plan. I saw plants of *O. Alexandræ* only the other day slowly dying through being grown in a house where the temperature was too high for them, when the same plants would have grown with the utmost vigour, and with but little attention, had they been placed under a north wall in a cold frame. All the attention we give them is to tilt the lights about half an inch in the morning at six, and to shut up the frame, after damping the surface of the pots or syringing the plants overhead, at five o'clock in the afternoon.

FLOWER GARDEN.

Now that the beds are filled up they do not require much attention, except to remove dead and decaying flowers, which must be noted as weekly work for the rest of the season. In wet weather trusses of Zonal *Pelargoniums* are destroyed if withered flowers are allowed to remain in the centres of the trusses.

We have been placing permanent sticks to *Hollyhocks*, and removing all side shoots. This grand old autumn-flowering plant is seldom seen now as it should be; in many places it is grown, but in a mixed herbaceous border, where, indeed, it has a fine effect as a back-row plant; but it is generally crowded-up with other plants and shrubs, and the ground is not prepared for it. The *Hollyhock* likes a very rich deep loam to grow in, and, when well supplied with water, its gorgeous spikes towering to 10 or 15 feet above the surface of the ground have a splendid effect. We prepare a place in the kitchen garden specially for them, as also for *Phloxes* and *Gladiolus*. We have been placing sticks to the *Gladiolus*; they also look pretty well, but certainly not better than usual. We are trying some experiments with manure-waterings, but until this year not a drop of manure water was ever given to them; we fancy that it is injurious to the corms. *Phloxes* had been supported by sticks some time ago, but we looked over them, and tied any loose spikes to the supports.

We do not now grow a collection of named *Pinks*; if we did, the pipings would have been put in this morning. Our success in striking these used to be remarked upon. We always put them in after a heavy shower; a piece of ground was prepared in a shady place out of doors, and as soon as the rain came they were put out. In this way we did not lose a plant. If the pipings were taken off in dry hot weather we lost 50 per cent., or more.—J. DOUGLAS.

TO CORRESPONDENTS.

* * We request that no one will write privately to any of the correspondents of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed *solely* to *The Editors of the Journal of Horticulture, &c.*, 171, Fleet Street, London, E.C.

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

N.B.—Many questions must remain unanswered until next week.

CURIOUS COINCIDENCES (Crito).—We are obliged by your bringing the paragraph in our contemporary to our notice. We were not aware that the portrait of *Thysanotus rutilans* had appeared in his pages in 1868. We admired it as published two or three months since in the "Rural New Yorker," but the flowers were so deficient in form that we supplied our artist with the "Botanical Magazine," in which the plant is figured, to correct it. Had we known it had been originally published by our contemporary we should have acknowledged it, as he ought to have done the portrait of *Odontoglossum vexillarium* which he published only last Saturday, the day on which he blames us. We employed Mr. Smith to draw and engrave that portrait, and published it in our number issued on the 15th of last May, a few weeks—not a few years—since.

BOOKS (H. D. K.).—B. S. Williams's "Choice Greenhouse and Stove Plants." It is in two pocket volumes, to be had of the author, Victoria Nursery, Holloway, London.

VAN HOUTTE'S "POMONA" (J. M. W. B.).—We do not know the number of parts it will occupy.

DESCRIPTIONS OF PLANTS (Eps).—We cannot afford space for descriptions of plants. You must refer to London's "Encyclopedia of Plants."

PELARGONIUM SPORT (H. B.).—We have seen several instances of totally different blooms on the same plant; and such sports occur in other much-crossed plants. The petals of your specimens were all shed.

COVERING WEST AND SOUTH WALLS (X.).—As you propose turning the 7-foot walls to profitable account, we would advise, in the event of your having Pears, to grow only the very early and very late sorts, as, of early kinds, Citron des Carmes and Jargonelle; and of late ones, Easter Beurré, Ne Plus Meuris, Josephine de Malines, Zéphirin Grégoire, Beurré de Rance, and Doyenné d'Hiver. We are inclined to think, in your situation is sheltered and mild, that Tea and Noisette *Roses* might be more profitable, and very likely command a better price than fruit. In this case you might plant Maréchal Niel, Céline Forestier, Lamurque, Devoniensis, Gloire de Dijon, Madame Falot, Niphétos, Safrano, and Vicomtesse de Cazes, which, in all likelihood, would give you buds more valuable than fruit. A few plants of *Jasminum nudiflorum* mixed with them would help in the autumn and midwinter weeks to afford bloom, and would, doubtless, attract customers as well as the *Roses*.

HOT WATER PIPING FOR A FORCING PIT (Subscriber's Gardener).—The hip-roofed pit that is 7 feet wide, 12 feet long, and 8 feet from the floor to the apex of the span, contains about 360 cubic feet of space, and will require 60 feet of 4-inch piping to maintain a temperature of 65° during severe frost.

GRAPE BAGS—PEARS AS DIAGONAL CORDONS FOR A WALL (Amateur).—No patent material for making Grape bags has come under our notice. The No. 3 Hexagon netting made by Haythorn, of Nottingham, is an excellent material, stouter and more durable than the ordinary gauge. To avoid rubbing the Grapes, distend each bag by fastening slight wire hoops on the inside near the bottom, and another near the top, fastening the mouth of the bag around the bunch-stalk with an elastic band. By this means the bloom remains intact, and the air plays more freely among the berries than when the bag touches the sides of the bunch. The following Pears are choice kinds that ripen in succession during seven or eight months—Jargonelle, Williams's Bon Chrétien, Desiré Cornels, Belle Julie, Marie Louise, Millot de Nancy, Beurré Bosc, Urbaniste, Comte de Flandre, Winter Nelis, Zéphirin Grégoire, Doyenné Defais, Doyenné du Comice, Duchesse d'Orléans, Knight's Monarch, Beurré Sterckmaus, Beurré de Rance, Jean de Witte, Elisa de Heyst.

PEAS (Thorney).—We never heard of any varieties of the names you mention.

SEEDLING BEGONIA (Dorsetshire).—*Begonia xanthina* is yellow-flowered, and a portrait of it is in the "Botanical Magazine." Yours is a pretty variety of it.

VEGETABLE MARROWS NOT SWELLING (Mould).—We attribute the non-swelling of the fruit after setting to the cold state of the soil, or to the cold weather; we think the former is the cause. The treatment cannot be far wrong. Try watering with weak liquid manure at a temperature of 70° to 75°. Hot weather will most likely set them right.

VINES FOR PLANTING-OUT (A Reader).—The Vines you propose planting out in autumn, and which are now in pots, we should at once shift into 10 or 11-inch pots. A fortnight afterwards reduce them to one cane each, unless you want them with more than one cane or rod, and cut the laterals to one joint each. Train the shoots or canes about 1 foot from the glass, and let the cane run to the length of 8 to 10 feet, then stop it. Keep the laterals pinched-in to one leaf. The supply of water should be liberal during the growing period, but reduce it gradually when growth is complete. Cut the laterals close-in in September, and prune the canes to the height required when the leaves have fallen.

CUCUMBERS FOR WINTER FRUITING (Idem).—To have fruit at Christmas and throughout the winter sow the seed in the first week of September. The kinds we advise are Volunteer and Telegraph. They are good, certain, and handsome.

MELONS WITH MALE FLOWERS ONLY (J. A.).—If your plants have made more than two joints of the side shoots without showing fruit we should cut away the main shoots, and train fresh shoots from the collar of the plant in their place; stopping these when they are 6 inches from the side of the frame. Probably the plants are not sufficiently advanced for the appearance of the fruit blossoms. They should fruit on the second vines, and mostly at the first or second joint of the laterals. We would not let the temperature fall lower than 65° at night, and 70° to 75° by day, with a rise from sun heat to 85° or 90°. If the temperature is too low, male flowers abound; if too high, female flowers predominate.

CARNATION SEEDLINGS DYING OFF (Frank W.).—From your description we should say your plants have died off from the attacks of wireworm or some grub in the soil used. There is no remedy but to scrutinise the soil minutely before sowing, and to have it well exposed to the air before use, turning it over frequently, and sprinkling with soot at each turning. Mix some lime rubbish with the soil. The application of soot water would tend to prevent the mischief complained of. Place some pieces of Carrot just under the soil. It is likely the grubs will leave the Carnations for the Carrot bats, when they may be taken and destroyed.

PREPARING ROSE CUTTINGS (Arthur).—Take off the cuttings as soon as the flowers are shed; the wood is then ripe. The cuttings must be of the current year's growth, without any portion of old wood. They may have

three joints or eyes; remove the leaf from the lowest one, and insert the cuttings up to the second eye in sandy soil in a frame; then keep moist, close, and shaded from sun.

PEACHES IN ORCHARD HOUSE FLAVOURLESS (*Amateur*).—We should consider the want of flavour to be due to the trees being highly fed by rich top-dressings, or manure water, and not having heat sufficient to ripen them thoroughly, or they may be kept moist when ripening; instead of having a dry atmosphere. We should preserve a dry atmosphere when ripening, and give only sufficient water at the roots.

PLANTING STRAWBERRIES (*P. T. B.*).—We should layer the runners at the first joint in 8-inch pots, and take off the point of each runner immediately the joint is layered in the pots. When the runners have filled the pots with roots cut them from the parent, and at once plant 1 foot apart, in rows 2 feet distant from each other. After the first year every alternate plant may be taken out. We should trench the ground as deeply as you have soil—two spits or more. After turning the top spit to the bottom of the trench give a good dressing of manure, and throw the bottom spit upon it. We should give, after trenching, a dressing of rotten manure and pour it in with a fork. The manure you mention will be suitable. Give as much as you can afford. It is useless taking off runners of plants that have not fruited. The first joint or runner gives the best plants. Plant them as soon as you can secure them well rooted, the earlier the better.

MELONS DAMPING-OFF (*Scott*).—The cause of the Melon plants damping-off at the collar is the leaves there overshadowing it and keeping it from receiving a due amount of air. The young shoots and leaves that cluster over the collar should be removed, so as to expose it to light and air. In dull and moist weather a light air at night is necessary to keep the moisture condensed during the night from being deposited on the leaves and stems. The collar should not be wetted or watered. Keep the laterals duly stopped to prevent the principal leaves from being crowded or overshadowed. Dust with quicklime the stems of those affected by canker. See that the lights are drip-proof.

PLANT HOUSE (*W. Sardin*).—We should decidedly prefer a half-span roof for the plant house to be built against a wall that is 5 feet 9 inches high. As you will not attempt to grow plants of a large size in such a structure, the roof need only be high enough for a tall person to pass under it. Let all the woodwork be as light as is consistent with strength. Do not let the sills touch the soil, but keep them a little above the surface by means of a few courses of brickwork, which will add very materially to the strength and durability of the building. For ventilation make an opening of 10 inches wide all along the south side or front of the ridge, fixing glazed or wooden ventilators by hinges to the ridge-bar, each ventilator to be opened or closed by an iron catch or handle perforated with holes, so as to enable you to regulate the admission of air to a nicety. Three small sliding wooden shutters fixed in the brickwork under the front sill will complete the ventilation, and answer as well as the most costly apparatus. The staging should be 2 feet wide in front, then should come a 3-feet walk, and between it and the back wall there should be a stage in three tiers, the lowest 2 feet from the ground. Continue the two lower tiers of the back stage round to the back wall at each end opposite the doors. With the exception of the path the whole of the space will thus be utilised for the plants. You are in error in supposing it is necessary to place plants near the glass to prevent the growth becoming drawn-up and attenuated. In a light and thoroughly ventilated house, with ordinary care, the plants might be grown to perfection upon the floor, but the stage is, of course, more convenient, and the plants appear to better advantage upon it. Use four rows of 4-inch piping along the entire length of the front of the house, placing them under the front shelf. Connect the flow and return pipes with the boiler by 2-inch pipes, which is the smallest size that ought ever to be used for the purpose. We do not think a glass coping along the wall from the plant house to theinery would improve the appearance of the houses, and we think it bad practice to plant a fruit tree or anything but Vines in a Vine border.

MILDEW ON VINES (*Elruep*).—This disease is prevalent in the present year. We had it in a Rose house, and dusted the Roses at least six times with sulphur before we eradicated it. A damp atmosphere with insufficient ventilation causes mildew, while a rather dry atmosphere with a current of air in the house is unfavourable to the development of this parasite. Sulphur is the only cure for it that we know. It will be desirable to paint the stems of your Vines, after they are pruned, with the following mixture:—Dissolve 2 ozs. of soft soap in a quart of water, add flowers of sulphur to make it of the consistency of thin paint, then add a little tobacco water; with this paint the Vines, working it well into all crevices with a brush.

MUSHROOMS GRUB-EATEN (*Backbarn*).—The grub is apt to assail Mushroom rooms in houses in summer, from being too close and hot. Sweep the beds clean over, water especially at the back and front, syringe the walls and pathway, give a little air, not a keen draught, and put no covering on the bed. A shady place out of doors, or a cool cellar, is the best for Mushrooms in summer.

GRAPES DISEASED (*W. F.*).—They are severely attacked by the gangrene, called by gardeners "the spot." Cut away every berry attacked, and water the roots freely twice a week, once out of the twice being with weak liquid manure, and the chink taken off all the water applied. The roots do not supply sap sufficient.

COLD PIT CONSTRUCTION (*A. P. Chester*).—Ours are sunk in the ground 2 feet, but the site is well drained. The floor is cemented, but ashes will do. The front wall is raised 6 inches above ground, or 2 feet 6 inches high, and the back wall 4 feet. The walls are 4½ inches thick, the wall plates the width of the walls, and beddled to suit the pitch. The pit is 7 feet wide, which with redrains, our lights are 3 feet 6 inches wide, and had we another to make we should have them 3 feet. Wide lights are very unwholly. The best of the sites you describe would be the S.S.W.; let the front face to that point. The lights should be 2 inches thick, and glazed with 21-oz glass.

STRIKING ROSE CUTTINGS (*Rose*).—Though you have means of supplying bottom heat, we presume you have a frame or hand-light or two. Take cuttings of the kinds you wish to propagate as soon as the first crop of flowers is shed. The cuttings should be of the wood of the current year, and are best with three eyes or buds. Cut the shoots below the lowest bud or eye, and remove the leaf which is there, but let the others remain. Insert each cutting in a 3-inch pot filled with two parts light loam, one part leaf soil, and one part sand. Set the pots on ashes in a cold frame or under a hand-light; keep the cuttings close and shaded from sun, and sprinkle lightly overhead with water every morning, replacing the light or lights immediately. In a month or six weeks they will be well rooted, and air should then be admitted, but gradually at first. Shift the plants into 5-inch pots in September,

and during the winter keep them plunged in ashes in a cold frame, with air in mild weather, but protect from severe frost. Shift the plants into 6-inch pots in April, and plunge them out of doors in a sheltered position, watering as required, and frequently giving water overhead. In September they may be placed in 8-inch pots, and in the following year they will flower if pruned in January and then introduced into the greenhouse.

HERBACEOUS CALCEOLARIAS AND CINERARIAS DYING-OFF (*Douglas*).—We do not see in what way your treatment differs from ours, only we think you allow the plants to become pot-bound. At no stage is this good. We should shift them into larger pots more frequently, and under this treatment they will require to be in 8 or 9-inch pots in February or March. Pinch out the point in the centre at the first pair of good-sized leaves. They require to be kept moist, and should be set on a cool bottom where they will be only just safe from frost, and have an abundance of air whenever the weather is mild. The dying-off at the collar probably arises from potting them too low. Pot so that the collar or neck of the plant may be a little raised in the centre of the pots, which will cause the water to drain from, not to it. Never pour the water directly on the stem or neck of the plant. In other respects we cannot improve on your treatment.

SOIL FOR PANSIES—POTTING (*P. C. S.*).—The best soil for the Pansy is three parts loam from rotting turves not less than six months old, turned over frequently, and sprinkled with soil in the turning to drive away wireworm. The loam should be of a medium texture—that is, neither heavy nor light. To this add one part leaf soil, half a part of thoroughly rotten manure, and half a part in equal proportions of sand and charcoal not larger than a hazel nut, the whole well mixed. For flowering in pots they should be potted at the end of September in 4-inch pots, well drained, and placed in a frame near the glass. Air should be admitted freely in mild weather, but keep close and covered with mats in severe frosts. Shift in February into 6 or 8-inch pots for blooming, continuing to keep them near the glass, but with abundance of air in mild weather.

RED SPIDER ON VINES (*A Subscriber*).—The chief cause of red spider is a deficiency of moisture at the roots or in the atmosphere. We should dress the border with guano, making it quite yellow all over, and wash-in the guano by watering. The floor of the house should be kept damp by sprinkling with water twice or thrice a day. If the Grapes have not begun to change colour for ripening, we should syringe them twice a day with clear rain water until they change colour. The force of the water should be directed against the under side of the leaves. Pearson's "Vine Culture under Glass" will suit you. It may be had from our office for thirteen penny postage stamps.

THRIPS ON VINES (*J. E.*).—We think that the insects on your Vines are thrips, which may be destroyed by fumigation with tobacco. Choose a calm evening, shut the house up closely, and after damping the floor, but having the foliage of the Vines dry, fill the house with tobacco smoke so densely that you cannot see the Vines from the outside; then remove the fumigating apparatus. In fumigating take care to deliver the smoke cool, not allowing the tobacco or tobacco paper to blaze. Repeat the fumigation on the next night but one, and continue to do so as long as you find a thrips alive. These insects are rather difficult to destroy when they obtain a hold, for though one or two fumigations may destroy all those in existence, other broods succeed them from their eggs; therefore keep a sharp look-out, and fumigate the house whenever a thrips is seen.

NAME OF FRUIT (*J. Green*).—Your Strawberry is Trollope's Victoria.

NAMES OF PLANTS (*W.*).—The Orchil sent two or three days ago is *Odontoglossum pulchellum*. (*G. B. C.*)—The plant is *Thalicttrum minus*, Lesser Rue-weed. We cannot name Roses or other florists' flowers. They are in leucis. (*H. P. M.*)—The same reply must be to you with this addition, we have repeatedly announced that only six specimens must be sent at a time, and you have sent nearly forty. (*E. J. E.*)—*Fumaria parviflora*, small-flowered Fumitory. (*F. D. H.*)—*Cynoglossum officina* c. (*O. Orpet*)—*Sertera depressa*; is quite hardy. (*T. Perry*)—1, *Veronica Teucrium*; 2, *V. spicata*; 3, *Erigeron speciosus*; 4, *Epilobium angustifolium*. (*W. D.*)—2, *Adiantum teucrium*; 3, *Nephrodium setigerum*; 4, Not in fruit; 5, *Pellaea hastata*.

POULTRY, BEE, AND PIGEON CHRONICLE.

DOGS IN GENERAL,

AND A VISIT TO THE HOME FOR LOST DOGS.—No. 2.

"Let Hercules himself do what he may,
The cat will mew, the dog will have his day."

Shakspeare.

I suppose that in the above lines Shakspeare wished to show, what is indeed most true, that let the great of the earth do whatever they choose—this king reign, that king be deposed, yet the little ones of the earth will in no wise be affected by them. They will go on just the same; they will have their life, their loves, their hates, their ways, and their whims under whatever king, or no king at all. Carry this reasoning to the lower animals, and how very little, indeed, is the power of the great. Look at the animal world, and the bird world; the lamb will frisk, the bird will sing just the same, however the land and timber may change owners. Let the dog only have a good master, and what cares he for king or kaiser? He will have his own enjoyments in his own little world. So, therefore,

"Let Hercules himself do what he may,
The cat will mew, the dog will have his day."

In passing, let me note how one man of genius inspired another. The latter half of the last line, from the greatest work, Hamlet, of the greatest poet of all time, found an echo in the heart of Charles Kingsley, who adapts it to another and higher purpose in his sweet and antique-sounding song beginning

"When all the world was young, lad,"

for, speaking of the hopes of youth and the enthusiasm of youth, when

"Every goose is a swan, and every lass a queen,"

he adds, remembering Shakspeare's words—

"Then hey for horse and boot, lad, and ride the world away;
Young blood must have its course, lad, and every dog his day."

Yes, and the more spirit the dog has the more eventful will be his day. You and I, my good reader, may like repose and a settled home, to sit in sunshine in our gardens during the summer, and be cozy by our firesides during the winter. But that fine, ardent, energetic lad of nineteen will not rest here, but must be off to ride over Australian plains. Well, be it so; it is all right, as saith a shrewd observer and wise man, whose letter lies before me. "We should be a strenuous lot, if, like the Hindus, we all kept in and around the paternal compound." So "to horse and boot, lad;" let "thied" have his day, let him go forth, and in future years he will have more to talk of, more to think over, and a brighter brain than the mere stay-at-home; for "Home-keeping youths have ever homely wits."

Mark next how we use the term dog. We call the boy we are proud of "a fine dog," or "a rascal of a dog;" and men with twinkling eyes and a poke in the ribs say to an old friend, "Oh, you sly dog." Then, "as kind as a dog," "as faithful as a dog." We use the word "cur" reproachfully, but he is the lowest class of dog, and has a nasty trick of biting the heels. He is the exception to the rule. Why, even "Oh, you dog," is half praise. What is an Englishman called? "John Bull," surely from the bulldog. We say of a bold plucky orator, "Ah! he has so much of the British bulldog in him."

I sometimes wish in my annual visit to the Royal Academy, that all those portraits of respectable round-faced gentlemen who have had their likenesses taken to please their wives, or to please their fellow-townsmen, or simply to add to the hereditary pictures, often mere "tenth transmitters of a foolish face"—I wish, so firesome are they in the unartistic black coat of the day, that they were all put in one room, and that visitors could go in if they chose (I wonder how many would choose)—I say I wish this could be, and in their place were portraits of good dogs (mark the good, if you please). How much more interesting than the picture of Alderman Jones, "Presented to Mrs. Jones, in grateful acknowledgment of the services of the worthy alderman in his spirited and successful endeavour to prevent the railway station being nearer his native town than full two miles." N.B.—This was actually done some years since. A portrait gallery of great men by great artists—such as Richmond's likeness of Lord Salisbury in this year's Academy—and good dogs would indeed be worthy of a visit. But there being no picture gallery of dogs, I determined to go and see the lost dogs at their Home.

This Home was originally somewhere in Holloway, but is now at Lower Wandsworth Road, Battersea Park. Wishing to pay a call there, two friends of mine, bent on walking the distance, inquired of a policeman as to the direction in which it lay. Policeman was a new one, and looked much puzzled by the question. "Home for lost Guards, sir. Yes, sir, all right, sir. Take the second turning to the right, sir." Now that turning led into St. James's Park, where, no doubt, many a gallant guardsman has lost his heart, but scarcely lost himself. But then, new policemen are in such an awkward position; as policemen they are expected to know every place, but being new, they do not know any, and they are ashamed of being thought ignorant. The greatest Englishman of the last century, who, by the way, had a deal of the bulldog in him, when asked by a lady why he had given such a wrong meaning to a word in his dictionary, truthfully answered, "From pure ignorance, madam." As it requires great courage sometimes to say "no," so all our dogs confess ignorance. Not being myself a walker, I take the train at Victoria for York Road Station on the London, Chatham, and Dover line, and in a very few minutes I am there, passing close by Battersea Park, where in olden times duels were frequently fought—then not a park, but a level dreary plain called Battersea Fields, now made an interesting and by no means dreary place, owing to the clever hand of a good gardener. Battersea Park is one of the genuine improvements around London; and then think how much the finger of time will add to the improvements, how trees and shrubs will grow, and the whole place become each year more and more park-like. Close to the station I find the Home; turning under an arch I pass on, but stop to pet a sleek cat basking and happy on a low wall, in spite of, and wholly indifferent to, the barkings fall in her ear and mine. The first thing that strikes me is the cleanliness of everything; all the paths clean, the kennels clean, the yards for exercise clean.

I walk down the centre of the kennels, where on each side of me, on low benches, are lying dogs of all varieties in different compartments: then these compartments open at the other end (I walk down a corridor on either side of the kennels) into yards wired-in, where in turns a number of dogs are let out for exercise. The separation is only a separation of sexes, not of sorts, save that the spiteful dogs are confined in kennels in another part of the yard. I was told that a great number of dogs are daily brought to the Home, and some 250 to 300 are usually there. If not claimed within a certain time they are for sale, with a due

care that they are not bought by dealers. Anyone desirous of a pet dog, and having a good judgment, or who can take one with him who has, can procure an excellent dog at a small price. Something like eight hundred were restored to their owners during the year 1872. Here we see the value of the Home, for the lost are found and welcomed home again. I own I expected to find that the greater number would be little dogs, knowing how many such are kept in London, but to my surprise they were not small pet dogs which were so very numerous, but larger dogs, and especially retrievers. A moment's reflection put me right. They are not so much London dogs as country dogs, who, like country folks, easily get lost in the vast metropolises. Poor bumpkins! they trotted off behind some vehicle; they would come to London, and, bumpkin-like, they get lost. There are almost all varieties of dog, "puppy, whelp, and bound," down to the very frequent "cur of low degree." I noticed one bob-tailed shepherd dog, with his peculiar long trot, who seemed sorely puzzled as to where his sheep could possibly have gone, and who trotted quickly and restlessly about the yard, marking friends with no one. He looked quite out of place. I longed to see him in a tree-shadowed country lane with his fleecy charge. Poor shepherd dog! There were also a few greyhounds in the Home, but by no means at home; and two Dalmatians, like school plum-puddings, for their plums (spots) were not plentiful. The many seemed happy enough, for they gambolled and played, especially the younger ones. Some were nasty fellows—noisy, irritable, senselessly and continuously barking. Some, a few, followed one round the wires, very desirous of biting. Then there were the pleading-faced dogs, who said as plainly as eye could say, "Do let me out, now, do!" There were only a few very large dogs, and also only a few very small. Here and there was a lady's pet, with a cloth coat to keep him warm; but I fear, as a rule, the little dogs in London are not lost but stolen. Some of the little ones lay on the benches close to the larger, cuddling near them for warmth, a liberty which the large ones did not seem to resent. There was the over-fat bulldog, evidently the pet of the butcher's shop, so very sleek and meaty. With me, or rather near me, in the corridor was a roughish-looking man, who peered into every kennel, evidently searching for a missing dog. Suddenly he called out, "That be 'im, sir; lor, bless 'e, sure enough that be little Fanny." And within the bars was a little crippled creature, making with voice, and eye, and tail the strongest demonstrations of affection. Note, that rough-looking man was not rough all through. The very good ones were at the Home, as they are everywhere, very few and far between, but some such there undoubtedly were.

The Home is worthy in every way of a visit, and deserves to be well supported. Anyone curious in the characters of dogs may get many a lesson, for points of character always come out in a crowd. Thus, a hot-tempered man at once loses his temper if he is in a crowd, while a sleek, easy-going, kindly-tempered man seems even to enjoy it, and cares little for the crush. Shrill-tongued parchment-faced women are always unpleasantly demonstrative in a crowd. N.B.—Let a bachelor beware of a thin-cheeked woman with only a slit for a mouth; let such a one have a pair of fiery eyes, and you have the being ready to use knife or poison. Rounded cheeks and rosy mouth imply kindness. In the crowd of dogs you could see the sensual Barnardine (see "Measure for Measure"), you could see the irritable brute, you could see the very affectionate dog, you could see the one pining for his own home, and the dog indifferent as to where he was—a very citizen of the world. One started up and thought he saw in me his master, but disappointment soon shadowed his face, and he lay down with "He has not come yet, I hope he will come soon" in his mind.

The manager showed me the various parts of the Home, and with him and if I was pleased. It is a good place, the result of kind thoughts towards the animals next to man in brain and heart. You see in this Home one of the results of Christianity. A Home for Lost Dogs! How much better than the dog pit! how much better than the tin kettle tied to the tail of the poor straying dog! how much better than the kicks and curses of cruel men! how much better than the stones of cruel boys! Poor weary, dirt-soiled dogs are fed and made comfortable, the weary and the exhausted are rested and refreshed. Then there is now hope that many a master or mistress who prizes dogs may have them returned, and a favourite dog is, if lost, not only much missed but much wanted. May the Home prosper, may its funds increase, and so its means of usefulness be extended. A home for the lost, but when there the lost are found.—WILTSHIRE RECTOR.

OXFORD POULTRY AND PIGEON SHOW.—His Royal Highness Prince Leopold has consented to honour the Oxford Show with his patronage, and has presented a silver cup, value £5, for the best pen of Dorkings irrespective of colour. The Committee intend having a class for Malays; the following gentlemen having promised to subscribe for a cup—viz., Rev. N. J. Ridley, 10s.; Rev. A. G. Brooke, 10s.; Mr. R. Hawkins, 10s.; Mr.

G. Burnell, 10s.; Mr. J. S. Rooth, 10s.; Rev. G. S. Cruwys and Mr. Herrieff kindly giving one guinea each for a cup for Clean-legged Black Bantams, not forgetting Mr. Billett's subscription for the same. Thirty-four silver cups or pieces of plate will be awarded. The number of classes is increased from forty-nine to sixty-three, including a class for local fanciers.

MANAGEMENT OF SITTING HENS.

The sitting hens should be very clean and free from vermin, which is one of the great secrets of successful poultry-rearing. It is impossible for a hen to sit well if she is tormented in this way, and the little chicks get infested with them and cannot thrive, sometimes dying off by whole broods. As a proof of this being the cause, Cochins or Brahmans rarely die off in this manner, because the young chicks have not feathers enough to harbour vermin. I have also been very often asked to call and see a lot of chickens that have been doing badly, though fed upon the best food money could buy; and on taking them up have generally found them covered with lice, which all quickly-feathering breeds are subject to. The best thing I know of in such a case is to mix a very few drops of carbolic acid with powdered brimstone, mixing or rubbing well together, and putting no more of the acid than will mix up dry with the brimstone; give them a few dustings of this, and you will not see any more of the little plagues for some time, while the chicks will recover as if by magic. I also find it a good plan to water the house all over with water in which a little of the acid has been mixed, which purifies it as well as destroys all insect life.

I prefer to set my own hens out of doors in the same covered coop I mean the bird with her chickens to occupy after hatching, and allow her to come off at pleasure. I do not believe in their needing to come off every day, as many people make a practice of taking them off—the food they eat lasts much longer than when they are taking plenty of exercise, and if Dorking hens at least be left to their own will, they will only come off once in two or three days. If you put a feeding hopper there will always be food ready for them. If the weather is very dry do not forget to sprinkle the eggs a few times, and pour plenty of water round the nest when the hen is hatching. I never take the chickens away, not being partial to chickens roasted on the hob or before the fire at that tender age. As soon, however, as all the chickens are out of the shell and are quite dry they should be put into a clean nest, though this is still better done the day before hatching; but they are better for not being fed till twenty-four hours old.—(*Colonial Farmer.*)

[We are always glad to get information from every source, and therefore gladly cull from our transatlantic brethren, and venture to make such remarks as seem called for. One of the most certain plans to avoid vermin in nests is to let hens sit on the ground. A butter-tub cut in half, and the top and bottom knocked out, makes two good sitting boxes. As the birds do not sit outdoors let a large sod of growing grass be cut, on which place the half tub, give a little clean straw, on which place the hen, putting the eggs under her. Let the top be covered with a frame of wire netting. All hens should sit in a house where they are quiet and secure from interruption from other fowls. The hens should have access to dust or road grit when they are off. When fowls have plenty of dust and road grit they will have no vermin. When a hen comes off her nest, all except the tub or box should be destroyed, and the tub thoroughly cleansed with boiling water, and carbolic soap if desired. We do not at all approve of the hens sitting in the rips in which the chickens are to live. We keep them fresh and thoroughly cleansed to receive the chickens. Nor do we approve of the plan of leaving the hens two or three days on their eggs without coming off. We take ours off regularly every morning, and they look for the attention.—Eds.]

LINCOLN POULTRY SHOW.

This Show, although the first that has taken place in the locality, obtained an exceedingly good entry as to numbers, and comprised pens from most of the celebrated breeders both of poultry and Pigeons. There was also a very good collection of eggs and butter exhibited in the tent, besides which a large number of excellent Rabbits competed for the special prizes allotted to that division of the Show. The tent was unusually spacious, and very well arranged throughout. Messrs. Turner supplied their well-known exhibition pens, and every specimen was seen to the greatest advantage. The Committee, a well-appointed body, worked with a will, evidently determined by personal supervision to enforce the regulations of the Show to the very letter. No small portion of the success of this meeting was attributable to the courtesy and methodical promptitude with which the whole of the correspondence was carried out by the Honorary Secretary.

During the whole of the present season *Dorkings* have not before shown as strong an entry as they did at Lincoln, Mr. White standing first in cocks, and Mr. Lingwood first with a well-shown hen. In the classes for Buff *Cochins* Mr. Taylor, of Man-

chester, took precedence in both cock and hen classes, the hen taking also the silver cup. In the variety *Cochin* class, Mr. Woodgate's grand White cock stood first, and Mr. Darby's splendid Black hen was easily first in her class. In Dark *Brahmas* Mr. Ansdell had it pretty much his own way with birds now so generally successful. The Light *Brahmas* were not nearly so good as the Dark ones, but the *Spanish* classes were such as to tax severely the discrimination of the Judges; at this season such excellent classes throughout are exceedingly rare. For this breed Mr. Powell took the cup with a most extraordinary young hen, in admirable form for competition. *Creve-Coeurs* were most extraordinary classes, some of the cocks being as well built as *Dorkings*. Golden-spangled were the best of the *Hamburgh* classes; the Golden-pencilled and Black were also of high merit. Both *Game* fowls and *Game Bantams* were well represented. In the Variety class Golden Polish stood first, Black *Hamburghs* second, and Malays third. Among the *Bantams* we noticed some Silver-laced that were conspicuous for the purity of the ground colour, but wanting the rich iridescent character of the lacing that marked the breed as shown some twenty years back.

Aylesbury Ducks were remarkably good both as to the entry and their general good quality; the Duck cup being given to this variety. *Geese* were decidedly superior; but, as may always be fairly anticipated at this season of the year, the *Turkey* entry consisted of only a single pen.

A glorious rivalry prevailed throughout the *Pigeons*, Messrs. Harvey, Pulton, Loversidge, Watts, and Yardley sending their choicest show birds.

The weather, we are glad to say, was satisfactory, and the arboretum grounds tended much to enhance the satisfaction of visitors.

The *Poultry Judges* were Messrs. Hewitt and Teebay; and Mr. Esquilant awarded the *Rabbit* and *Pigeon* prizes. We published the prize list last week.

OUNDLE POULTRY SHOW.

This meeting, which was held on the 11th inst., was very satisfactory, and, as the weather was exceedingly fine, the visitors were more numerous than on any previous occasion. It will be remembered by many of our readers that the last year's show was, on the contrary, marked by severe thunderstorms, and consequently the receipts were comparatively small. We can also congratulate the Committee not only on an increase of entries, but also on the quality of the poultry and Pigeons exhibited being such as is rarely surpassed even at exhibitions with double the number of specimens. An excellent tent fitted with Messrs. Turner's well-known exhibition pens placed all the birds on an equal footing for inspection.

All the classes of *Grey Dorkings* were well filled, and the competition, as is usual at Oundle, was very close in these breeds. It was a matter of regret to find that many of the *Grey Dorking* chickens, though very early hatched and well grown, were intolerably sooty-footed—a feature that necessarily prevents position in the prize list. Though fast getting into moult, many of the *Game* fowls were of great merit, and it may be safely said such a numerous and first-class collection of *Spanish* hens is very rarely to be met with. *Cochins* were large classes, and the birds were excellent. In *Cochin* cocks the first prize went to a Buff, and the second to Partridge-coloured; and in the hen class Whites of high quality stood first, the Buffs taking the remaining prizes. In a capital class of *Cochin* chickens, at once well grown and in first-rate condition, the first and second prizes went to Whites, and the third to Partridge-feathered. *Brahmas* were few, and some so exhausted by over-exhibition as to enforce rest if they are intended for future competition. The Spangled proved much better than the Pencilled *Hamburghs*, the Golden-spangled being especially fine. In *Game Bantams* a pen of superior Red Piles was successful, closely pressed, however, by Black Reds. A single pen of Golden-laced *Sebrights* constituted the whole of the entries in the Variety Bantam class! In an especially good class for any other breed, Silver *Polands*, *Creve Coeurs*, and Golden-spangled *Polands* took the prizes in the order named. *Geese*, *Turkeys*, and *Ducks* were well shown; in the first-named class a pen of Canada *Geese* in extremely good feather stood first. The *Aylesbury Ducks* proved unusually good.

The *Rabbits* were of far quality throughout.

In *Pigeons* the competition was far greater than on any previous occasion. A peculiarity of this Show is that in Pigeons each entry has to consist of three pens, the varieties being left entirely to the discretion of the exhibitors. It certainly gives considerable scope for entries, and contributes much to the interest of this portion of the Show. The first prize was taken by White *Pouters*, Black *Barbs*, and foreign *White Owls*. The second prize was given to White *Pouters*, Red *Barbs*, and *White Fantails*. An extra prize, a silver cup, for the exhibitor winning most poultry prizes, was very warmly contested, the principal competitors being Mrs. Deacon, of Polbrook Hall, and Mr. Yardley, of Birmingham. Mrs. Deacon secured three first and four second prizes, Mr. Yardley taking four first, three second,

and a third. The birds were well attended to, and the Show proved very successful.

DORRINGS.—*Hens*—1, Rev. E. Bartrum, Berkhamstead. 2, J. Longland, Gleadon. 3, O. E. Cresswell, Bagshot. *he*, R. Wood, jun., Clapton (2); J. White, Warbury, Northampton. *Pullets*—1, L. B. Calcott, Oundle. 2, J. Longland.

DORRINGS.—*Cock*—1, T. C. Burnell, Mischeldere. 2, J. Longland. 3, E. W. Southwood, Fakenham. *he*, J. White, Warbury. R. Wood, jun. *Cockerel*—1 and 2, Rev. E. Bartrum. *c*, J. Longland (2); R. Wood, jun.

GAME.—*Hens*—1, H. Yardley, Birmingham. 2, S. Deacon, jun., Wellingborough. 3, H. Lotan, Oundle. *c*, S. Deacon, jun.; Mrs. Deacon. *Pullets*—1, Mrs. Deacon. 2 and *he*, H. Lotan.

GAME.—*Cock*—1, 3, and *c*, H. Lotan. 2, Mrs. Deacon. *he*, H. Yardley. *Cockerel*—1, S. Deacon, jun., Wellingborough. 2, H. Lotan.

SPANISH.—*Black.*—*Hens*—1, W. R. Bull, Newport Pagnell. 2, H. Yardley. 3, M. Brown, Akkethley. *he*, J. Nash, Walsall.

SPANISH.—*Black.*—*Cock*—1, W. R. Bull. 2, Withheld. *Chickens*—1, W. R. Bull.

COCHIN-CHINA.—*Hens*—1, Rev. S. S. Woodgate, Tunbridge Wells. 2 and *he*, H. Yardley. 3, W. Jones, Walsall.

COCHIN-CHINAS.—*Cock*—1 and 2, H. Yardley. *he*, H. Lotan. *Chickens*—1, W. A. Burnell, Southwell. 2, H. L. Saunders, Apperley, Leeds. 3, Rev. R. L. Storey, Bedale. *he*, H. Yardley; J. Longland. *c*, T. Simesy, Aylestone; Rev. R. L. Storey, Bedale.

BRAMMS.—1, H. Yardley. 2, T. F. Ansell, Cowley Mount, St. Helena's; R. E. Sanderson, Thrapston.

HAMBERGS.—*Gold and Silver-pencilled.*—1, H. Feast, Swansea. 2, W. Driver, Keighley. 3, W. Speakman. *c*, W. Bearpark, Anderby steeple. *Gold and Silver-spangled.*—1, T. Love, Kingsthorpe. 2, L. Wren, Lowestoft. 3, H. Yardley. *he*, H. Feast.

BANTAMS.—*Game*—1, Mrs. Deacon. 2, H. Lotan. *he*, H. Yardley; Mrs. Deacon. *c*, H. Feast. *Any other variety*—1, H. Yardley.

ANY OTHER VARIETY.—1, W. Bearpark. 2 and *c*, H. Feast. 3, G. W. Boothby, Louth. *he*, H. Yardley.

SELLING CLASS.—1, J. R. Marriott, Titchmarsh. *he*, J. Longland. *c*, Mrs. Deacon.

GEES.—1, Mrs. Deacon. 2, T. M. Derry, Gedney. *he*, H. Whyman, Stilton. *Ducks.*—*Aylesbury.*—1, H. Whyman. 2, Mrs. Deacon. *he*, Mrs. Deacon (2); H. Whyman. *Golden*—1, Rev. E. Bartrum. 2, R. Wood, jun. *Any other variety*—1 and 2, H. Whyman.

TUCKERS.—1, M. Kew, Market Overton. 2, Mrs. Deacon.

PIGEONS.—1 and *rhe*, H. Yardley. 2, W. H. Tomlinson, Newark-on-Trent. *he*, L. Watkiss, Northampton; J. E. Palmer, Peterborough.

RABBITS.—*Heavied*—1, W. Smith Oundle. 2, W. Fox, Oundle. *Lop-eared.*—1, E. Robinson, Kettering. 2 and *he*, J. E. Palmer, Peterborough. *Fancy.*—1, T. Garner, Kingsthorpe. 2, W. Fox. *c*, E. Robinson; J. G. Silk, Oundle.

Mr. Edward Hewitt, of Sparkbrook, Birmingham, was the Judge.

STAMFORD POULTRY SHOW.

This was held in connection with a Rose Show in beautiful grounds, was well attended and a great success. The Committee contemplate making it an open Show another year, when no doubt it will prove more attractive.

DORRINGS.—1, C. Speed, Exton. 2, Marchioness of Exeter. *Cock*—1, C. Speed. 2, Marchioness of Exeter. *White*—1, C. Speed. 2, Marchioness of Exeter.

GAME.—*Cock*—1, A. Peake, Somerby, Oakham. 2, C. Chambers, Bury. 3, A. Fladyer, Aston Hall. *he*, Mrs. Deacon, Oundle; A. Medwell, Chipsham. *Hen*—1, C. Speed. 2, Mrs. Deacon.

GAME.—*Red and other Dark Colours.*—1, Mrs. Deacon. 2, Rev. R. Hart, Carby.

SPANISH.—*Black.*—1, M. Brown, Akkethley, Melton. 2, — Murrell, Stamford.

COCHIN CHINA.—*Blue or White*—1, Mrs. Deacon. 2, W. C. Dunis, Stamford. *Common, Buff, or Partridge.*—1, M. Kew. 2, A. F. Faulkner, Thrapston. *Any colour.*—*Cock*—1, G. Edmonds. 2, M. Kew, Market Overton.

BRAMMA POOTRA.—1, A. F. Faulkner, Thrapston. 2, W. Patchett, Wiltshorpe. 3, Canon S. Brown, Stamford. *Cock*—1, R. Garner, Dyke. 2, Withheld.

HAMBERGS.—*Gold or Silver pencilled.*—1, Rev. G. Skipworth, Oakham. 2, — Ward, Stamford. *Gold or Silver-spangled.*—1, G. Hewlett, Melton. 2, — Ward, Stamford.

FRENCH.—1, — Faulkner, 2, M. Kew.

BANTAMS.—*Cock*—1, W. Emerson, Stamford. 2, — Munro, Stamford. *Any other variety.*—1, A. Storrer, Peterborough (Black Bantams).

GAME BANTAMS.—*Red or other Dark colours.*—1, Mrs. Deacon. 2, G. Edmonds, Ketton. *White or any Light colour.*—1, Mrs. Deacon.

ANY OTHER VARIETY.—1 and 2, M. Kew (Malays and Black Hamburghs).

CROSSBREDS.—1, Marchioness of Exeter. 2, J. Lowe, Stamford. 3, M. Kew. 4, Mrs. Dainty, King's Cliffe. *Chickens*—1, — Pollard, Oakham. 2, M. Kew. 3 and 4, Marchioness of Exeter.

FERRIES.—*Hens*—1 and 2, M. Kew. 3 and 4, Marchioness of Exeter.

GEES.—1, — Kew. 2, Mrs. Deacon.

DUCKS.—*White Aylesbury.*—1, Mrs. Deacon. 2, M. Kew. *Rouen.*—1, M. Kew. 2, Marchioness of Exeter. *Any other variety.*—1 and 2, M. Kew (Bucchos Ayres and Muscovy). *he*, Marchioness of Exeter (East Indians). — Barratt (Wild). *Tuckers.*—1, T. M. Derry, Stamford. 2, Rev. Mr. Sainsbury, Market Overton. 3, Marchioness of Exeter.

PIGEONS.—*Carriers.*—1 and *he*, J. E. Palmer, Peterborough. 2, A. Storrer. *Tuainers.*—1 and 2, — Palmer. *Foilers.*—1, — Storrer. 2, J. E. Palmer. *Jacobins.*—1, M. Kew. *Fantails.*—1, M. Kew. *Antwerps.*—1, T. Hare, Stamford. 2, Dr. Newman, Stamford. *he*, E. H. George. *Rocks.*—*Blue.*—1, M. Kew. 2, Withheld. *Any other variety.*—1, J. E. Palmer (Dragoons). 2, — Marshall, Peterborough.

JUDGE.—Mr. John Douglas, The Aviaries, Clumber, Worksop.

TESTIMONIAL TO MR. VAN HAANSBERGEN, OF NEWCASTLE-UPON-TYNE.

I have just had the pleasure of placing in the hands of Mr. Van Haansbergen a very handsome marble dining-room timepiece, on his resignation as Honorary Secretary and Treasurer to the Northern Columbarian Society, Newcastle-upon-Tyne. It will be remembered that Mr. Haansbergen took a most prominent part in the formation of this Society—in fact, he was almost the founder of it. From its commencement he held the joint offices of Honorary Secretary and Treasurer until last February, when he resigned solely on account of business engage-

ments. As soon as his resignation became known Mr. James Watts, of Birmingham, reminded the members that they were losing the services of one of the best, if not the best of secretaries, honorary or otherwise, and that we ought not to be unmindful of his unflinching energy. Such an appeal was at once responded to by most of the members. The testimonial was forwarded to me by Mr. Watts for presentation on behalf of the subscribers. It was supplied by Mr. T. Leighton, Snow Hill, Birmingham, and bears the following inscription on a silver tablet—"Presented by the Members of the Northern Columbarian Society to W. B. Van Haansbergen, Esq., in recognition of his valuable services as Honorary Secretary of the Society."—JOHN G. DUNN.

Mr. Haansbergen acknowledged the receipt of the testimonial in a letter to Mr. Dunn, of which the following is a copy—"Will you permit me to express my great pleasure at receiving, and to tender my sincere thanks for, a most handsome present which has been presented to me by the members of the Northern Columbarian Society, in recognition of what they are pleased to term my valued services as Honorary Secretary to their Society since its formation until the beginning of the present year, when, owing to other engagements, I was obliged to retire from taking an active part in the management of the Society, although I retain as great an interest as ever in its welfare, and am glad to see, from the large number of new members who have joined it, that there is every probability of this year's exhibition being an improvement upon the very good one of last. I believe Mr. James Watts, of Hazlewell Hall, King's Heath, near Birmingham, was the prime mover in originating this testimonial. Whether this be the case or not, I wish to convey to him my especial thanks for the kind manner in which he has taken so much trouble in selecting the beautiful marble timepiece (which is the form the testimonial takes), and it does great credit to his good taste. It will always afford me pleasure on looking upon it, by recalling to my memory the many new friends I made since the establishment of the Society. Wishing success to the Society, such as I have no doubt it will attain under its present able management, I remain, &c.—W. B. VAN HAANSBERGEN."

HIVE WITHOUT DRONES.

We are the possessors of a hive, which, though apparently in a most prosperous condition (the bees gathering honey and pollen, the latter in such abundance as to lead us to think that breeding must be progressing very rapidly, while the hive is crowded to such an extent that late in the evening the bees cluster thickly outside the entrance), yet not a single drone has made its appearance up to this advanced period of the season. To what cause can this absence of drones be attributed? Even if a swarm should now come off, it would have a very small chance of wintering. We have, it is true, in our neighbourhood an abundance of heather, to which the bees might be sent in August; but unless the weather should prove exceedingly favourable, we fear that it would be of little avail. The hive is of straw, and of large dimensions. Do you advise our putting on supers or placing boxes underneath?—ANXIOUS BEE-KEEPERS.

We can hardly tell how to account for the non-appearance of drones in a colony so prosperous as you state yours to be. We should imagine that in the early part of the summer it must have been in a very backward state, and that it is only of late the bees have become so numerous. As there was but little prospect of their being able to throw off a swarm, no drones were allowed to come to maturity; probably you may yet see them. A swarm now would be scarcely likely to construct comb sufficient for surviving the winter, unless copious supplies of artificial food were given. It would be better to put on a super, which, if not filled with honey, may have some combs built in it; if so, the super must be taken off in September, and carefully kept in a moderately warm place, to be put on in the following spring. A box placed beneath the stock would also, most probably, prevent a swarm leaving, but it must be removed before winter.—EUS.

THE ITALIAN BEE.

In unpropitious years one learns the worth and superiority of many of the productions of nature, which in good years are not so apparent, owing to the abundance of the yield. It is thus with the Italian bee. I admit that I did oppose the introduction of that bee. Yet the past year, the worst we have had in thirty years, has altered my opinion. Now, from the fullest examination, I believe the Italian to be the race most suitable to Germany. Whether those Italians reared artificially by Herr Vogel are equal to the native Italian, is yet in my mind a matter of doubt. The appearance is there, but that does not make the Italian bee. In the spring of this year I had sixteen stands alike as to numbers and quantity of food. Four of these were Italians, and the remaining twelve German bees. During the fine days of March they all flew alike, and my hope was consequently much raised to obtain this year a large yield. Then came the bad days of April. Were there some few good

hours during the dry, they were invariably followed by cold winds or wet weather. With the opening of April, my sixteen stocks during propitious moments flew strong.

But what did I live to see? All the patris of the garden, and the ground around the hive, were covered with German bees, yet no Italians were to be found among them. I then watched the fly-holes. Out of all the hives many bees flew, the Italians, however, alone returning. It was a rarity for the German bees to return to the hive. The natural result was, that the German stocks were becoming weaker and weaker, while with the Italians there was no diminution apparent; further, by the end of April, the German bees had no brood, while the Italians were rich in brood. May was like April. My German stocks had become so weak that, except in the warm hours of the day, not a bee was to be seen. The Italians, on the contrary, increased in strength from day to day, and by the end of May began building comb. Long before this I began to feed the German bees, so as to keep them alive. On the 19th of June the raspberries began to bloom. The weather became warmer. The Italians began with their whole strength to gather from the raspberries. The weak German stocks were able to gather little. On the 20th of June the *Acacia* began to bloom, but its blossoms were not as rich this year in honey as they had been in former years, the frost having destroyed fully one-half of the blossoms. The Italians now developed daily a stronger flight as the young bees made their appearance. After eight days they ascended to the surplus honey-rooms and built them half full of comb. The German bees now only began to have large supplies of brood. When on the 8th of July, the Linden began to blossom, and the Italians were so strong that I began to expect them to swarm, the German bees had also become stronger, and were labouring rather industriously on the Linden; yet the most of the honey brought into the hive was used for feeding the young brood; there was none stored of any account. With the end of the Linden blossoms the harvest was practically over; still the German stocks continued to increase in numbers, so that by the end of August they were over-populous. The Italians had at that time filled all the honey-room with honey, about 30 lbs., and in the brood-chambers there was a superabundance for winter use. When at the end of August I inspected also the German stands, I was astonished. All the stocks were in arrears, so that in order to winter them I had to feed them strongly. Had I only Italians, the year 1871 would have been for me a good ordinary one, as four stocks of this species would have given me a yield of 112 lbs. of honey.—*Bienenzeitung*.)

THE SILK FROM SILKWORMS.

To make it available for use, ten cocoons should be put in a basin of warm water (this will not kill the chrysalis); the threads from each can then be easily found, and should be twisted together and wound round a reel 3 feet in diameter; this will fit the weaver's loom. The individual threads will easily cement together, for they are very gummy, and if wound in this way, will scarcely ever break. A few years ago we had 5000 silkworms in this parish; the school children wound the silk, and Mr. Smith, I think, of Coventry, offered us 5s. a-pound for it. We never got a pound weight, and so he did not have it; but in one of his letters he said it was far better than foreign silk. It was shown at the Coventry Museum, and especially noticed in the newspapers. Afterwards it was sent to France to dress the wounds of the soldiers in the late war.—*J. SHELSWELL.*

PREPARING WAX FOR MAKING WAX FLOWERS.

The material or wax in its crude state is unfit for modelling purposes: it requires to be prepared as follows, that is, if the modeller is desirous of preparing his own material, otherwise it may be purchased ready made for use at any artificial florist's.

Procure some of the purest beeswax, and having first cut it in pieces, place it in a vessel and dissolve by means of heat. When dissolved, add Venice turpentine in the proportion of 2 ozs. to each pound of wax. The addition of the turpentine renders it of a softer nature, and prevents it from cracking in the mould, as it would be apt to do if used otherwise. The modeller can impart any colour to the dissolved wax by rubbing together in a vessel a small quantity of the particular colour required, mixed with olive oil with a portion of the liquid wax, until it gets hard by cooling, when it should be well stirred into the body of the dissolved wax. The liquid is strained through muslin to remove impurities, and is then fit for use.

A mould of the fruit, &c., desired to be copied is next required. This is generally made from plaster of Paris, and consists of two, three, four, and even more separate pieces, according to the form and size of the fruit to be modelled. It is obtained in this way.—First construct a card form, somewhat like a collar box, about 1 inch or so larger than the fruit to be copied. Then mix with water such a quantity of plaster of Paris as will be of a moderate thickness; pour just as much of this into the form as will fill to the fruit, which has been previously olive-oiled, to sink only half way in the plaster. Having allowed

some time for it to get set, remove the paper and make a few holes on and around the edge of the mould. Then scrape the edge quite smooth, and re-oil the uncovered part of the fruit edge of the mould, replace the form, and pour on the fruit as much plaster as will be of an equal thickness to the first part of mould. Let this also stand for some time, then take off the paper form and the mould is complete. By giving the first half of mould more or less "cup-like holes," the second part will receive a similar number of projections, which, fitting into the cavities, allow the parts to be exactly placed together, and render the mould more secure.

Leaf moulds are made by giving the leaf (which should be first made quite clean, and then oiled, and placed face-upwards on a sheet of paper), first thin, then thicker, coatings of plaster, allowing a little time for the first coat to become set before giving it the second, and so on, until the mould has acquired the requisite thickness. The face of the leaf only should be covered with the plaster.

Having shown how to obtain the fruit and leaf moulds, I will now describe the method of using them. Before doing so, however, I wish to observe that no moulds should be used before they are thoroughly set or hardened, and that preparatory to using the mould, it should be placed in hot water for a few minutes, and then carefully wiped dry with a soft cloth. On casting, take one half of the mould in the left hand and pour in the liquid wax so as to nearly fill the hollow; then quickly place on the other part, in such a way that the projections of the one fit into the cavities of the other part of the mould. Hold both parts tightly together, and gently turn the mould in the hand so that the wax may be disposed on the inside evenly. Having allowed some little time to elapse, place the mould in hot water for about two or three minutes, then take it out and separate the parts carefully, and remove the fruit as gently as possible. Should there be any roughness on the fruit, it can be easily removed by rubbing it with a flannel dipped in turpentine.

Wax leaves may be painted green by means of Prussian blue, chrome, and burnt sienna, and polished, when necessary, by means of a soft brush. The stems of fruit are made from wire covered with wax of the required colour.

The characteristics of both fruit and leaves are mostly produced by the colouring and its various modes of application; to give rules for such would be but waste of time, and only tend to mystify the reader. Practice and study of the works of Nature alone will enable the reader to acquire any proficiency in this art. I may mention, however, by way of a guide, that most fruits require a body tint according to the particular colour required, and that all colours must dry on the wax before any decision can be pronounced as to the correctness of tint. If the modeller always endeavours to copy Nature in all her parts, so that each part when taken conjointly shall resemble the whole, he will not only achieve but deserve success.—*SULYAN.—(English Mechanic and World of Science.)*

OUR LETTER BOX.

PRESERVING EGGS FOR WINTER USE (St. Edmund).—You must preserve your eggs by putting them in slaked lime in a pan, layer upon layer, till the pan is full. You must put them in fresh, and they will keep so. It is the generally received opinion that Ducks must have a depth of at least 12 inches of water. Observation will show you we are right, and yours is, we believe a solitary case. The Rabbit is an uncommon case, but those who breed from bantock stock frequently meet with these sports.

COLOURS OF CREE-COERS (L. S.).—Cree-Coers should be quite black. Both cocks and hens get white feathers in their top-knots as they grow older, but they are a great disadvantage in competition. White feathers cannot be excluded out of the top-knot, and any other colour is a positive disqualification.

CHICKENS NOT EATING AND ATING (L. W. P.).—It may be your chickens suffer from the seeds they pick, but as a rule they improve in condition on new-mown land. Change their food. Give them meal mowing and evening, slaked with milk, some Indian corn or whole barley twice between these meals, and discontinue the scraps for a time. The rains will probably do them good. Drought is bad for them. Give them cauphor in all their water, and supply their runs with road grit.

DONCASTER AND BOSTON POULTRY SHOWS.—T. S. Adsett, Esq., Cowley Mount, Lancashire, informs us that he won the first prize for Dark Brahms at Doncaster, and the silver cup for the same variety at Boston. We publish the reports as sent to us.

POULTRY FOOD (Dover).—Do not be deceived by a delusive term. "Middlings" are not so good as barley meal, being part of the ground grain that is taken from the meal. If it were as good as barley meal it would not be sold at half the price. We have long sought for some cheap food that was as good and nutritious as the dearer ones, but we are still seeking. We had nothing so cheap as the best food. In such the weight is made-up of feeding stuff, in the lower priced it is made-up of "offal." Profitable food mixes into dough or paste, it is smooth; but the cheaper and less-feeding is rough when wetted, and looks as though fine-cut chaff were mixed with it. The fowls do not like it.

EGG-EATING HEN—SWOLLEN CROP (Idem).—There is no cure for a hen that eats the eggs on which she is sitting, but we are bound to say it is a very unusual thing—so much so, that we advise you to kill the hen as soon as her three chickens are fit to leave her. She will always do it. The swollen crop may be reduced, if not cured, by holding the fowl by the legs, head downwards, till the crop has emptied itself from the mouth; the bird must then be shut up and fed very sparingly, and only with a small quantity at a time. It must have water only twice per day, and then very little. If the crop still has so down you may put alum in the water. It will be some time before it regains its normal state, but we have seldom known this treatment fail.

EGGS BLOOD-STREAKED (E. J. B.).—You do not say whether the streaks were on the shell or in the egg. The latter is not an uncommon case, but it is a bad sign, and shows there is something wrong about the bird that lays them. If the streaks are on the shell they betoken fever. Castor oil given internally and administered with a feather into the egg-organs will cure it. In all cases of fever, lettuces are excellent food. It is hard to find a cause for the paralysis. An injury on the back will cause it; being egg-bound will do so also. We advise you, as soon as you see this, to take a wing feather, dip it in castor oil till it is thoroughly saturated, and then introduce it into the egg-passage as far as it will go without hindrance. We believe you will then remove the complaint, by causing an egg to be laid. You say she is only a year old; these are, perhaps, her first eggs. If so, you may well expect to save her. She is little more than a pullet.

LINCOLN POULTRY SHOW.—One of the pair of Ayresbury Ducks entered for this Show by Mr. S. H. Harris, of Casgarra, Carwall, was dead in the hamper when delivered on the Show ground, and therefore, strictly speaking, this pen should have been marked "absent," in the catalogue.—THE POULTRY SECRETARY.

INCUBATORS (H. G. O.).—We cannot give any information about them. Any one will hatch, but then the difficulties commence. We never knew any one who reared chickens artificially hatched except at a fearful loss.

RUCKWHEAT, &C., FOR PIGEONS—SEX OF EGGS (F. W. H.).—We have known Pigeons fed on this, but we never used it for our own birds. In regard to the disease in Pigeons known as eanker, see our reply in last week's "Letter Box." As to which egg produces the cock bird, the one laid first or second, we believe there is no rule. Very often both the young are cocks, occasionally both are hens.

CANARY'S LEG-WEAKNESS (Constant Reader).—I fear there is no permanent relief for your ailing bird, but I think the symptoms would be ameliorated by giving a drop or two of cod-liver oil. Hold the bird in the left hand, and if you cannot manage to open its mouth and administer the oil at the same time (which can be done by taking up sufficient on a blunt-pointed little stick) get some one to assist you by opening the patient's mouth, when a little nerve and a steady hand will do the rest. Another method is to remove the water vessel, say from breakfast time till the middle of the day, three or four hours, when you can replace it, or one kept for the purpose, with plenty of oil floating on the surface of the water. The patient will then drink its medicine without assistance. Some birds soon get to like it. I once had a very valuable Variegated Jonque Norwich cock which appeared hopelessly gone, and which I turned over to the care of my wife. I do not know whether it is the result of practice acquired in the nursing, but for artistic management with a spoon recommend me to a woman. The way in which a woman tucks up one of those little bundles in the nursery, pinions its fat hands, and prepares to administer physic is a gift peculiar to the sex. No sooner is the mouth open than in goes the spoon and the operation is over. I should be afraid of hitting the bundle in a wrong place. My wife appeared to have no difficulty in managing this bird, which subsequently became the father of a family, and lived almost entirely on cod-liver oil.—W. A. BLAKSTON.

BULLFINCH AND CANARY EGGS (M. G.).—After a horned Canary we may expect anything. Among other freaks of nature I have heard of a remarkable Linnet Mule. I was told it would be sure to beat anything likely to appear this season if the prize-lists could only be made to suit the bird, "myast (most) legs to win," as my informant said, "for this yale's (one's) gotten fower (four)!" The notes on Bullfinch and Canary Mules in the "Letter Box" a short time back attracted the attention of a correspondent, who writes:—"I had a hen Bullfinch which I had reared by hand. Seeing her evidently preparing to nest, I introduced into her cage a very vigorous Buff-breasted Norwich Canary, which paired with her successfully. She behaved in every way as a Canary; if anything she seemed more so. She dropped the first egg in the case bottom, and finding it broken I examined it: it was to all appearance properly impregnated. I that evening stewed the case bottom with fine sawdust, and so saved the remaining eggs—five, some of which she laid in the nest, and others on the sawdust. These eggs I placed a laid under different Canaries, but they all proved infertile. I gave the Bullfinch some bad Canary eggs, which she set quite carefully, and after a week or two had clasped I again tried her with the same Canary, with precisely the same result. She again laid six eggs, all infertile." "M. G." also, in reply to whom the notes in the "Letter Box" appeared, writes, "I was not successful with the Canary and Bullfinch. The Canary had five eggs, which she sat for fifteen days. She was a small hen, and did not cover well. Some time after she laid again, and the Bullfinch made a hole in the egg. She is now sitting on two eggs, and never stirrs except to eat, and that seldom." So far, then, the weight of evidence in this *versata quæstio* is against the production of Canary and Goldfinch Mules. Other Finches also will mate with the Canary readily, but the result is *nil*.—W. A. BLAKSTON.

YOUNG CANARIES LOSING FEATHERS (A Reader).—If I shut some young Canaries into a cage with their father, and I noticed that one of them became rather short of feather, I do not know that I should suspect the old bird of the theft, because young ones are very apt to pick one another, and when they once begin it is extremely difficult to get them to discontinue the practice—in fact, they will continue to pick as long as there is anything to pick at; but if I observed that one of them was "minus his tail, with blood all about the tips of its wings and the roots of the tail, and I noticed blood on the cock's beak," I should consider that strong presumptive evidence of his guilt, and I do not think an action for libel would lie if I charged him with the crime. At all events, I should lock him up on suspicion. You have done quite right to remove him, and if the young ones can only pick a little there is not much fear that you will rear them. Give them plenty of soft food, such as stale bread soaked in water, and squeezed dry, or neatly so; add to this a little chopped egg and a little mawseed. Supply white canary seed, and when you notice that they can crack it, reduce the quantity of soft food and put them on hard seed entirely. I should not, as a matter of choice, always allow young ones to be fed through the bars of another cage hung on to the other; but when they are so ill used, what else can you do? In such cases all depends on the ingenuity of the breeder; and any contrivance which, while it protects them, gives the old birds access to them for feeding purposes, is an admissible adjunct to the breeding cage. The method you have adopted is very common, and you will see by referring to my A. P. C. Canary papers in previous numbers of the Journal, that I recommend the wires of the breeding cage to be inserted at such a distance as will admit of the birds getting their heads through without fear of their bodies following, or, on the other hand, strangling themselves. You must be careful, however, to put the perch on which the young ones will have to sit at such a distance from the wires of their nursery cage that they will either have to stretch their necks a little, or go to the wires to be fed, or else, when they are resting after a meal, the cock will be sure to help himself to any juicy little tail feather he can

reach. The life of a Canary, from the shell to the show-cage, is beset on all sides with dangers, and were it not for the great number of deaths which occur, an ordinary room would scarcely hold the produce of a season.—W. A. BLAKSTON.

SILKWOOLS (E. M. N.).—Thanks for your note, but our correspondent needs more details of the size of marketable skeins, &c.

PAYNE'S HIVES (T. M. P.).—Either Messrs. Neighbour, High Holborn, London, or Mr. W. J. Pettitt, Apicultural Institute, Dover.

SALE OF HONEY (A English Bee-keeper).—Write to Messrs. Neighbour, Messrs. Fortnum & Mason, and other Italian warehousemen, whose directions you can find in Kelly's "Post-office Directory."

POT PATRIE (L. Jackson).—You must mix your rose petals (leaves as you call them) as follows:—Gather the petals of the most fragrant kinds of roses, with which other flowers may be mixed at pleasure in smaller proportion; spread them out to dry in the sun, or in a warm room; sprinkle a little salt on them, and put them into a jar, in which they are to be kept covered up till wanted for use. Take of these rose leaves 4 ozs.; dried lavender flowers, 8 ozs.; vanilla, cloves, storax, and benzoin, all bruised, of each 1 drachm; ambergris, 20 grains; otto of roses, twenty drops. Mix.

ROSE LEAVES (St. Edmund).—See the above answer.

METEOROLOGICAL OBSERVATIONS,

CAMDEN SQUARE, LONDON.

Lat. 51° 32' 40" N.; Long. 0° 8' 0" W.; Altitude 111 feet.

DATE.	9 A.M.				IN THE DAY.				Rain.	
	Barom. at Sea level.	Hygrometer.		Direction of Wind.	Temp. of Sun at 1 ft.	Shade Temperature.		Radiation Temperature.		
		Dry.	Wet.			Max.	Min.	In sun.		On grass.
1873.	Inches.	deg.	deg.		deg.	deg.	deg.	deg.	In.	
July.										
We. 9	30.154	65.8	56.2	N.W.	62.2	76.4	52.9	122.4	50.0	—
Th. 10	29.910	63.6	59.0	S.	62.3	76.6	55.3	125.2	52.7	—
Fri. 11	29.875	64.3	58.2	S.W.	62.9	77.6	54.6	125.0	51.2	—
Sat. 12	29.781	64.4	54.0	S.W.	62.2	71.9	52.1	121.7	49.0	0.030
Sun. 13	29.659	62.7	55.4	S.	61.2	66.8	58.3	104.4	48.2	0.970
Mo. 14	29.629	61.1	55.6	S.	59.6	70.2	49.1	122.2	47.2	0.121
Tu. 15	29.767	61.3	54.7	W.	59.7	70.6	50.8	120.5	48.2	0.670
Means	29.836	63.1	56.3		61.4	72.0	52.4	119.8	49.5	1.184

REMARKS.

- 9th.—Fair all day, but occasionally cloudy all through the day.
 - 10th.—Bright and fine, with a pleasant breeze all day.
 - 11th.—Fine day, but slightly clouded in the after part of the day.
 - 12th.—Three or four slight showers, but very fine between.
 - 13th.—Fine early, but rain commencing at 10.30 A.M., and continuing to fall, more or less heavily, all the day.
 - 14th.—Showery in morning, but very fine after.
 - 15th.—Heavy showers in morning, with thunder between 11.3 and 11.18 A.M., thunder also at 2.13; fine evening, distant lightning in the south at 9.13 P.M.
- A moderately fine week, temperature very similar to the preceding four weeks. Very heavy rain on 13th.—G. J. SYMONS.

COVENT GARDEN MARKET.—JULY 16.

We are now getting into full swing with the standard and bush fruits, all of which are well supplied and of good quality, especially Currants, Raspberries, and Strawberries. The latter are very abundant and can be had at very low figures. French goods are also freely offered, comprising Peaches, Nectarines, Cherries, Apricots, Plums, and Melons. Potatoes are showing symptoms of disease both in rounds and kidneys.

FRUIT.

	s.	d.	s. d.		s.	d.	s. d.
Apples..... 1 sieve	1	6	0	Mulberries.....	1	0	0
Apricots..... doz.	2	0	0	Nectarines..... doz.	8	0	15
Cherries..... bushel	1	0	0	Oranges.....	1	100	0
Chestnuts..... bushel	0	0	0	Peaches.....	doz.	15	0
Currants..... 1 sieve	3	0	4	Pears, kitchen..... doz.	0	0	0
Black..... doz.	3	0	1	dessert..... doz.	2	0	0
Figs..... doz.	6	0	10	Pine Apples.....	lb.	3	0
Filberts..... lb.	0	0	0	Plums.....	1	0	0
Cobs..... lb.	0	0	0	Quinces..... doz.	0	0	0
Gooseberries..... quart	0	3	0	Raspberries.....	lb.	0	4
Grapes, both home..... lb.	2	6	0	Strawberries.....	1	0	0
Lemons..... 100	8	0	14	Walnuts..... bushel	8	0	12
Melons..... each	2	0	8	ditto.....	1	100	2

VEGETABLES.

	s.	d.	s. d.		s.	d.	s. d.
Artichokes..... doz.	3	0	6	Minshrooms..... pottle	2	0	4
Asparagus..... 100	3	0	6	Mustard & Cress..... punnet	0	10	0
French.....	6	0	12	Onions..... bushel	4	0	0
Beans, kidney..... 100	1	6	0	Pickling..... quart	0	6	0
Beet, Red..... doz.	1	0	3	Parsley per doz. bunches	0	4	0
Broccoli..... bundle	0	3	1	Parsnips..... doz.	0	9	1
Cabbage..... doz.	1	0	1	Peas..... quart	8	1	0
Capstoms..... 100	0	0	0	Potatoes..... bushel	6	0	0
Carrots..... bunch	0	6	0	Kidney..... do.	0	0	0
Cauliflower..... doz.	3	0	6	Round..... do.	0	0	0
Celery..... bundle	1	6	2	Radishes..... doz. bunches	1	0	0
Coldwater..... doz. bunch	6	0	0	Rhubarb..... bundle	0	0	1
Cumbers..... each	0	8	0	Salsify..... bundle	1	0	1
Cumplings..... doz.	0	0	0	Savoy..... doz.	0	0	0
Endive..... doz.	2	0	0	Scorzoneria..... bundle	1	0	0
Fennel..... bunch	0	3	0	Seakale..... basket	0	0	0
Garlic..... lb.	0	6	0	Shallots..... lb.	0	3	0
Herbs..... bunch	0	3	0	Spinach..... bushel	2	0	0
Horseradish..... bundle	5	0	0	Tomatoes..... doz.	2	0	0
Leeks..... bunch	0	6	0	Turnips..... bunch	0	3	0
Lettuce..... doz.	1	0	2	Vegetable Marrows.....	0	1	0

POULTRY MARKET.—JULY 16.

THERE is a tendency to lower prices, and a change may be looked for daily. This season will for a long time be remembered as a bad hatch for fowls and Ducks.

WEEKLY CALENDAR.

Day of Month		Day of Week	JULY 24—31, 1873.			Average Temperature near London.			Rain in 43 years		Sun Rises		Sun Sets.		Moon Rises.		Moon Sets.		Moon's Age.	Clock before Sun.	Day of Year
			Day.	Night	Mean.	Days.	to	h	m	h	m	h	m	h	m	h	Days	m.	h		
24	Th	St. JAMES.	72.6	51.7	62.1	11	14	af	4	58	af	7	35	3	39	8	1	6	12	205	
25	F	Twilight ends 11.50 P.M. William Forsyth (died, 1804.	73.9	49.4	61.9	15	16	4	57	7	46	4	2	9	1	6	13	206		206	
26	S		73.7	50.3	62.0	22	17	4	56	7	58	5	21	9	2	6	13	207		207	
27	SUN	7 SUNDAY AFTER TRINITY.	71.9	50.7	62.8	19	18	4	54	7	8	7	36	9	3	6	13	208		208	
28	M		76.4	50.8	63.6	21	20	4	53	7	17	8	48	9	4	6	12	209		209	
29	Th	Hartlepool Horticultural Show.	75.5	49.9	62.7	18	21	4	51	7	26	9	0	10	5	6	11	210		210	
30	W		75.2	50.2	62.7	16	23	4	50	7	35	10	12	10	6	6	9	211		211	

From observations taken near London during forty-three years, the average day temperature of the week is 74.6; and its night temperature 50.4. The greatest heat was 95, on the 24th, 1838; and the lowest cold 31, on the 29th, 1838. The greatest fall of rain was 1.18 inch.

STRAWBERRY GOSSIP.



THE time of gathering Strawberries is the time for judgment and comparison, and as soon as the gathering is over it is time to prepare for future crops. There can, therefore, be little risk of an anachronism by essaying a little Strawberry gossip in the month of July—the month alike for eating the fruit and planting the plants.

In the early period of the year, after the deluge of the autumn and winter months, I never saw Strawberries present a more miserable and starved appearance, and had there been a scant crop, no one could have justly grumbled, considering the absence of autumn sun and the consequent immature state of the crowns. There has, however, been such a bountiful yield generally, that owners and growers, and Strawberry lovers, may rejoice indeed. The fact seems now about demonstrated, that extreme frost is more detrimental to this fruit than extreme wet. I have seen the foliage of plants rotted and perished by wet to such an extent that hardly a vestige of green could be found on the beds, and following this one of the finest returns of fruit ever gathered; but I have never seen the foliage so frozen and perished by a dry continuous blast without the crop following suffering proportionably. Extreme wet, then, appears to be less injurious than extreme frost. Strawberry-forcers may perhaps gather a hint from this, and turn it to account in storing their prepared plants. I know, from a pretty extensive experience, that damage may be done by packing the pots high and dry, and that there is much less danger in plunging the pots upright in a sheltered position, providing the heavy rain and melting snow can by some means be shunted off them, as certainly the plants cannot so well resist the damaging effects of a torrent of wet in pots as when planted in the open ground. The reason for this is obvious. But the lesson is given that they will suffer from drought and frost in autumn and winter more than from wet, and that many failures in Strawberry-forcing may be attributed to letting the pots get too dry in ripening and resting. As to moisture, in this matter the "happy medium" is the safest and the best.

I have only had one kind of Strawberry in the garden that could in any manner deal with the enormous amount of wet which the ever-dripping clouds poured upon it, and that is the Vicomtesse Henriette de Thury. But stay, I am a trifle too fast. Newtown Seedling carried its foliage remarkably well. This is my sheet-anchor Strawberry. I have been occasionally deceived in other sorts as to a crop, but in this one never. That, however, is its best recommendation, but it is not devoid of usefulness. By its extreme firmness, high colour, and nice appearance it is the best I know for bottling; it is also useful for preserving, but rather too acid for dessert when there are so many others better. I have grown it for several years, and hope to grow it for several more; but the Vicomtesse stood the wet best, and preserved its foliage

dense and green all throughout, and then such a crop! and just as early as Black Prince, and five times better. It is good in size, good in colour, in taste not rich but refreshing, and is, according to my experience, the best early Strawberry extant; but this is a qualified verdict, as I have not quite grown all in the dictionary. If anyone thinks he can send me one earlier and better I shall be glad to have it, but as I am growing every day harder-headed, I shall attach this condition—that I prove it before I pay for it. I shall not have many come.

After the French peeress come the two next best, and best of all for general purposes and midseason. They are well named, too, in President and Sir Joseph Paxton. On stronger soil I have seen Garibaldi as good as either of them, but on this light ground the last must take a subordinate position in the Strawberry ranks. The longer I grow President the better I like it, and am certain it is the Strawberry for a non-strawberry soil. The crop is immense, and superior in this respect to Sir Joseph Paxton, but a trifle inferior in flavour, though not much. President requires more room than any other variety I grow. The rows should be quite 3 feet apart to allow its fine fruit bunches to spread and have air. Last year I had it less than 2½ feet distant, when the fruit of the rows overlapping and lying one on the other was one-half spoiled. I took out every alternate row, and this year have more than double the quantity of fruit from just half the number of rows, and I adduce that as the best argument for plenty of room. President has one advantage over most, if not all, others. After the first gathering of large ripe fruit, the smaller green ones continue to grow larger, and do not, as is common, lie still and ripen small. I do not mean to say that all the small ones get large, but they do this to a greater extent than any other variety.

After President comes that fine sort Dr. Hogg, but the little ones of this do not get big. The big ones, however, are fine indeed, alike in size and quality. It is not so hardy as those previously named, neither in frost nor wet-resisting qualities, but is, nevertheless, thoroughly recommendable. It will grow on lighter, poorer soil than British Queen, yet I will put the latter and Dr. Hogg together, and pay due and loyal respect to both.

Now for lates: and here Elton Seedling comes in, but not all alone in its glory. As a distinct sort Lato Prince of Wales, kindly sent me by Mr. Record, is fully as late, if not later, but I have only had it this season. It promises remarkably well, and bids fair to be really useful and worthy a place in a limited and select list. The few sorts named are what I have found to be the most useful, taking into account productiveness, quality, and succession. I observe they are nearly identical with a list recently recommended in the correspondence columns of this Journal, and I am sure may be planted with confidence. But this does not say there are not many other good kinds that I have not proved.

And now a word as to culture. This must vary according to soils, but in all cases planting early in July if possible; ground, however, is not always vacant at this

time. The most fruit from a given quantity of ground I have obtained this year has been from plants put in, just a foot apart all ways, on the 1st of August last year. As soon as fruiting is over, and in showery weather, half of these will be lifted and planted, and will again do well; but if the weather continue hot, they will be thrown away, and young plants again depended on. Another favourite plan of mine is at every 2½ feet, or 2½ by 3 feet, to put in three stout young plants in a triangle with a base of 6 inches. No one at next gathering-time can, without very careful examination, tell these from established two and three-year-old stools. In strong soils thorough deep-digging and making the ground rich to a depth of 15 to 18 inches, and a top-dressing of manure on the surface, will be all that is really necessary. If much deeper than this, and without surface-dressing, I have often observed the plants run too much to leaf. For fruit of all kinds there is nothing like surface roots, but they must be taken care of.

Strawberries like firm ground, and in a soil naturally light and warm I can get better crops by not digging at all, either at planting time or afterwards. I render acknowledgments to Mr. Radelyffe for this hint that I have put into practice. At desired distances scoop a hollow in the soil capable of holding two gallons of water. Soak this thoroughly with liquid manure, level-up, and put three plants in each spot. The manure water should be strong, and the hollow a foot in diameter. I have tried different sorts of manure, and find 2 ozs. of guano and 1 oz. of salt to the gallon the best of all, and better indeed than holes dug out 18 inches deep and filled-in and trodden with good manure. For a time the manured roots took the lead, but after two years the liquid-manured roots produced the most fruit, and best withstood the drought. It is the firm soil that does it. I always surface-dress my Strawberries in the autumn with half-rotted manure, or not quite half-rotted, and never take it off again. This may not be so necessary in districts with a heavy rainfall, but I know it is good practice here. Last autumn, considering the tremendous wet, I was for once doubtful as to the wisdom of the practice and only did a portion, but those dressed are much the best, and I decide that if it is good in a wet season it must be good in a dry one, at any rate where the soil is light. The winter's rains clean the manure perfectly, and leave a surface of smooth sweet straw, better packed than any hand could pack it, for the fruit to rest on. Where this top-dressing is not given, the best recipe to keep the fruit clean is Mr. Peach's—viz., straw cut into inch lengths. It is handy to apply and save when it is there, and is the best slug-antidote I know. I have watched the hungry "varmint" in their pilgrimage to the fruit, and am bound to say rejoiced in their treadmill-like work in turning over, and instead of the straw being the foundation for the slugs, the slugs were a foundation for the straw, and they were glad to get out of it. This would not have been the case had it not been cut into inch lengths.

It is important that clean surfacing be applied early, and it is the greatest possible mistake to defer it until the fruit is ripening. No one can possibly do the work then without more or less injury to the fruit-trusses. Strawberry trusses are as impatient of being disturbed as the haulm of young Peas, and neither can be meddled with without damage. Early surfacing has also another valuable point in its favour, in arresting evaporation and retaining the earth's moisture. It should be applied before the plants are in bloom, and it can never be done so well afterwards. A sprinkling of salt in early spring at the same time and in half the quantity of that given to Asparagus beds, or, to be more definite, about half an ounce to the square foot, is of much value, but more will not hurt if it be kept out of the crowns. By its deliquescent nature it keeps the ground moist and cool. It is certain to do good in dry localities to these things besides Strawberries. It should be applied previous to the straw surfacing. By salting and surface-dressing in autumn and early in spring I have had no occasion to water, although much hot and dry weather has prevailed. But—and this is important—I set aside two rows: one had no salt, and the other was not surfaced until the fruit changed colour; both these we have been compelled to water copiously, and then could not get the fruit so fine as the rest, but it was equally plentiful in point of numbers. Every point urged in this gossip is based on actual and careful practice.

I have never been sufficiently careful or curious as to note the relative value of the first or second roots of runners, but I do know that barren plants will produce barren progeny; I do not say invariably, but sufficiently so to make the practice

of planting from them an unsafe one. Just another hint: I cannot grow British Queen or Dr. Hogg by runners from my own plants, but if I have them from a thorough strong Strawberry soil I can get fair crops. I am certain this is a point of considerable value, and will in many gardens make all the difference between Strawberries and no Strawberries. Let those who grow this fruit under difficulties try, and I am very sanguine they will do as I do, "try again."—J. WRIGHT.

NEW ROSES.

MR. KEYNES did a good service to rosarians on the 16th inst., and he did it simply for their benefit, for he brought up from Salisbury seventy-two blooms of twenty-four of the best Roses of 1872. It was refreshing, after the dazzling repetition of Zonal Pelargoniums, to be able to take a chair and sit down comfortably opposite these fresh blooms and quietly examine them. It was a pleasant thing, too, after one had one's notes, to have them confirmed by two such authorities as Mr. Keynes and Mr. Turner: and therefore in giving my judgment, it may add some little weight to it when I say that it is thus confirmed. I have always maintained that it is utterly impossible to judge of the new Roses until the second year, they are only then recovering from the high pressure to which they have been subjected; but I do not recollect that we have ever had so good an opportunity of seeing the new Roses as on this occasion. We see some of them in the classes for new Roses, and oftentimes in the larger classes exhibited by nurserymen, but not in such a collection as this; and then they were so fresh, so fine, so, in fact, Salisbury-like, that it was a treat of no ordinary kind.

1. *Abbé Bramercel*.—A finely coloured, ill-shaped Rose. It may be tolerated in a stand, but will be, I think, more esteemed as a garden Rose. I should describe it as a cross between Eugène Appert and Géant des Batailles, having the intense colour of the former with the form of the latter.

2. *Bessie Johnson*.—This is a sport from Abel Grand, and is much lighter than that variety, and is worth adding to a collection.

3. *Etienne Levit*.—One of the best of the whole collection. The shape is beautiful, the petals large and shell-like, and the colour a fresh bright carmine.

4. *Madame Bellon*.—A pretty, well-shaped, light Rose.

5. *Madame de Parrieu*.—Bright rose shaded with carmine, but, then, said to be from Anna de Diesbach.

6. *Madame George Schwartz*.—Bright rosy pink, shading off into deep rose; fine form; a distinct and good Rose. I have always had a high opinion of this Rose, and am glad to see it confirmed.

7. *President Thiers*.—Fiery red; a fine colour, but wanting in quantity of petals. Probably will be grown for its bright colour, but not a first-class flower.

8. *Madame Scipion Cochet*.—Good form, but too thin.

9. *Louis Corbic*.—A pretty soft crimson rose. I find a Louis Charin in Messrs. Paul & Son's list; I do not know if this be the same.

10. *Baron de Bonstetten*.—Deep velvety blackish crimson. A grand Rose; quite in the way of Mons. Boncenne, but larger, and a good grower.

11. *Le Harre*.—Rough and thin.

12. *Souvenir de Général Douai*.—Bright salmon rose; large and full, and likely to be an effective Rose.

13. *François Michelin*.—A large, fine, and well-shaped imbricated Rose; silvery rose, with a fine petal. A first-rate Rose.

14. *Richard Wallace*.—Bright crimson rose; full, globular form, and attractive for its novelty.

15. *Madame Lefebvre Bernard*.—A splendid bright Rose; fine imbricated form, reminding one of Souvenir de la Reine d'Angleterre, but more refined and regular. A grand Rose.

16. *Madame de Riddar*.—Something of the colour of Beauty of Waltham. Good.

17. *Souvenir de Madame Hammet*.—Rough.

18. *Anaïs Rigoiard*.—Beautiful shell-like petals, cherry red. An excellent Rose.

19. *Princess Beatrice*.—Rough as shown here.

20. *Madame de St. Pulget*.—Shows the eye.

21. *André Duand*.—Light rose, with distinct paler edge; fine form, very beautiful in colour.

22. *Lyonnais*.—Light rose. Of the Charles Verdier type, but to my mind too watery in colour.

23. *Souvenir de Paul N. (Lea)*.—A very lovely flower,

salmon yellow edged with rose; large and full. Of the Madame Margottin style of flower.

24. *Bacante Louise Vrkull*.—Large and full; fine colour, but I am inclined to think uncertain.

25. *Souvenir de Charles Ferry*.—A seedling raised by our lamented friend, but hardly, I think, full enough to give it a lasting place.

I am inclined to give the first place to the following:—André Dunand, Etienne Levet, Madame George Schwartz, Madame Lefebvre Bernard, Baron de Bonstetten, François Michelin, and Souvenir de Paul Neron. In the second rank would come Abbé Brammerel, Bessie Johnson, Madame Bellon, President Thiers, Rigotard, Louis Corbie, Richard Wallace, and Souvenir de Général Douai. And it is odd to find that some of these, undoubtedly good, do not appear at all in two catalogues of our chief growers now before me, so completely is it a lottery which flowers are selected out of the eighty or ninety sent out. It will be a great boon if the new Cercle at Lyons exercise some sort of prohibitory power on the sending-out of such a multitude of new, and in many instances worthless flowers.—D., *Deal*.

G. F. WILSON PEA.

This proves to be a first-rate Pea, and fully justifies the Royal Horticultural Society in awarding it a first-class certificate. Those who like Vetch's Perfection should grow this variety; it is a decided improvement on that old favourite, being more prolific, having larger pods more equally filled, and is at least a week earlier; the colour when cocked is a lively green, and the flavour excellent. I shall grow it exclusively next year for my mid-season supply. It should be sown 2 inches apart in a single row, and the rows 8 or 9 feet apart, planting Potatoes or other low-growing vegetables between. Why do cooks spoil good Peas by boiling Mint with them?—WILLIAM TAYLOR, *Leighton*.

THE HYDRANGEA AS A DECORATIVE PLANT.

The common *Hydrangea hortensis* is perfectly hardy in the south of England, the Isle of Man, and other parts of the British dominions; but it is as a pot plant that we would here allude to its excellence.

Doubtless some of our readers may have seen the beautiful little plants of this species now being brought into Covent Garden Market by the London market-growers. These plants are propagated from cuttings in the autumn and spring, and flower in from twelve to fifteen months, bearing from one to four magnificent clusters of rosy flowers. Some of the largest, or autumn-struck plants, vary from 18 inches to 2 feet across, and are literally one mass of bloom, and invaluable either for window-plants or conservatory decoration. I visited a small market garden at South Acton the other day, and saw a long span-roofed greenhouse quite full of this beautiful plant, while hundreds had already found their way to Covent Garden before my visit. In the turf-pits outside, four thousand cuttings had been potted-off ready for next year's supply, and this in one small establishment only—a fact quite sufficient to show the high estimation in which this plant is held around London.

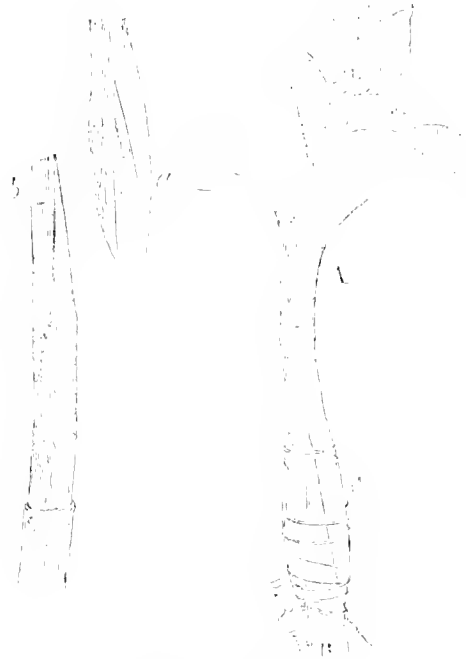
Old plants furnish quantities of fine cuttings, which strike freely in a moderate temperature, after which they are at once potted-off in good fibrous loam, leaf mould, and sand, and placed close together in any empty space at command. The leading growth is pinched out at the second or third joint, so as to obtain strong bushy plants as dwarf as possible. As the pots become filled with roots, they are again potted-on into 4's, and the larger ones into 32's, and in these they produce their flowers. During summer they are liberally supplied with water, a little manure water being occasionally added to strengthen their growth. They are kept as near to the glass as possible while growing, and fully exposed to the sun, by which means the plants are kept dwarf and bushy. The aim of the market-grower is to get these plants into the market as early as possible, since a much better price is thus obtained. Those now in the metropolitan market sell wholesale at from 21s. to 30s. per dozen, and are eagerly bought up at the price. The market-grower has, in fact, but little difficulty in disposing of his flowering plants or cut flowers, provided they are good in quality and early, these being the two great essentials necessary in order to succeed.

Everyone who has to keep up a succession of flowering plants in either greenhouse or conservatory, will find yearling

plants of the common *Hydrangea* invaluable for the purpose at this particular season, and for the next month or six weeks. We often see the *Hydrangea* with poor greenish blossoms; but if grown close to the glass in a low span-roof house or pit, fully exposed to sun and air, the flowers finish-off beautifully, and are of the brightest rosy hue imaginable. When growing, the plants require but little room, and when in full flower are very effective when grouped along with Fuchsias, Pelargoniums, Ferns, and other decorative plants.—P. W. B. (*in The Gardener*.)

METHOD OF GRAFTING RHODODENDRONS.

In his treatise on grafting Mr. Charles Baltet calls this method of grafting Rhododendrons "*Anglaise à cheval*," or, as we should say, "saddle-grafting." He describes it thus:—The stock B is cut wedge-shaped and sloping evenly, while the scion A is split up from the bottom, as at a, placed astride the



Saddle-grafting Rhododendrons.

stock, pushed over it, as at c, and tied up. Under glass clay-ine or waxing is unnecessary. Some years ago a charming collection of Rhododendrons was exhibited by M. Bertin, jun., in which a flowering shoot was employed as the scion, the result being in each case a truss of flowers. In this way it would be easy to have in a limited space a flowering collection of miniature Rhododendrons.

PEACH KERNELS POISONOUS.

It is not so generally known as it ought to be (says the *Argus*) that the kernels of some stone fruits, especially Peaches, contain prussic acid to an extent which may prove poisonous if a large number of the kernels be eaten. The following case, reported in the last number of the *Australian Medical Journal*, by Dr. W. R. G. Samuels, of Wanganui, New Zealand, should make parents cautious:—"February 19th, 1873. I was sent for to attend a little boy, aged five years, the son of a carpenter of this town. On my way I was informed that the little fellow had eaten something unknown to his parents, and was believed to have been poisoned. On my arrival, I found him lying on the sofa in a state of partial coma. The pupils were dilated, the skin somewhat cold and clammy, the pulse feeble. He seemed, in short, to be suffering from the effects of some narcotic poison. Upon making inquiries, I was informed that about half an hour previous to my arrival he had been seized with dizziness, stupor, fainting, inability to stand without

assistance—in fact, it was described to me as in partial intoxication. He vomited 1 oz. or more of masticated Peach kernels. I at once administered an emetic, followed shortly by a full dose of castor oil, which soon acted on the bowels. I ordered him to be kept warm. After being placed in bed, he slept for about two hours, after which he awoke and seemed recovered. This was obviously a case of poisoning by hydrocyanic acid (prussic acid) contained in the Peach kernels, of which the child had eaten a large quantity. My chief reason for reporting this is that I notice but one case mentioned in Taylor's 'Manual of Poisons' of poisoning by Peach kernels."

WALES AND WELSHMEN.—No. I.

I HAVE now been round Wales and through Wales, and am writing from its most beautiful sea-spot, truthfully named Beaumaris, built by Edward I. "upon a marsh ground, yet for the situation thereof he gave it this goodly faire name." But let not your readers deceive themselves with the expectation of finding in Wales any of the characteristics learned even in their nursery days. I have placed them long since on a blank page of Browne's "Vulgar Errors." Take first the national emblem—the Leek. "Common as Leeks in Wales" was a proverb centuries old, yet never have I, in garden or shop, seen a Leek in any part of the Principality. Who ever saw a Welshman with a Leek in his hat on St. David's day? I can aver it is not a popular table vegetable among them, but the "Welsh Onion" is; you see it everywhere, and this very morning I have seen baskets full of it at every greengrocer's in this capital of the Druids' Island as we have been long taught to consider it; but more about that presently.

We all have heard tell that Leeks are worn by Welshmen in commemoration of a victory they gained over the Anglo-Saxons in the sixth century, and which they attributed to wearing Leeks, by the command of St. David, to distinguish themselves in the battle; but others say it is because each of the small farmers who aided each other with ploughs brought Leeks to the common repast. And this I hold as more probable, sustained as it is by the still general practice of the Welsh Onion being the usual accompaniment of the bread and cheese you see vanishing from before every farm labourer as he rests beneath the field hedge; and a tradesman replied to my observation, "It's relishing, yet satisfying," which curiously agrees with old Tusser's verse:—

"In March Leekes are in season for pottage full good,
And spareth the milke cow, and purgeth the blood,
These having with peason, for pottage in Lent,
Thou spareth both omelet and bread to be spent."

Now, about this island of Anglesea, and its being especially the stronghold of the Druids. Camden says, "This isle was called of the Romans *Mon*, of the Britons *Mon* and *Tir-Mon*—that is, The land of Mon; and *Ynis Dowil*—that is, A shadowy or darke island; of the ancient Anglo-Saxons *Monez*, and at last after that the Englishmen became lords of it, *Engles ea* and *Anglesey*, as one would say, The Englishmen's Island. (Not a word about the Druids in those names.)

Giraldus Cambrensis states it was so fertile and so productive of Wheat that there was a local saying, *Mon mam Cynbry*, or "Mon is the mother of Wales." This saying is as old as 1188, for it is recorded then by Archbishop Baldwin in his "Itinerary through Wales," and it is stated that it was so called because its superabundant crops supplied the other parts of the Principality. If this were so, those other parts must have been superlatively unproductive, and Anglesea must have been more fertile than at present, for the soil is poor and the crops very inferior, Potatoes excepted, and they were unknown in Baldwin's days.

Mentioning Potatoes reminds me that I gladly learned in Oxfordshire, Cheshire, and now in Anglesea, that the disease this year has not made its appearance.

But to return to the theme from which I have diverged. Was Anglesea the stronghold of the Druids? I cannot conceive that such was the fact. There are no woods, no fossil remains of forests, no soils in which forests could have flourished, yet woods were their homes; and their sacred plant, the Mistletoe, does not grow here, and will not live here. I will jot down some of my notes about this plant, and let any one of your readers judge whether an island where the Mistletoe never dwells is likely to have been the Druids' home.

The Mistletoe is a cosmopolitan parasite, for it has been found not only on the Apple, but on the Horse Chestnut, Maple, Poplar, Acacia, Laburnum, Pear, Sallow, Locust, Larch,

Scotch Fir, Spruce Fir, Service, Hornbeam, Olive, Vine, Walnut, Plum, Laurel, Medlar, Oak, Cedar, Hazel, Ash, Lime, Elm, Baelthorn, Whitethorn, and Birch; therefore it is not the absence of a suitable tree that excludes it from Anglesea. But it is more particular as to the climate it will put up with. It flourished for a time in the Botanic Gardens at Dublin, but it died, and Dr. Moore, the Curator, repeatedly, but unsuccessfully, tried to re-establish it; yet at Farmley, in the county of Kilkenny, it has immemorably lived on the Apple trees. At Badamscourt, near Chepstow, for three-fourths of a century it was on an Oak; yet in another district of Wales, Peniarth, Merionethshire, and in other places, Mr. Cooke, gardener there, says the Mistletoe is almost unknown. That it does not grow in Anglesea is testified not only by the replies to my numerous relative inquiries, but by Mr. Hugh Davies, a native of the island, and who published a volume on its native plants. His is a remarkable testimony, for he was unwilling to admit the fact, and he says, "I have not seen this plant; but we can scarcely suppose that the Druids had fixed upon, as a favourite residence, a spot that did not produce this highly-venerated plant." The assumption rather is that they did not reside here because of that non-production.

Some have considered—I am alluding to Welshmen—that *Uchelawg*, the Mistletoe, is a magical herb, probably the Forbidden Tree in the middle of Eden's trees, for in the Edda, to the Mistletoe is ascribed Balder's death, caused through listening to a woman. The Druids had a great veneration for the number 3, and Vallancey says "the Mistletoe was sacred to them because not only its berries but its leaves grow in clusters of three."

In Brittany, at Yule-tide, the Druids sought for a Mistletoe on the Oak of about thirty years' growth, and when found it was consecrated, the *Panchrestum*, or universal remedy—the restorer of health and the securer of happiness. It was cut with a golden, or more probably brazen, sickle, and after a sacrifice and prayer, fragments were distributed to the prostrate people. Whoever obtained a fragment believed that he was sheltered from sickness, witchery, evil spirits, and even thunder-bolts.

As the berries of the Mistletoe were considered promoters of fertility, and the whole plant to be all-powerful to preserve from evil, kissing beneath it may well have been practised as an invocation to obtain those benefits; and it is certain that a belief prevailed that the maiden not kissed under the Mistletoe would not be married next year. We may be quite certain that Shakespeare calls it "the baleful Mistletoe" because it is injurious to the trees on which it prevails, and not because he objected to kissing beneath it.

At Christmas, or Yule-tide, the Druids laid the Mistletoe, which they called "All-heal," on their altars. This they cut off the Mistletoe from the trees with brazen celts, or hatchets, fixed on the ends of long staves; and, in Stukeley's time, on Christmas-eve Mistletoe was placed on the altar of York Cathedral, and a general pardon was proclaimed at the gates of the city.

Selden relates that in France about Christmas-tide the young men went from village to village knocking at all the doors, with the exclamation, "*An gwy l'an neuf*"—that is, "To the Mistletoe this New Year;" the Celtic name of the Oak was *gwy*. This seems to be a relic of Druidical customs; for it is recorded that at Christmas time the Druids in solemn procession went to gather the Mistletoe on the Oak, chanting as they went, "The New Year is at hand, gather the Mistletoe."

In Gay's time the Mistletoe was mingled with other evergreens in decorating our churches, for he wrote—

"Now with bright *Holly* all the temples strow,
With *Laurel* green, and sacred *Mistletoe*."

Even now in Worcestershire a farmer will give the Mistletoe bough in his house to his cow that calves first after New Year's-day to secure luck to all his dairy. But the belief in the general curative as well as the mystical powers of the plant's berries still prevails in many places, and as the plant was widely known here as "All-heal," so was it known to the ancient Romans by the synonymous name of "*Omnia sanans*."—G.

P.S.—I hope this will be in time to qualify that which I wrote about the Mistletoe in Anglesea. I can meet with no one who has seen it growing naturally here, but I have seen it flourishing in the garden of a butcher named Hughes. He has a very luxuriant and fruitful orchard, and on the bark of

some of the Apple trees, fourteen years since, he placed Mistletoe seeds which he brought from Denbighshire. The seed germinated, and the plants not only are vigorous, but offsets from them have come forth lower down the branches on which they are growing. So the Mistletoe will not only grow but endure here.

ARRANGEMENT OF A FRUIT GARDEN.

The accompanying engraving represents a section of the fruit garden of the "Jardin d'Arboriculture," in the Bois de Vincennes, at Paris; and it conveys a very correct idea of the arrangement of fruit trees which are cultivated for profit; the produce of fruit being sold for the benefit of the establishment. The estimate which the authorities made of the value of the probable crop was to be in 1874, 10,000 to 12,000 francs. It remains to be seen whether this will be realised.

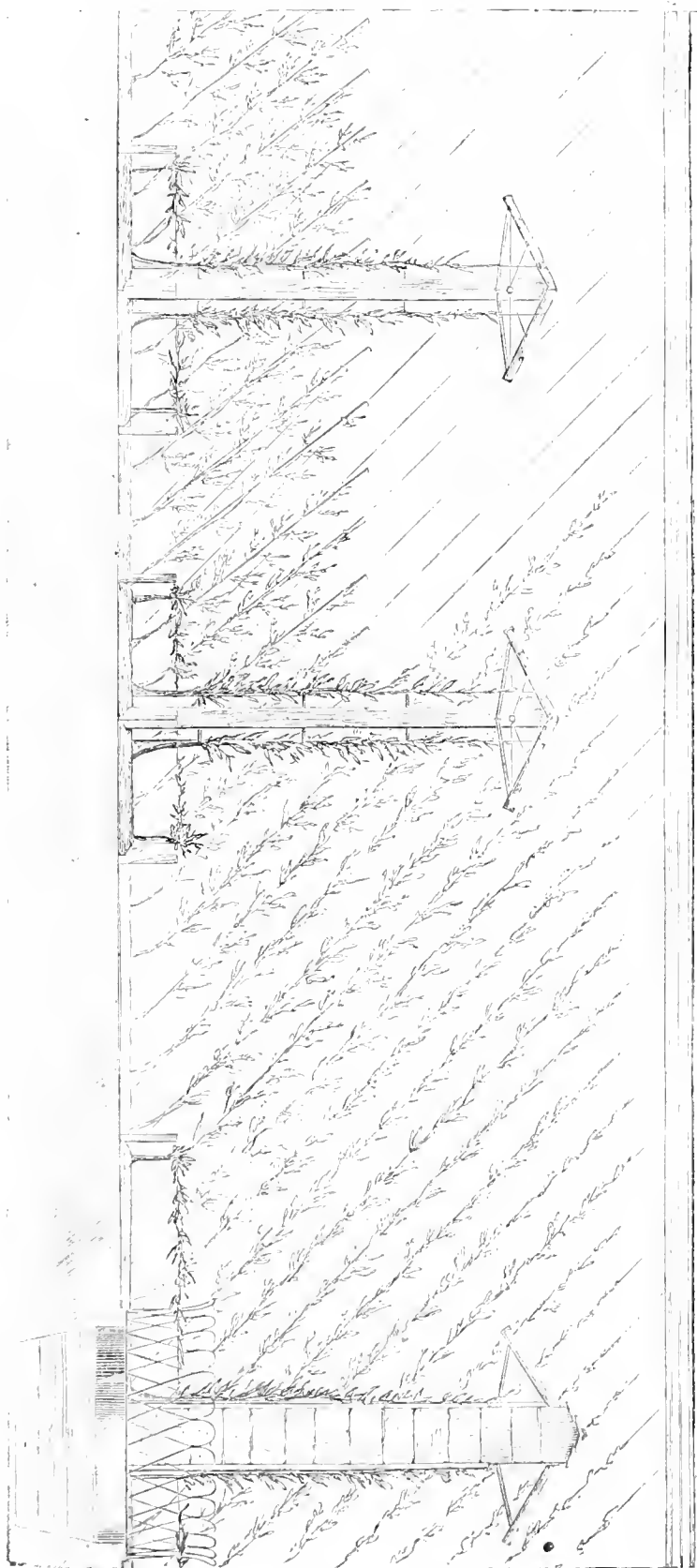
The plan of the garden is excellent, and although this part of it which we now figure is entirely occupied with Peach trees, the same arrangement may be adapted to different varieties of fruits if the plan is used in this country. The wall which forms the background may be covered with single cordon Peaches, Nectarines, and Apricots, or, if preferred, the trees may be trained fan-shaped. Then the tall, coped trellises might be occupied with Pears and Plums, while the dwarf wired borders, or "man-traps," as they have been called, might be appropriated to the finer varieties of Apples on Paradise stocks. We have often seen in the gardens of the bourgeoisie about Paris trees grown on a somewhat similar arrangement with great success.

Our engraving is from M. Alphan's splendid work, "Les Promenades de Paris."

PLUCK THE FLOWERS!—All lovers of flowers must remember that one blossom allowed to mature or "go to seed" injures the plant more than a dozen buds. Cut your flowers then, all of them, before they begin to fade. Adorn your room with them; put them on your tables; send bouquets to your friends who have no flowers, or exchange favours with those who have. All Roses after they have ceased to bloom should be cut back, that the strength of the root may go to forming new roots for next year. On bushes not a seed should be allowed to mature. —(Scribner's *Morning*.)

SCUTELLARIAS.

I would fain draw the attention of plant-growers to the special claims which this beautiful genus of Labiates has upon their attention. More especially do these remarks apply to amateur gardeners with but limited stove accommodation. True, they cannot be grown into large specimens for exhibition purposes; but everyone does not grow for exhibition, and a genus of plants that will produce quantities of bright and gay-coloured flowers in quite a small state are well deserving of attention. Scutellarias are amongst the most easily grown plants of any that I



know; they are mostly herbaceous or small shrubby-growing plants, which bear cutting well and bloom throughout the greater part of the year. They may be grown in small pots. The compost which suits them best is loam, peat, leaf mould, and sand in about equal parts, and in a cool stove they will grow admirably.

These plants produce their flowers very freely. They are admirably adapted for cutting for bouquet-making, and also for placing in vases with Fern fronds, Grasses, &c., for the decoration of the drawing-room or dinner table. They are rather apt to become bare of leaves towards the bottom of the stems, and are thus much benefited by frequent cutting. Moreover, it conduces to production in succession; and if some few species are grown, the cultivator will not lack bloom the whole season round. Having thus made out a good case in favour of Sentellarias, I shall now enumerate a few of the best species for anyone to cultivate in order to arrive at the desired results.

S. rotundifolia.—A tall-growing species of great beauty. The leaves are ovate-lanceolate, slightly serrate at the edges, and rich dark green. The racemes of bloom are terminal, and are nearly 3 inches long; the individual flowers are tubular and stand erect, forming a splendid dense head; the tube is rich crimson, whilst the open mouth is orange yellow. As I have before remarked, these flowers are beautiful objects for placing in vases, &c.; and as the plants are cut back this causes lateral growth, so that a succession of its rich blooms may be obtained throughout the year. Native of Costa Rica.

S. aurata.—This is a fine plant, and quite distinct from the last-named. The leaves are oblong-ovate at the base, clothed with fine hairs and bright green. The terminal racemes of flower are yellow, with the inside of the lips rich orange. It is as free-flowering as the previously-named kind. Native of Mexico.

S. incarnata.—A compact neat-growing species, having cordate dark green leaves, which are slightly serrate at the edges and hirsute on the lower surface. The terminal racemes of bloom are very dense, and the flowers are deep rose colour, affording a pleasing contrast to the before-mentioned kinds. Native of Brazil.

S. incarnata Trima.—This variety may be distinguished from the normal type by its leaves being somewhat smaller and quite destitute of hairs. The flowers differ also in being rich red flesh-coloured. Native of New Grenada.

S. Mociniana.—A fine and large-flowered species, the leaves of which are ovate-acuminate, hairy on the upper side, and dark green. The racemes of blooms are very large, the individual flowers being upwards of 2 inches long; the tube bright orange scarlet, and the throat deep yellow. Native of Mexico.

S. Pentanatif.—This is a charming free-flowering plant; leaves ovate, tapering to a point, and deep green. The flowers are nearly 1½ inch long and brilliant reddish-scarlet. It might be termed a continual bloomer. Native of Brazil.—FALLENB. CREDE.

ON THE URARI,

THE DEADLY ARROW-POISON OF THE INDIAN TRIBES IN BRITISH GUIANA.

[Read by Dr. R. Schomburgk before the Adelaide Philosophical Society, on April 19th, 1866.]

The great and unfortunate Walter Raleigh was the first who brought to Europe an exact information of the existence of the dreadful and quickly-operating extract called "Urari," which was used by the natives on the Orinoco and Rio Negro for the purpose of poisoning their arrows used in war and for hunting. Though a great deal of attention has been paid, since this information was first received, to distinguish the true from the untrue in the mysterious accounts which were circulated concerning the ingredients used for the preparation of the "Urari," yet it was without success, even up to late years. The accounts of older travellers and missionaries, like Hartwick, Gumilla, Gill, and others, outbid one another in the fabulous and mysterious. The former related that, to try the strength and quick operation of the urari, the Indians send their arrows dipped in urari into a young tree. Does the tree die in the space of three days, the poison has the required strength. Other fabulous accounts need not be mentioned. In the beginning of the nineteenth century it was Alexander von Humboldt who gave us the first authentic accounts concerning the preparation of this dreadful poison, having been present at the manufacture of the same in Esmeralda, on the Upper Orinoco. Later travellers were dissatisfied with the simple process as stated by

Humboldt, and tried again to give the preparation of the urari a more mysterious appearance. It was maintained that the vegetable extract was only the medium of the deadly poison, and that the urari only received its life-destroying power through the addition of the fangs of the most poisonous snakes, poisonous ants, and Cayenne pepper. None of these travellers had been present at the preparation of the urari, and none of course had seen the ingredients added to it. These accounts are only supported by the communications received from the Indians, whose interest it is to represent the preparations to be as difficult as possible.

To test the respective value of these different accounts, my late brother, Sir Robert Schomburgk, felt induced, on his first expedition to the interior of British Guiana, to give this subject his closest attention. Already, on the Upper Rupununi, he was so fortunate as to see one part of his wish fulfilled in getting at least a botanical knowledge of the dangerous plant which gives the main ingredient for the preparation of the urari. In the Wapishana settlement, Aripai, on the Rupununi, in 3° north latitude, he was informed that the plant was found growing in the Canuku Mountains, distant about one and a half day's journey from Aripai. Accompanied by some Indians he went to the place. After a wearisome march they reached the mountains near Mamesua, a Wapishana settlement, where they stayed all night, and where to his great joy he found an inhabitant who not only was well acquainted with the place where the plant grew, but who also understood the preparation of the urari. He was quite willing to bring him bark and branches of the plant in any quantity, but refused to bring my brother to the place where the plant was growing. Only rich presents would at last induce him to act as a guide. The next morning they set out, and after great difficulties, the road winding through a very stony country, they discovered the first plant. Although this neither showed flower nor fruit, my brother recognised in it a new species of *Strychnos* (which he named *Strychnos toxifera*). No persuasion would induce the Indian to prepare the urari in the presence of my brother. During the second expedition of my brother up the Essequibo, he had an opportunity to visit the regions of the Urari plant. During his stay in Pirara, a Maensi settlement, lat. 3° 33' N., long. 59° 16' W., he was informed that near the Canuku Mountains a Maensi Indian was living, who was known as the most renowned preparer of the urari in the whole tribe. He inquired after him, and he was successful in persuading him to prepare the poison in his presence. In the company of the poison-preparer he made first an excursion to the western part of the Canuku Mountains, where it was said the plant was also in existence, not only to get from there the material to prepare the deadly extract, but also to try whether he could see the plant in flower. The Flaunkipang was about eighteen miles in a south-easterly direction from the place he was staying at. Under the same difficulties which I experienced afterwards, they reached the first plants; and although he found them without flowers, he saw the fruit, which confirmed his supposition of its being a *Strychnos*. After collecting some of the necessary bark of the Urari plant, only taken from such plants as were in full sap, they returned to Pirara.

The preparation of the poison was delayed for some days, as the preparer of urari stated that to enable him to produce the poison he had to subject himself to a strict fasting. During that time a notorious chief, named Kanaima, from the Rupununi, arrived in Pirara, who persuaded the preparer of the urari to withdraw his promise to prepare the poison in the presence of my brother. The Indian with great energy asked my brother to return the bark of the *Strychnos*, to which request my brother of course did not accede, taking the urari bark to Fort San Joaquin, a Brazilian fort on the River Rio Branco, which place the expedition exchanged with their former abode in Pirara. Here my brother undertook to make an experiment himself to extract the poison from the bark of *Strychnos toxifera* alone. For that purpose he took 2 lbs. of bark, which he pounded, put it into a pot, adding to it a gallon of water. He let this remain twenty hours, putting the half of the extract—which already had assumed a brown colour—into another pot, boiling it over a slow fire until it took the consistence of treacle, and during this process the remaining extract was added. Two fowls were wounded and the poison inserted—one in the foot, the other in the neck. The effect of the poison appeared after the lapse of five minutes; yet the second—wounded in the neck—died in twenty-seven minutes, the other in the twenty-eighth after the wounding. This was a sure proof that the *Strychnos toxifera* alone, and without the admixture of other

ingredients, develops the deadly properties, and that all other additions are not essential to the strength of the urari. The boiling-down of the poison was finished in seven hours, while it takes the Indians more than forty-eight hours, which accounts for the slower effect the poison took which was prepared by my brother; the continued boiling, of course, concentrating the extract. The colour of my brother's extract was a light-brown, while that of the Macusi Indians was almost pitch-black, probably from the admixture of the other ingredients.

This vegetable poison is known by several tribes of the Indians between the Amazon River and the Orinoco; yet almost every tribe differs not only in the preparation of the same, but also in the ingredients used. This manifold preparation is also the cause that with almost every tribe engaged in the preparation of the urari, the strength and time in which the poison operates are different. I have already observed that the existence of the most vigorous plants of the *Strychnos toxifera* is limited to some localities within the ground which is inhabited by the Macusi Indians, and that may also be the cause why these are generally considered everywhere the preparers of the strongest poison. The arrow-poison of the tribes on the Amazon, Rio Negro, and Orinoco, which came into our possession through chance, only operates after the lapse of three to seven hours; that of the Macusi produced the death-struggles in as many minutes. This renowned strength of the urari of the Macusi Indians brings whole caravans of Indians from the Rio Negro, Orinoco, and even from the Amazon River to the Canuku Mountains, to exchange the urari with the inhabitants for other articles. Von Martius gives us an account of the preparation of poison of the tribes of Juris, Passos, Tecunas, and others on the Amazon and Yupura. The traveller Poeppig gives a description of the vegetable poison in Peru and Chili, and Humboldt of the same as prepared in Esmeralda, on the Orinoco. Every one of these tribes use, according to the accounts, quite different ingredients. My brother, on a visit to the mission of Esmeralda—lat. 3° 11' N., long. 66° 3' W.—which was so flourishing when Humboldt was there—found only one family remaining. The old patriarch told him that he had exchanged his arrow-poison with Iodiani tribes inhabiting the territory near the Rivers Parana and Ventuari, especially from the Guinaus and Madongkongs. Both tribes which had been visited by my brother call the arrow-poison "Cumarawa" and "Makari;" but even these tribes prefer the urari prepared by the Macusi to their own, the latter effecting the quickest operation.

(To be continued.)

THE SPURIOUS MAY DUKE CHERRY.

It is a wonder to me that this deformed worthless Cherry has not been the subject of a note from some of your leading writers long since. It seems to me to be on the increase of late, to such an extent indeed as to call for instant measures being taken to put a stop to its further propagation. Just now being the time for budding, I think it worth while to call attention to it; but I much deplore not being in a position to offer a positive guide, to enable a person about to bud to be certain whether he is working the right or wrong without the fruit being present. Whether it is a sport I know not, but the fact that it is increasing is too apparent, and when planted for a real May Duke it is disappointing indeed. On a person going to a nursery to purchase a tree, should there be this bastard amongst them it will sure to be the first to attract the attention of the buyer as being a "healthy promising tree." We planted two supposed May Dukes with other Cherries a few years since; one, the true variety, has produced crops for the last three seasons, the other just a sprinkling, ripening, if at all, about a fortnight later than the true variety. I say, if at all, for it often occurs that but half of the fruit do so, the other half remaining quite green or yellow; and then to eat them is simply impossible, so acid and bitter are they. Bear in mind, I am not making a mistake, it is not any of the later Dukes. I have often found, especially in bush trees, a single branch, or two or three, even half or more of a tree, bad, while the other part has been good, and *vice versa*, but I always fancied the good to be somewhat more acid than from trees that were wholly good.

Now, there is one thing I am confident of—viz., it being

The article of exchange which the Macusi take are the celebrated and dangerous Wapipi, which are made out of a small cone shaped *Arum* (*Arundinaria Schumacheriana*), which is found on the river Parana; it grows to an enormous height, and the joints or buds appear at a distance of 16 to 15 feet apart.

much the stronger grower, the budder will naturally take its shoots before those of a weaker one for his buds; hence this variety being now so prevalent. There is this again—the buds are generally taken in nurseries from young trees, and, fruit being absent, there is nothing to show whether one is working good or bad stock. Selecting the strongest shoots year after year has been the means of substituting for the good, moderate-growing May Duke, a worthless fruit no better than the wild Cherry of our woods. The end will be, if not at once looked to, that we shall not be able to purchase a good May Duke. The only remedy seems to be that buds should only be taken from old trees that are known to be good. I well remember helping to plant a plantation of young trees of May Dukes in my father's garden, many of which turned out to be quite worthless in this way; but I believe, if I recollect rightly, he was of opinion that they would eventually come good, but I am not in a position to say if he realised his hope. It would be interesting to know if any of your correspondents are able to verify this expectation.—J. TAYLOR, *Maesgwynne, South Wales.*

We have ourselves known nursery stock of *Bigarreaus* being very much mixed through scions being taken from a strong-growing wilding on which the bud had failed, and which had been left to grow as if it had been a budded plant. Nurserymen cannot be too careful in this respect.—Eds. J. or H.]

GAZANIA SPLENDENS OR RIGENS.

WHATEVER disadvantages may attend a dull, cold, and late spring, there are certain plants which are benefited by a mild winter. On all sides we hear of *Calceolarias* standing uninjured, and a friend of mine in the west of England informs me that a Scarlet Geranium in a rustic vase fully exposed has stood the cold and is now in full flower. Such, however, was not the case in the majority of places, for the wet killed the plants where the frost was not sufficiently severe to cause that result; nevertheless, many plants passed through the last winter with little injury. A number of New Zealand *Veronicas* growing here against a low wall, and which we have slightly protected in most winters, have survived without any such covering and are flowering freely, while the plants are robust and healthy. Other plants of the same kind fully exposed were also uninjured, but later in blooming.

My purpose now, however, is to call attention to a plant which with some has been a great favourite in the parterre, while it has been unduly condemned by others. Those who want early bloom have, in general, just reason to complain of it, but for a late display it is all that could be desired. In the present season we had it in all its beauty early in June, and there were flowers out in May, notwithstanding the lateness of the season. The plant referred to is *Gazania rigens* or *splendens*, which is much more easily managed than many suppose, as it is nearly as hardy as the *Calceolaria*, and not subject to the sudden and unexpected dying-off to which that once-popular plant is liable in so many places. On a gravelled terrace here we have a number of small beds raised about 10 inches by rustic woodwork, and to overhang this woodwork we usually plant some suitable trailing plant; last year *Gazania rigens* was employed on four of the beds, and succeeded as well as usual during the summer and early autumn months. As the latter were mild and wet, and the *Gazania* did not show any signs of injury from the cold, it was allowed to remain, and is now one of the gayest plants. The healthy green foliage is studded with star-like blossoms of bright orange, and only two or three plants in one of the beds have failed. This, of course, is an exceptional case, and winters which this plant will survive unscathed do not occur more than once in five or six years; still it is possible that near the coast it may do so more frequently than inland, and where it does so it is of great beauty, and well deserves all that has been said in its favour.

There are other places than the flower bed where it may be tuned to account. The rockery would seem to be a more fitting place for it than the flower bed, because its failure on the mixed rockwork would not be of so much consequence as when a broken edging of a flower bed had to be repaired by plants of a smaller kind. Moreover, I think the rockery is a more likely place for it to escape injury, for it will probably be drier than a flower bed. In the case of our plants that safely passed through the long wet winter of 1872, they were growing on a raised bed on dry ground, and the bulk of the tops hung over the side; and as the frost was at no time suffi-

ciently severe to destroy the stems of the paler-sepaled Fuchsias growing in the same bed, it may be inferred that dryness and elevation had a considerable influence in the matter. *Centaurea candidissima* has stood many years in a similar position, withstanding rather severe winters. Those who have plants of this *Gazania* occupying dry sheltered position ought not to be in any hurry to remove them in autumn, for they may prove useful at a time when bedding plants, so called, are far from plentiful.—J. ROBSON.

NOTES AND GLEANINGS.

WE are informed that MR. PEARSON, of CHILWELL, was so gratified by the display of GERANIUMS which was made at the last meeting at South Kensington, in competition for the prizes he offered, that he has decided to offer a similar set of prizes next year.

— It is announced that the MANCHESTER INTERNATIONAL HORTICULTURAL EXHIBITION, to be held in September, will be opened by the Earl of Derby on the 3rd of that month, and that he will also take the chair at the dinner in the City Hall.

— MESSRS. J. WEEKS & Co. have just issued an ILLUSTRATED BOOK OF DESIGNS FOR HORTICULTURAL BUILDINGS, in a very tasteful style. These designs are in chromo-lithography, and are shown in connection with the dwelling houses to which they are to be attached. Besides the chromo-lithographs, there are numerous other lithographic illustrations of every imaginable form of glass structures.

TACSONIA MANICATA (GAUNTLETED TACSONIA).

THE Passionworts comprise some of the most gorgeous of tropical climbers, but there are few, even of the tender species, which surpass or equal in beauty this magnificent plant. Although it is brought to us from equatorial regions, yet, from the altitude at which it is found growing (often 7000 feet above the level of the sea), it is a greenhouse climber.

In their habit of growth the *Tacsonias* resemble very closely the common Passion-flowers, being, like most of them, of vigorous growth, the shoots extending 10 or 20 feet in a season, according to the age of the plant. The resemblance between the two genera is indeed carried so far, that some of the most acute botanists of the present day are unable to give the precise grounds for the separation of the *Tacsonias* from the true Passion-flowers.

This leads us to the botanical structure of the plants of this order, which is too remarkable to allow of being passed over; and as the *Tacsonias* possess its chief characteristics, our illustration will serve as the text of our remarks. The climbing stems (which are somewhat rounded, and not four-sided, as in *T. pinnatistipula*), and three-lobed foliage, do not claim any special notice, unless it be to point out the glands on the upper edge of the leafstalks, and which are found in most Passion-flowers. Occasionally they are placed at the base of the leaf, near its junction with the petiole, and sometimes on the back of the leaf. These glands, although not conspicuous, are easily perceptible to the naked eye, and have the appearance of small greenish yellow projections rough to the touch. The stipules, or small wing-like expansions at the foot of the leafstalk, are another peculiarity of the true Passion-flowers. In *T. pinnatistipula* they are deeply divided, as the specific name implies; and in *T. manicata* they are toothed in a crested manner.

The chief interest of the plants of this order, however, centres in their elegant flowers. These are, at a glance, seen to consist of ten segments or divisions, the lower portions of which are united into a tube, surrounded at its base by three leaf-like bodies termed bracts. These bracts, which are shown in the engraving, are common not only to the *Tacsonias*, but also to nearly all the other Passion-flowers, though in a few species they are placed at a considerable distance below the flower, and are extremely small. In one or two species they are cut into hair-like segments, and give a very interesting appearance to the flower, as in the *P. ciliata* and *P. foetida*. These bracts are not much larger in *T. manicata* than in many other Passionworts; but from the shortness of the tube, which is almost concealed when the flower is expanded, "it may not unprofitably be compared to an arm thrust into a large loose glove;" from which circumstance it is presumed that Jussieu gave it its specific name of *manicata*, or gauntletted.

Some difference of opinion exists with regard to the real

nature of the coloured portions of the flower. Lindley considers the five outer segments to be the true calyx, and the five inner ones as the corolla; whilst others look on the filaments, or ray-like appendages, as the true petals, and consider all the segments as sepals. Each segment of the outer series is terminated by a horn-like process, which is, in fact, a prolongation of the keel-like ridge on the back of the sepals. The inner segments, which we will call the petals, are rather broader and more rounded at their ends.



Tacsonia manicata.

The remarkable appendages arising from the base of the petal, and which are termed the rays or crown, vary exceedingly in the different species. In the *Tacsonia manicata* they are very short and tooth-like, and are arranged in two concentric series; but in some of the Passion-flowers these filaments are nearly as long as the divisions of the corolla, and are grouped in four or five rings, the innermost series being generally much the shortest. They are regarded as modifications of the petals, between which and the stamens they are probably intermediate in their nature. The stamens are monadelphous—that is, the stalks supporting the anthers are united into a tube, above which is borne the ovary seated on a long stalk, which passes to the bottom of the calyx-tube. Both the anthers and stigmas are unusually large, and the pollen or farina from the former forms one of the most interesting microscopic objects that can well be imagined. Each grain of pollen appears, when viewed under a rather high power, as a spherical body covered with a delicate network, and bursting by opercula, or lids, of which there appear to be four, to allow of the protrusion of the pollen-tubes. The fruit is not the least remarkable part of the plant. In *Tacsonia pinnatistipula* it is 5 or 6 inches in circumference, spherical, and when ripe of a yellow tint, hanging by the very long peduncle to which the remains of the flower are usually attached. The seeds are surrounded with a pulpy arillus of an edible nature, especially in a few species, which are not unfrequently cultivated for the sake of their fruit, as *P. edulis* and *P. quadrangularis*.

T. manicata may be increased by cuttings either of the old wood in spring or of short young shoots in summer, under a bell-glass with a little bottom heat. When grown under glass most of the *Tacsonias* will ripen seed, from which they may be readily increased.

The specific name has been already explained; the name of the genus appears to be a latinised form of *Tacso*, that by

which the plants are known in Peru. There are several species besides *T. manicata*, those best known being *mollissima*, *pinnatifidula*, *princeps*, and *grandis*.

We must not omit to observe that the shoots of the *Tacsonias* do not require shortening, but if they are too crowded they may be thinned-out while young. When the growth is too rampant and sterile of blossoms, a flowering habit may often be induced by training the shoots horizontally, or nearly so.—W. THOMPSON, *Ipswich*.—(*English Flower Garden, Revised*.)

SOILS. THEIR VARIETY AND USES IN VEGETATION.

THESE IS, perhaps, no term that conveys to the minds of readers the idea of a greater diversity of substances than the word "soil." I will not enter into these, but at the outset state my intention to confine the remarks made to that outer covering of the earth which supports vegetation, and plays so important a part in the welfare alike of the animal as of the vegetable world. It is the part it plays in supporting vegetation, and the diversities it presents in the different localities in which it is found, to which I shall direct attention in the following remarks.

Praiseworthy as undoubtedly is the industry of individuals or of communities who have by diligent and well-directed cultivation rendered a piece or tract of land highly fertile that was previously almost sterile, there can be no question but there are tracts where Nature in a long course of years has accumulated an amount of vegetable wealth which it is not easy by artificial means to store-up. A course of yearly manurings will render a piece of indifferent land fruitful, but it is made so by the addition it yearly receives, and if left to itself there is reason to believe it would relapse, certainly not into exactly the condition in which it was originally, but into one somewhat approaching it, if left unaided for a sufficient length of time. Most likely the additions it received while in cultivation would have their influence for a number of years; and if the superfluous water had been drained away in something like a permanent manner, there is little doubt that the surface soil would have undergone a change, both chemically and mechanically, so that it would not easily revert into the old condition; while if cultivation were continued instead of left off, the piece of poor unfertile land might in time become the reverse of what it once was by the aid of liberal dressings of substances foreign to its original composition. In this, in a great measure, lies the art of good cultivation, and we have not to go far in most neighbourhoods to see examples of it. At the same time it must be confessed that now and then cases are met with where labour and material also may be said to be thrown away; and even in gardening I do not think we are always in the right in what we do or advise in the matter of soils and their treatment. But before embarking in a condemnation of a system that is recommended by so many in almost every number of "our Journal," and often more than once in the same paper, it will be as well to make some further remarks on the character of the various soils the garden-er has to deal with, and also of those auxiliaries to them that he may have at command, but of course in a smaller way.

Taking, therefore, the character of the soil of a given district into consideration, we shall find on examining it that there is often, but not always, considerable diversity in samples that may be taken from spots not far apart, more especially in hilly districts. The crown of the hill may have only a thin skin or covering of soil bound together by a hard wiry kind of grass or other herbage, while at the base of that hill, perhaps not a stone's throw off, may be a morass with several feet deep of black vegetable matter that has been accumulating for countless ages, and is still increasing, unless disturbed by cultivation. Acting as a sponge, it sucks up a great part of the water the hill is charged with, and remains a bog that would not be passable by either man or animals in all places were it not for the thickly-woven carpet of turf or other herbage which forms its outer covering. Such places are becoming fewer as cultivation extends; for by draining off the water from the level alluded to, and subjecting the surface to cultivation, by degrees it is made to support plants widely different from those natural to such soils. It is some time before the change finally does take place, but by skilful treatment and adapting the ground first to the growth of such plants as it is most suitable to, it is by degrees brought not only to support vegetation of another kind, but to enable that vegetation to flourish

in more or less luxuriance. The accumulated substances in which it is so rich are not so easily exhausted as a soil not previously so well fed, and hence its staying powers. At the same time let it be fully understood that such a soil is one not usually converted to garden purposes, although I have more than once seen orchards of several acres in extent do pretty well on such a soil, kept moderately dry by deep open ditches from 12 to 20 feet apart. One was a peaty swamp to which salt water must have had access, and probably left a seasoning behind it more favourable to the growth of *Planes*, &c., than such soils usually are where the morass is not so formed.

Taking another class of soil, and one occupying a position in a valley like the last, but not usually so level, we find the material to which the term soil is usually applied a combination of matters in which stones, from the size of a cricket-ball to that of a bean, form three-fourths of the whole, and these stones are all rounded like the pebbles on the seashore. An intermixture of a little fine matter gives such ground a certain degree of fertility, but the inert character of the stones deprives it of the right to be accounted a good soil, and a hungry gravel is the name often given it, and with good reason too, as it is often an ungrateful soil to the husbandman, and one which he dislikes more or less according to the proportion of stones which compose it. But a moderate quantity is not only harmless but really useful, permitting the atmosphere to penetrate the earth by their always remaining the same size; whereas the swelling and contracting of the material surrounding them enables the air to penetrate in the latter condition. A certain amount of gravel is beneficial to most soils; for although it can scarcely be said that a hard piece of flint in the form of an egg can impart nourishment to a plant, it nevertheless forms a sort of nucleus around which the roots of plants may cling and obtain the food supplied them by the soil which surrounds them; and stones on the surface help materially to keep in moisture during hot summers, and consequently induce the formation of roots near the surface, where they would not be without some such covering. Thus we must not altogether despise the gravelly or stony soils we often meet with, unless it happen that these gravels are too hot, and, maybe, rest on a sort of pernicious subsoil, alike obstructive to vegetation and to the tools of the cultivator. But extreme cases of this kind are not common, while ordinary gravelly soils are met with in many places.

We now come to the soil overlying the chalk or found at its base, a soil much more productive than to the ordinary observer it appears to be. Containing, as it does, so much calcareous matter, it at once points out the class of plants it is adapted for and the contrary kind. Strange to say, although chalk in itself is destitute of water, or nearly so, the soil or coating by which it is often so thinly concealed from the open air is far from being light, open, and porous; and we not unusually meet with a stiff clay or stiff loam at the base of chalk hills, where the chalk itself does not embody sufficient flinty matter to render it otherwise. Chalk is usually met with in hills and often to a great depth; but in some neighbourhoods, as in Hertfordshire, it often descends into the valleys, the soil that overlies it producing good crops of cereals and other things; and there are some good gardens met with on such soils, the whole of the Cabbage tribe appearing to flourish well on a soil of this description. In colour it is often a palish yellow tinge, never red nor brown, and when of good depth it forms an excellent soil for most cultural purposes. But there has been much diversity of opinion of late as to its suitability for Grape culture. On this head, however, something may be said hereafter, and I shall for the present pass on to another kind of soil, expecting to have occasion to refer to this again.

Another description of soil, and that very widely distributed, is one that overlies the sandstone and has been more or less incorporated with it. Water is usually found at an easy depth in a soil of this kind, but it is not necessarily a wet one, while it is certainly one of the most fertile we have, supporting in a flourishing state a greater number of plants that conduce to our welfare than any other previously mentioned. Large portions of the centre of England consist of soil having an origin of this kind, and it is met with elsewhere as well. In some cases the rock from which it is supposed to have originally come is all, or nearly all, gone; in others the harder parts only exist, and these waste more or less slowly as years pass on. Many of the soils having this as a base are exceedingly productive and adapted to most kinds of crops,

but there are few plots of it now to be met with in a state of nature. Past generations as well as the present have had their eyes open in selecting the most productive land, and a large proportion of this was enclosed at an early period of this country's occupation.

Decomposed sandstone supports most of the important timber trees we have, and that to a larger size than other soils, when the circumstances are equal; and in gardening it seems to hold a medium position between soils containing a large amount of calcareous matter and the peaty ones previously alluded to, in such a way that most of the plants of these extremes will thrive, and that well too, on the stratum that was once a sandstone. Witness the excellent beds of Rhododendrons and other plants of a like kind met with on soils differing in outward appearance widely from peat, while at the same time the Yew, Juniper, and other plants usually met with on chalky or limestone soils are also equally thriving; and I have a strong impression the best Grapes, as a general rule, are obtained from soils of this character, notwithstanding all that has been said about lime rubbish and the other hundred-and-one substances used as components of the Vine border. On this head, however, perhaps someone else will give us an opinion. I am certainly of opinion that most kinds of vegetables like it well—Celery, Lettuce, the Strawberry, Potatoes, and most other crops, unless it be Cabbages and Onions, which I imagine prefer the calcareous soil previously alluded to. Of course there are differences in the character of soils of the kind now spoken of. Some I have met with much more open than others, these evidently suffer more from dry summers than others do; others, again, merging fast into the stiff loam, or even clay. To this class perhaps the application of lime might be of service. But judgment is required here, and I am not sure, as stated in the early part of this article, that we do not often act improperly in some of our mixtures.

We now come to that class of soil which is far more abused than it deserves to be, "a stiff loamy soil." Somehow this soil is more found fault with than it deserves to be, owing to more labour being required in its cultivation and its unpleasantness in wet weather, but it is not an ungrateful soil, and possibly gives a better per-centage for the value of the manure put upon it than any other, as anything applied is not easily washed out of it by rains. As a soil adapted for tillage, it is one that usually withstands hot dry weather better than most others, and supports vegetation in such times with less flagging than we often see in other soils. There are numerous breadths of stiff soils scattered all over the kingdom. The London and Wealden clays are proverbial, while other districts have their tracts of stiff heavy land. It is not always in the valleys where it is to be found. On the contrary, it seems to prevail most in gently undulating countries, leaving the steep hills and level plains for other kinds of soil, although now and then it is met with there also, but that is the exception and not the rule. The general character of such land, however, does not unfit it for cultivation. On the contrary, the gentle incline and other inequalities favour draining; and the use of the plough, as well as that of vehicles, is not impeded by steep hills, while it also possesses other advantages that may be spoken of hereafter.—J. ROBINSON.

TOADS IN THE GARDEN.

MANY persons have a loathing of this really interesting, but certainly not handsome, Bufo, the result of superstition or want of education. It is time we learned that they cannot bite any more than a snake, and if they could, that bite would be equally harmless. We suppose the fiction that they carry a jewel in their head is no longer believed, Shakepeare to the contrary notwithstanding; yet the latter is more true than the former—indeed it is half true. They carry two; their eyes, at least, are as bright as any jewels that ever sparkled in a diadem. They are the most innocent of creatures that ever ate indiscriminately anything that had life that they could swallow that came within reach. They are worth more per head to the horticulturist than chickens, even allowing that chickens did not scratch; and to put our readers thoroughly in good humour with these insect-devourers, we reproduce the following story by Dr. Harris:—He supposed the odour of the squash bug (*Coreus tristis*) would protect it from the toad; and to test the matter he offered one to a grave-looking Bufo, under a Cabbage. He seized it eagerly, but spit it out instantly, reared up on his hind legs and put his front feet on top of his head for an instant as if in pain, and then disappeared across

the garden in a series of the greatest leaps a toad ever made. Perhaps the bug bit the biter. Not satisfied with this Dr. Harris hunted up another toad, which lived under the piazza, and always sunned himself in one place in the grass, and offered him a squash bug, which he took and swallowed, winking in a very satisfied manner. Twenty other fine bugs followed the first in a few moments, with no difficulty or hesitation in the taking or swallowing, though from the wriggling and contortions, it appeared their corners did not set well within. The stock of bugs then being exhausted, a colony of smooth black larvæ was found in a White Birch, each about three-quarters of an inch long, and over one hundred of these were fed to the waiting toad. Touching one of them with the end of a straw it would coil around it, and then when shaken before him he would seize and swallow it, at first eagerly, but with diminished zest as the number increased, until it became necessary to rub the worm against his lips for some time before he could decide about it. He would then take it and sit with his lips ajar for a short time, gathering strength and resolution, and then swallow by a desperate effort. There is no telling what the number or result would have been as the dinner bell rang as the 101st disappeared, and by the close of the meal he had retired to his hole, nor did he appear for four days in his sunning place. It is to be hoped that he slept well, but there might have been nightmares.—(*Western Rural*.)

GERMAN INSECTICIDE.

IN No. 619 of THE JOURNAL OF HORTICULTURE, &c., page 18, you write:—"We should be obliged by particulars of a solution that will destroy aphids and not discolour the woodwork, &c." I take the liberty to recommend to you the new insecticide, sold by Peter Smith & Co., at Hamburg, Hopfenmarkt, No. 27. The bottle containing more than 1 lb. (German), costs 2s. 6d. retail. I use it in washing and brushing all theinery—viz., the woodwork, the glass, the walls, the stems of the Vines, both for cleaning these and destroying insects, dissolving thirty grains of the insecticide in one litre of hot water. As soon as a part of the house is brushed I give a good syringing with clean water. Without injuring the most tender foliage. I use it to destroy all insects infesting plants, including grubs, dissolving twenty grains (as much as the volume of a walnut) in one litre of hot water.—D. K., a German Reader.

THE HABIT OF THE RATA (*METROSIDEROS ROBUSTA*).

R. T. KERR, F.L.S.

Read before the Auckland Institute.

THE occurrence of several climbing species of *Metrosideros* in New Zealand, coupled, perhaps, with the native application of the name "Rata" to the majority of species both scandent and erect, has led to a singular error in connection with the form now under consideration, affording a marked instance of the readiness with which erroneous statements relative to natural phenomena are accepted and repeated, although the exercise of a small amount of observation would suffice to detect the fallacy.

Few persons can have travelled amongst settlers in a forest district in the north without having their attention attracted by distorted giant Ratas, and hearing the commonly-received opinion that these immense trees were originally weak climbing plants, the stems of which increased in bulk until they killed the fostering tree which had supported them, and ultimately united to form a solid trunk, perhaps some 60 or 70 feet in length, and with the branches, perchance, attaining a total height of 100 feet. The frequent repetition of these statements has led to the error being reproduced by many superficial writers on New Zealand, although in the original "Flora Nova-Zelandiæ," published twenty years ago, the plant is correctly described as never climbing. I copy, almost at random, the following extract respecting the Rata, from Wakefield's "Handbook for New Zealand":—"Rata (*Metrosideros robusta*). There are several varieties of this tree; one grows at first as a parasite, creeping in numerous stem-like ropes up the trunks of the other forest trees, gradually enclosing them till they perish, and then uniting to form a noble tree taller than that which it has destroyed, with an enormous trunk, but hollow within." It is, however, noteworthy that this opinion is not expressed by Dr. Hochstetter and the writers of other standard works on New Zealand, who simply speak of the Rata as a large tree with showy blossoms. The general resemblance which the foliage and inflorescence of one of the

seen lent species exhibit to our plant has doubtless contributed to the perpetuity of the mistake. *M. florida*, which is also called Rata, is a climber in all stages or its existence, but may readily be distinguished by its larger leaves and flowers, its weak stems, and, above all, by the capsule being included within the calyx-tube. More than half the capsule of *M. robusta* is not included in the calyx-tube.

There can be no question that *M. robusta* is often found destroying trees by which it is supported, and these instances are adduced by the bushman as decisive proof of the climbing habit of the plant, and he attempts to confirm his view by calling the species just mentioned (*M. florida*) the young state of the destroyer, totally ignorant of the fact that he is confusing two widely-separate plants. In reality, however, our plant is exactly the reverse of a climber, the so-called trunks or stems being truly aerial roots, sent down from an epiphytic plant in search of nourishment! The seeds of *M. robusta* are conveyed by birds or blown by the wind amongst the epiphytic masses of *Astelids*, *Lycopods*, and *Ferns* so abundant in the trees of the northern forests. In this situation the plant takes root and forms a small bush, for a time obtaining sufficient nourishment from the decaying vegetation in which it is growing, until the limited supply proving insufficient for the increasing demand, its roots stretch boldly down the trunk of the supporting tree in search of that full supply which can only be obtained from the earth. Sometimes only a single root is given off, at others one main root with one or two weaker roots are to be seen, and again several roots of about equal dimensions are to be found; but in nearly all cases the different roots or stems are bound together by smaller roots, which are given off at right angles to the trunk of the supporting tree, and become united with the adjacent main roots by inoculation; not infrequently masses of fibrous roots are developed, which perish with the increase of the main root after serving their purpose of deriving temporary nourishment from the atmosphere. In course of time the various stems become inoculated to a greater or lesser extent along their course, and the supporting tree is literally strangled by their iron embrace. Notwithstanding the common belief that the stems ultimately become homogeneous, I have never met with an instance where they have united into a solid trunk. It is certainly true that straight stems of great bulk, sometimes 12 feet in diameter, are to be seen, but this is only the case when a single root-stem has been formed, or when the specimen is entirely of terrestrial growth. This may be verified by examining the position of the pith. It is, however, to be noted, that when several stems are given off the pith in each will be found much closer to the side on which the root has been in contact with the supporting tree; this, however, arises chiefly from the unequal pressure to which the root has been subjected during growth. The roots or stems may be met with of all heights up to 70 feet, and from 1 to 12 feet in diameter.

That the habit of the plant is erect, and not scandent, is demonstrated by the young plants in cultivation in our gardens; and this leads me to mention another peculiarity of this species—viz., a characteristic specimen which has been under cultivation for at least fifteen years without producing flowers may be seen in the grounds of the Hon. James Williamson, Remuera. The young cultivated plants are always rigid, erect, and bushy, exactly resembling epiphytic specimens of similar size, or specimens growing on rocks. There is no tendency to a scandent habit, and not until the young plant attains a considerable size does it afford any decided indication of a true arboreal stem. It usually produces a few much-branched stems. This has led to the belief that the plant is naturally a shrub, and only becomes a tree when placed in a position to develop aerial roots. But the opinion cannot be maintained in presence of the occurrence of large terrestrial specimens in many localities. I am fully prepared to admit their rarity when compared with the abundance of specimens of epiphytic origin; still the fact remains that in some localities they are frequent enough to attract the special attention of the bushman, who calls this form the "inland Pohutukawa," a designation he also bestows on symmetrical specimens of the true Pohutukawa sometimes found in the forest. These terrestrial specimens of the Rata are usually found in comparatively open places in the forest, while the distorted giants which started in life as epiphytes are usually most abundant, and attain their greatest development in the denser parts, a condition which of itself goes far to account for the comparative rarity of terrestrial specimens. Occasionally dwarf specimens exactly

resembling the young cultivated plants, except that they produce flowers, are found on elevated rocky places, but the cause of their stunted maturity is self-evident. It is uncertain if the aerial root of the Ratas should be considered simply adventitious, or as a special development of the original epiphytic root, although I am inclined to believe the latter. In any case the Rata stands alone amongst New Zealand trees in developing stems of large bulk, and affording valuable timber from aerial roots.

The Pohutukawa (*Metrosideros tomentosa*) sometimes produces aerial roots from the main trunk, but these are usually small and appressed. Our President has informed me of a remarkable instance on the west coast of the Great Barrier Island. The plant grows on the summit of a cliff, and has given off a root, now become an immense stem, which has travelled down the face of the cliff some 60 or 70 feet to seek its nourishment in the soil at the base. The example is so striking as to have received a special name from the Maoris. The only tree which the Rata seems powerless to injure is the Puriri (*Vitex littoralis*). A fine example, surrounded by three or four large stems, which it has forced outwards at the base, is to be seen on land belonging to Mr. W. C. Dady, by the Hotea river, Kaipara; similar instances are rare.

While on this subject I may be allowed to remark that our plant (*M. robusta*) has been largely used of late years in the place of the Pohutukawa for ship-building, it is therefore desirable that the attention of ship-builders and marine insurance companies should be drawn to the fact that for durability it is inferior to the Pohutukawa, or even to the Rawiri or Tea tree. Should its use be persisted in, considerable discredit will in a few years be brought on our shipyards. I have been informed by a well-known ship-builder that although *M. robusta* is not durable when grown on low land or in zullies, yet when grown on hill sides it is equally durable with the Pohutukawa. The Rata of the south (*M. lucida*) is not more durable, and has the additional disadvantage of splitting with the slightest blow. It is remarkable that the Pohutukawa and the Kauri, the timbers best adapted for ship-building in the colony, are practically confined to the province of Auckland, the former only having a single outlying habitat at Waitara in the province of Taranaki. *M. robusta* appears to have its centre of distribution in the Kaipara district, where it is abundant, and attains a large size. It occurs from the North Cape to Cook's Straits, and has, I believe, been found in the province of Nelson. It is, however, comparatively rare from the Waikato southwards. I am informed by Sir George Grey that only a single specimen is known on the island of Kawau, although it is abundant on the Great and Little Barriers, Waheke, and other wooded islands in the Hauraki Gulf.—(Extracted from *Transactions of New Zealand Institute*, Vol. 1.)

WORK FOR THE WEEK.

KITCHEN GARDEN.

BRANCHED all seed weeds before they shed their seed; pull them up by hand, as cutting them up with the hoe and allowing them to remain on the ground is nearly as bad as letting them stand, for although the seed may not be ripe at the time, the sun will soon ripen it. I allude particularly to Groundsel, Shepherd's-purse, and Sow Thistle. The main crop of *Cauliflowers* for autumn use should be immediately planted on a rich piece of ground. This vegetable, when planted at this season, comes in very useful after the Peas are over. If *Cucumbers* are required through the winter, seed should now be sown, so as to have strong plants by the beginning of September. Carefully attend to those in frames, remove decayed leaves from the plants, and about twice a week in warm weather give them a liberal supply of water. Where new *herb beds* are required they may now be made; the ground should be previously dug and manured; slips of some sorts and rooted plants of others should be immediately planted in them. Thin and transplant a sufficient quantity of *Lettuces* for use; keep them watered during the continuance of dry weather. The early-planted *Onions* from the autumn sowing will probably be fit to pull up if the weather be fine; let them lay on the ground a day or two before they are hoisted, but if showery they had better be laid in an open shed. Let a sowing of *Parley* be made immediately if it was not done at the beginning of the month. If any has been left for seed, let it be gathered as it ripens, or the best of it will be lost. Earth-up and stick the advancing crops of *Peas*; the sticks from the early crops will now be out of use. Plant some *Potatoes* that have been saved from last year to produce new ones in the autumn. The rows may be closer together than the spring plantings. The Black and White Spanish *Radishes*

should now be sown for winter use; also sow the common kinds for successional crops. Continue to keep up a succession of *Spinach*; a larger space of ground may now be devoted to it, as it will not now run so soon.

FRUIT GARDEN.

Fine, mild, showery weather at this time offers a favourable opportunity for budding the stocks of stone fruit trees, and for inserting buds of esteemed kinds upon the branches of established trees, the sorts of which are not approved of. Propagation by budding, though generally confined to stone fruit, may also be resorted to with advantage in the case of scarce varieties of Apples and Pears.

FLOWER GARDEN.

There are few persons, I believe, who are fond of floricultural pursuits that do not save seeds from some favourite flower; they raise them, and watch the opening blossoms with anxious but pleasing expectations of procuring something different from what they have yet seen; but how many are disappointed in their expectations! From whence arises this? I think we can point out the reason. It is that no attempt is made to artificially impregnate distinct species or varieties having good properties, or, if it is done, it is done carelessly, and new varieties are not more likely to be obtained than by the common practice of saving seed indiscriminately from every plant that produces it, whether having bad or good properties. This I believe to be the chief reason of so much disappointment in seedlings. One person, by care and attention to impregnation, will have more good flowers from fifty plants than another who has saved seed indiscriminately will from a thousand. As an illustration of the above remarks, respecting the care with which seed should be saved, I once worked under a gardener who held a high situation, and who, thinking to produce some seedling Dahlias superior to any in cultivation, sowed seed, raised, and planted five hundred plants, most of which bloomed the first season, and those that did not were planted a second. Out of the number above named not one proved worth keeping, whilst a less fortunate neighbour as regarded means raised about forty plants, and out of the number obtained four or five good ones, some of which were in the trade for several years, and one-half were worthy of being preserved. The former sent a man round to collect seed from every flower he could. Many of our readers are probably aware that the worst flowers ripen the best seed. This was, therefore, the cause of the disappointment. In the latter case only a few flowers of the best varieties were saved, and after being carefully impregnated were covered with a piece of muslin to prevent promiscuous fertilisation, and in wet weather they were protected with a coarse canvas covering. The difference in the results needs no further comments. Continue to tie the buds of Carnations as they advance. Waxed thread wound round the top part about thrice, twisting the ends together with the finger and thumb, will be found the most safe, easy, and expeditious method. An old florist in the north used to get some Windsor Beans and cut them transversely in sections of about the eighth of an inch; when the inside was removed the rest formed a small hoop or ring. He would fit those lightly on his buds according to their size. The exposure to the air caused them to shrink, thus fitting the calyx closely, and certainly this was a very neat as well as effectual means of attaining the end proposed. Continue to plant-out rooted pipings of Pinks. Look well to the pods of seed, extract the decayed petals, and slit the calyx down to prevent the extension of wet, which will invariably cause decay and the loss of the seed. Dahlias must be regularly tied-up to their stakes, as they are now making vigorous growth. Occasional waterings with liquid manure will be of service. As we presume Tulips are all safely stored, an occasional glance to see that everything is going on right is all that is now requisite.

GREENHOUSE AND CONSERVATORY.

New Holland and other greenhouse plants will now be getting out of bloom, and some care will be necessary to avoid being short of showy plants with which to supply their places. Many plants in stoves, such as *Achimenes*, *Gloxinias*, &c., should now be in a forward state, but these must be carefully prepared for removal to the drier atmosphere of the conservatory, otherwise there will be some risk of injury. When circumstances will admit, plants that have been grown in a warm moist atmosphere should be removed to an intermediate house about a fortnight previous to their being taken to the conservatory, and gradually inured to a free circulation of air. By attention to this and placing the plants in the warmest corners of the conservatory, *Clorodendrons* and *Allamandas* will continue growing slowly and blooming for some three months at a time, whereas if this is neglected their beauty may be very short-lived. Aim at maintaining the even temperature in the conservatory, after removing plants thence that have been grown in the stove, and avoid allowing the atmosphere to become very warm on bright sunny days. Now, when many will begin to cut down their *Pelargoniums*, let me guard the inexperienced against two extremes. Formerly we used to cut our plants to mere stumps, and now some cut them by far too long for the sake of making

large specimens next year, but with care this may be effected; still the safest way for beginners is to cut the lower side shoots of this season's growth to three or four eyes, and if the plants are tall to cut-in the centre shoot to one or two eyes. Three-year-old plants make the finest specimens for ordinary use, providing the roots are healthy. Very old plants that are to be discarded had better be planted in the open ground, and they will furnish in September good cuttings which may be kept in store pots through the winter, and they will come in useful for succession next summer. Examine Heaths frequently for mildew, and apply sulphur the moment it is perceived; some of the soft-foliated varieties are very liable to be attacked by this pest. Young stock in pits will now be completing its growth, and must be carefully attended to as regards watering.

PITS AND FRAMES.

Numerous cuttings may now be put in, but particularly *Geraniums*. Pot-off such as have struck root, also seedling plants of *Lophospermum*, *Maurandya*, &c., for next season.—W. KEANE.

DOINGS OF THE LAST WEEK.

FRUIT AND KITCHEN GARDEN.

We have been looking over all the dwarf and pyramid fruit trees, stopping and thinning-out the shoots. The fruit, when it is so crowded as it is this year, on Apple, Pear, and Plum trees, should be thinned-out, otherwise it will not be of good quality; but it is not easy to find time to do everything just when it ought to be done, and when work is pressing some of the minor details are often neglected. Much may be done by method and forethought, and making an effort when it is required.

Morello Cherries trained on the north wall have been washed for the third time to destroy aphid on the points of the young shoots. A man takes the shoot in his hand and with a mat-brush applies the mixture; it is composed of tobacco water and soft soap; we read of a great many compositions to destroy this pest, but none is more effectual than this.

At this season of the year kitchen gardens have frequently a rough appearance from the crops not being cleared-off in a tidy manner: for instance, as soon as Peas are gathered the sticks and haulm should be taken away and the ground cleared of weeds. The same procedure should be followed with all other crops.

Cherry trees as pyramids on the Mahaleb stock have a charming effect when loaded with fruit, but it is no easy matter to keep the starlings from them; they attack the fruit before it is three-parts ripe, and carry off whole clusters in their bills. We have been obliged to net the trees all over, and this seems to be the only way to save the fruit.

Planted-out Coleworts after Potatoes. These are put in close together, and are cut when of a small size.

FRUIT AND FORCING HOUSES.

Vineries.—We have not much to do here except as regards airing the houses. In all we have air on at night. The Grapes in all the late houses are colouring, and at the same time red spider is putting in an appearance. We sulphured the pipes, making them as hot as we could to be safe; this, if it do not destroy the enemy entirely, checks its progress. We have not had any scalding yet; and we would just offer a word of warning to all who may have fruit of Lady Downe's Grape beginning to change colour. A close moist atmosphere will cause half the berries, or more, to scald, sadly disfiguring the bunches; while, if the ventilators are opened to their full extent, with the atmosphere only moderately moist, no harm will accrue to them. No variety is so liable to scald as this, but plenty of ventilation suits all sorts. We looked over the ripe bunches hanging in the early houses, and cut off any berries showing the least signs of decay. We are not much troubled with wasps, but flies are numerous, and are attracted by any berries which have the skins broken.

CONSERVATORY AND PLANT STOVE.

If one thing grieves us more than another in connection with this department it is growing plants until the house is too circumscribed for them, and then having to throw them away. Especially is this the case in regard to some of the *fine-foliated plants*, which grow rapidly, and very soon fill a large space. We had to dispose of some of our largest plants, and this gave us an opportunity to repot younger specimens of Ferns and other stove plants. We are rather particular in potting Ferns; it is owing to the careful manner in which they are potted and the compost mixed, that success is attained. An unhealthy specimen of a Fern, or, indeed, of any ornamental-foliated plant, is not worth house room; it is owing to the freshness and health of the foliage that they are esteemed for decorative purposes. The potting must be performed in a systematic manner. Clean pots of different sizes should be ready to hand, the crocks ought to be clean and placed carefully at the bottoms of the pots, over them drainage should be placed, then some very fibrous loam or peat. The compost for most sorts of Ferns should be turfy loam and peat in about equal

proportions, and in potting press the soil rather firmly around the ball of the roots.

We have been repotting softwooded plants of different sorts to supply us with cut flowers for decorative purposes in the autumn, and putting in some cuttings of the best sorts of Zonal Pelargoniums, which are very valuable for the same purpose. Amongst the plants potted were *Phloxes* (*Phlox decussata*); the cuttings were inserted singly in 3-inch pots about six weeks ago, and have made good growth; being now in 5-inch pots, they will flower in the autumn when the others are over, and very useful they are for arranging amongst greenhouse plants. They take up no room, and the long stems are hidden amongst other plants. The flowers have also a very agreeable perfume. It may not be out of place to name half a dozen of those best-adapted for pot-culture: *Anranitiaca superba*, *Madame Damage*, *A. P. Barron*, *Mons. Linden*, *Mons. Murin Saison*, *Queen Victoria*, and *Venus*. After they have done flowering they are removed to a cold frame for the winter, and make excellent plants for planting-out in the spring.

We also potted-on *Tea Roses*: these are very valuable for autumn flowering. The plants are making vigorous growth, and only require to be kept free from green fly, red spider, and mildew to reward us with a splendid bloom. We also accommodate such plants as *Bouvardias* of sorts, *Eranthemum pulchellum*, *Thyrsacanthus rutilans*, &c., on shelves in the Cucumber house; they will each in order reward us with plenty of flowers during the dreary winter months. We have been repotting those requiring that attention, and tying and placing sticks to those plants in want of support.

FLOWER GARDEN.

The weather this year has been favourable to continuous bloom in the flower beds, and we do not think they have ever looked better. No artificial waterings have been given to the plants, except in the case of one or two of the beds which had become dry from not receiving the whole of the rain that fell. Both in the flower and kitchen garden we advocate deep trenching, and placing some of the manure at the bottom of the trenches as well as near the surface. Roses are now far past their best, and all flowers are removed as soon as possible after they are showing signs of fading. Attention is also given to removing all suckers from the base of standards, as well as from dwarfs on the *Manetti* stock. Through ignorance, we have seen this stock entirely smother the Rose that had been grafted upon it, and the shoots of the *Manetti* had been annually pruned, the owner, however, looking in vain for Roses. Other work consisted of mowing the lawn, trimming the edgings, and making all neat and clean in the garden.—J. DOUGLAS.

TO CORRESPONDENTS.

* * We request that no one will write privately to any of the correspondents of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to *The Editors of the Journal of Horticulture, &c.*, 171, Fleet Street, London, E.C.

N.B.—Many questions must remain unanswered until next week.

THE JOURNAL IN NEW ZEALAND (G. J.).—By far the best way for you to procure the Journal safely and expeditiously is to send your subscription for a year direct to the office here in London, and the paper will be posted to you weekly. You will see the terms of subscription published at the top of the first advertisement column of each number. We know the difficulty you labour under, as we have frequent complaints, and this is the best remedy.

VARIEGATED SWEET WILLIAM (J. F. G. G.).—Your variegated-leaved Sweet William appears to be a very pretty thing.

PLANTING A WALL (De Bush Subscriber).—The best time to plant fruit trees is as soon as the leaves have fallen. Do not plant them on a mound, and do not make the soil too rich. Your garden would be better of a hedgesing.

PRESERVING MELONS.—A correspondent is anxious to know of a good receipt for preserving Melons whole; any information on the subject will be esteemed.

ROMAN HYACINTH (W. D.).—The Roman Hyacinth grows wild in France in the southern departments, but not at Lyons. You will find it at Cannes, Narbonne, Toulouse, and in the basin of the Garonne. It also grows about Rome, and on the coast of Barbary.

PLANTING TREES (D. J.).—The concluding paper of the series on ornamental planting will be devoted to general details, among which the subject of your inquiry will be fully explained.

FRUITING FORBED STRAWBERRIES IN THE SECOND YEAR (T. J.).—The plants got turned out from pots last year, and which have produced a good crop this season, will bear again well next year if the runners be duly removed and the plants well watered in autumn, but the fruit is rather smaller than in the first season after planting out. The plants put in last year, and which have borne scarcely any fruit in the present season, will fruit well another year, remaining where they are, and the runners cleared off. It would not do to remove the plants to another part of the garden.

GRAPES NOT SWELLING (G. J.).—The berries do not swell because they are not set. You may effect this artificially, by going over the bunches whilst in bloom with a dust brush, such as painters use, or by drawing the hand lightly

over them. Some Vines, however, are at best bad setters, requiring more heat than other kinds to swell well. There are no insects on the leaves sent us, but evidence of there having been thrips, the remedy for which is to fill the house on a calm evening with tobacco smoke, repeating the dose the next night but one. Have the foliage of the plants dry, but the floor of the house wet.

MELONS FAILING (*Anxious*).—The failure probably arises from want of bottom heat, too much moisture when setting, and overcrowding the plants. When the flowers are on the point of setting, the bottom heat should be 75°, and the air of the house should be dry; a little air may be admitted at night to prevent the deposition of moisture on the blossoms, and no water should be given over the leaves or flowers; if any be needed at the root it should be applied without making the surface of the bed moist. After the fruit is set and begins to swell, water will be needed until ripening, and its use should then be discontinued. One plant on each mound is quite sufficient, and its principal shoots should be 1 foot apart. We apprehend you have a mound to each light of about 3 feet 6 inches wide. In other respects we do not see that your treatment is wrong.

CUCUMBERS IN POTS (H. J.).—They may be grown successfully in pots; we have grown them well in 11-inch and 13-inch pots, but we like them best in 15-inch pots. We suppose the pots will be plunged in some material that will be heated by the two 4-inch pipes; or are the pots simply placed between them? If they have the sides of the pots against the pipes the roots will probably suffer from the heat. The pots should stand clear of the pipes, or they may be placed on them. It would have been preferable to have had the wooden-lattice frame 4 inches above rather than below the plants. Your frame or pit to be worked from the outside will not be of much use for winter work, as it will not be advisable to open the lights in continued frosty weather to duly attend to the plants. They will, no doubt, answer well for summer work.

MELON TREATMENT (J. W. L.).—The cause of the Melons turning yellow and not swelling is because they are not set, or impregnated, and that may arise from too close and moist an atmosphere, or it may be due to a deficiency of bottom heat. Give rather more air when about setting, leaving a little on at night if at all moist, and have the surface of the bed dry, but the soil daily moist. Three or four fruit are not too many on a plant if they are vigorous. It is proper to stop one joint beyond the fruit, and about the time the flowers expand is the time to stop them. Liquid manure may be given at every alternate watering after the fruit commences to swell, but it should be weak.

NAME OF FERN (*Idem*).—It is *Adiantum assimile*, a very useful kind for bouquets. *Adiantum emarginatum* is pronounced *cu-ne-a-tum*, not *cu-nat-um*.

ESCALLONIA MACRANTHA (*Myr. Kenilworth*).—In your part of the country this should have the protection of a wall.

PLANTING VINES—HEATING (*An Old Reader*).—Intending the houses for plants as well as for Vines, we should not plant the Vines closer than 3 feet 10 inches, or one to each light, and by all means have them planted inside. For the earliest and latest house we should have the borders the entire width of the house, except, perhaps, the pathway at the back. In the other houses the 4-feet inside borders will do. It would not answer well to have 1-inch flow and return to the other houses through the early house, nor would we have any in the other houses, save those which are required for heating, but, instead, a 4-inch flow and return outside the houses, and take branches from it as each house was reached. The supply pipe might pass through sheds which might be used for growing Mushrooms and forcing Rhubarb, Sea-kale, &c. The flow and return supply pipes might, if you object to this, be taken in a flue under the back pathway of the houses, and might either be covered-in or a lattice pathway made over them. The heat they would give off would be beneficial rather than otherwise, especially as you intend to have plants. It is desirable to have the front lights made moveable and double, so as to form a narrow space in which the Vines can be placed when at rest. The house by this arrangement will be liberated for the growth of plants requiring a temperature hurtful to the Vines. This arrangement you will find fully treated of in "Sudlers on the Vine," a work published at our office. Notwithstanding the subsoil being dry and sandy, we should concrete the borders, secure perfect drainage, and confine the roots to the border. For the early house we recommend three Black Hamburgh, three Buckland Sweetwater, and two White Frontignan; this house to be started in November. Second house, started in January, Frankenthal, Black Prince, Muscat Troyen, two Mill Hill Hamburgh, Black Muscat of Alexandria (Muscat Hamburgh), and two Muscat of Alexandria. Third house, started in February or early in March, two Frankenthal, Trentham Black, two General de la Marmer, Black Prince, Muscat Troyen, and Golden Hamburgh. It is presumed you will have Muscats remaining from the second house to come in along with the other kinds in the third house. Late house, Muscat of Alexandria, two Mrs. Pince, Alicante, two Lady Downe's, West's St. Peter's, and Trebbiano.

BROWN TURKEY FIG NOT RIPENING (G. S.).—This variety does well with us in pots, and why it should not succeed with you while the others ripen we cannot say. When Figs are grown in pots under the shade of Vines we have found them drop off before they are ripe. In your case the trees might have received some check from under or over-watering at the roots.

PLUM NOT BEARING (*Anxious*).—We can only account for your tree not bearing so well as your neighbour's from the fact that his tree, having the protection of a wall, receives more warmth while in flower, which causes the blossoms to set more freely. When fruit drops off when of the size of peas, it is because the blossoms did not set. Your district may be too cold for this sort as a standard or pyramid. In the south of England it bears abundantly as such.

POTATOES WITH MITCH HAULM (*South Hackney*).—The Potatoes you have planted are robust-growing sorts, Sutton's Red-skin Flourball especially so. In all probability your garden is shaded or confined in some way. You ought to plant them wider apart in the rows than usual, and the rows should not be less than 2 feet apart. Cutting away some of the haulm will not increase the size of the tubers. It is early yet; if you wait a few weeks perhaps the tubers will swell.

STRAWBERRY PLANTS (G. W. O.).—Any of the nurserymen in your neighbourhood will supply you with strawberry plants. There are surely nurserymen at Blackheath.

WEEDS ON LAWN (*An Old Subscriber*).—Such weeds as your lawn is infested with are very difficult of removal, except by hand-weeding and destroying the flowers so as to prevent seeding. Although weeding is a tedious process, it will no doubt have the effect of gradually extirpating the pest.

MARCHEL NIEL ROSE (*A Beginner*).—No doubt Marchel Niel will do well in the situation you mention. A good strong loam will suit it.

BANANA FRUIT DAMPING.—**POTTING POINSETTIAS** (*Subscriber*).—The cause of the Banana fruit damping is probably too close and moist an atmosphere. When ripening the atmosphere should be rather dry, and only moderate supplies of water must be allowed at the roots. Probably the fruit is wetted by syringing or drip from the roof, or the damping may result from an injury in undue handling. Poinsettias from cuttings of this year may be bloomed well in 7-inch pots; it is now high time they had their blooming-pots, but it is not too late. The cuttings now 1½ foot high are too tall; take off the tops with three or four joints, and insert them singly in small pots in sandy soil. Place them in a horse or frame in gentle bottom heat, keep them close and shaded, and they will soon root. When the pots are full of roots sink the plants into 6-inch pots, and keep them near the glass. They will form dwarf plants with fine heads.

FUCHSIAS IN WINDOW NOT FLOWERING (*X. Y.*).—Probably the plants need repotting. We presume you cut them in February, kept them rather dry until they had made shoots an inch or two long, then repotted them, removing most of the old soil, and when these pots were full of roots shifted the plants, watering as required to keep the soil moist. Either the soil is sordid or the plants have too dry an atmosphere or soil. Guano, 1 oz. to a gallon of water, is probably the best for window plants. It may be given at this strength to all plants in active growth, but not when they are not growing. The only thing we know of that you can do with your hard water for drinking purposes is to have it filtered.

PEAS LYING (*W. Jones*).—We think the Peas you enclosed to us have had the outer covering of the stem destroyed by snails or slugs. Dust the ground over the rows with quicklime before the plants appear, and every week until they are sicken. There is evidence of mildew, which will yield to the lime. A dressing of manure and salt, two parts of guano to one of salt, sprinkled along the sides of the rows before earthing-up, would be very beneficial, but keep it off the Pea lambs. The ground should only be made yellow.

STRAWBERRIES FRUITING (*Id. m.*).—The not-dragging between the rows and so not interfering with the roots is sufficient to account for the plants producing a greater crop than those of which the roots were disturbed by digging. Strawberries are, however, as a rule, very fine and abundant this year.

ROSE BUDDING (*Id. m.*).—We consider the first fortnight of July, or as soon as we have a moist weather after the flowers are shed from the plants, the best time for budding, and it may be practised up to the end of the month.

IVY SCEDDING (*E. L.*).—Scedding Ivy plants are just as good for covering walls as those from cuttings. The best time to remove them is in October; take them up carefully, and give a good watering after planting. From September to April they may be moved quite safely.

FLOWER BEDS.—**BEDDING GERANIUMS** (*Id. m.*).—When the plants in the flower beds are fully grown no portion of the soil should be visible, and where they meet the grass, the edging, neatly trimmed off, should not expose any portion of soil, or a very small margin. It is hard to say which are the best four bedding Geraniums, crimson, scarlet, pink, and rose, but the following are superior sorts:—Chimion, Bayard and Waltham Scedding; scarlet, Jean Sisley and Vesuvius; pink, Master Christine and Mrs. Upton; rose, Beauty of Dulwich and R. Evans. We have named two of each.

DESTROYING MEALY BUG (*W. J.*).—The best remedy would be to cut the plant away, and have the house thoroughly painted. It is of little use striving to get rid of it by the application of insect-destroying compounds syringed on, as the plant being so dense, the solution would fail to reach every part. Thin it out, and syringe forcibly, the greater force the better, with clear soot water, made of one peck of soot to thirty gallons of water, stirred well up, and strained before use. Do this twice a day, and in time you will overcome the mealy bug, or keep it under. If you could take the plant down, immerse it in Clarke's compound, at a temperature of 12° F., and then sponge it thoroughly, and again immerse, it is likely you would annihilate the pest. The compound should be 3 ozs. to the gallon of water. It may be advantageously syringed on; the only difficulty is to thoroughly wet the plant, and of course reach the bug in every part.

VINE LEAVES SCALDED (*Joseph Dutton*).—This is caused by lenses formed in the glass, or by insufficient ventilation.

CALECOLARIA PROPAGATION (*S. A. E.*).—If your *Calecolaria* is of the shrubby class you can not only preserve your old plant to bloom again next year, but you can also take cuttings from it to preserve over the winter; but if it is what is called an herbaceous variety, you may have some trouble with it. Your Vine leaves are searched through thickened places in the glass forming lenses.

PEAR CRACKING (*A. Clorbo*).—We suspect your soil is dry and sandy. Give abundance of water in dry weather, and mulch the soil round the trees.

CLASSIFYING ROSES (*A. Conant Subscriber*).—The classification of the varieties of Roses is very arbitrary, and it is not easy to define what is a Bourbon, a Noisette. Both of these were raised by the hybridizing of species, and now the varieties have become so crossed it is impossible to give a correct definition of either. You can get the work you require by applying to Mr. B. S. Williams, of Upper Holloway. There is a supplement to the "Glossary to Gardeners' Dictionary," published by Bell & Dalry.

WINDS ON WALKS (*H. J.*).—The ashes will not injure the *Polypodium*. *Aclimacium* *Sampsonii* is a greenhouse climber; and we have no experience or knowledge as to its being able to withstand the winter.

FROGS ON HOLLYHOCKS (*E. C. E.*).—The fungus is *Phenicia maculosa*, *Mon.*, which abounds everywhere this year in England, though it has only been observed on Hollyhocks in Australia only. It was first noted in Aitha in Chili. Mr. Broome has found it on the common Mallow. How it was introduced into this country is unknown. There is no chance of getting rid of it except by burning at once the infected plants.

INSECTS (*Subscriber, Lincoln*).—The small insects which have attacked your Strawberries are a species of millipede, or "forty-feet," named *Julus pulchellus*. The ground must have been foul, as the insects are reared in decayed vegetable matter. We know no other remedy in their present condition than carefully cleaning the ground beneath the plants and picking off the decayed leaves.—I. O. W.

NAMES OF PLANTS (*J. M. C.*).—*Eriophorum angustifolium*. (*A. C.*—*Hemerocallis disticha*. (*C. Clifford*).—*Carex luteo-lucida* (*Euchaeter's Nidula*—*Salic.*). (*H. D.*)—The fruit of a Fern is on the back of the frond, and there is none on either of your specimens. We cannot name plants from leaves only, and your specimen No. 6 is only leaves. (*A. M. X.*)—1, *Alantum tenerum*; 2, *Spiraea erantifolia*; 3, *Passiflora racemosa*; 4, *Pasiflora caribaea*; 5, *Selaginella coccinea*; 6, *Selaginella Mortensii*. (*Dorham*).—*Astrantia maxima*.

POULTRY, BEE, AND PIGEON CHRONICLE.

COTTAGE POULTRY-KEEPING.

IN answer to your correspondent "RECTOR," will you allow me space for a few words in vindication of the policy adopted by farmers in general in forbidding their labourers from keeping poultry? "RECTOR" states that he "has often and often spoken to his poorer friends upon the beneficial results in every way of keeping poultry." I can assure him he is perfectly wrong. As a practical poultry-keeper of more than twenty-five years' experience, I state boldly that poultry-keeping cannot pay in England if you keep a proper debtor and creditor account of your expenses and returns, and the only possible manner in which a cottager would find it answer to keep poultry would be by turning them out to pick up their own living as best they could, or, in other words, to feed upon the neighbouring farmers' crops. It is utterly impossible "to restrict them to the roadsides," as badly-fed poultry will roam away great distances in search of food; and anyone who has had practical experience knows that poultry, besides what they actually consume in the corn and hay fields (and that is very considerable), do an immense deal of damage by scratching up the seed and by tramping down the corn and moving grass before the harvest begins. Corneraks are considered bad enough for this, but poultry are fifty times worse. In my own case my poultry render useless, and quite unfit and impossible to mow from this very tramping, about three acres of a field every year reserved for hay. Again, farmers know full well that during winter, if at no other time, there is a great temptation to the labourer to fill his pockets with corn from his master's granary to keep his poultry from starving to death—a temptation that would not exist had he no poultry to feed.

In the southern districts of Sussex the farmers may, as you say in your editorial note, allow the cottagers the free range of the fields after the harvest is ingathered, but if they do it is an extraordinary exception, and those who do not do so should not be called "selfish and flinty." The gleanings of the cornfields is a valuable product of the farm, and it is customary for the farmer to turn in his own poultry, Turkeys, Geese, and pigs, which thrive and fatten well upon it. In the north of England vast numbers of young Geese, imported annually from Ireland, are bought by the farmers for the express purpose of being turned into the cornfields as soon as the harvest is gathered, and by which means they are fattened and got ready for the Michaelmas market at a scarcely perceptible cost. No one can have a greater desire than I have to improve the status of the agricultural labourer, but I am fully convinced that this cannot be done by trying to induce him to believe that he could keep poultry at a profit, if his master and employer would only allow him so to do. Let him try. Let him feed his poultry well enough to keep them near home; let him agree to pay reasonable compensation for all damage done to his neighbours' crops, hedges, &c., and I think he would very quickly arrive at the conclusion that cottage poultry-keeping was a delusion, without any beneficial results whatever.—E. C. C.

P.S.—I am firmly convinced that breeding and rearing the common tame Rabbits can be made most profitable by cottagers. Being kept in confinement they cannot trespass; they can be fed on sow thistles, grass, &c., gathered from the roadside; they increase rapidly, and the more wild Rabbits are exterminated as vermin, the higher will rise the price of tame ones. In your last Journal they are quoted at 1s. 5d. to 1s. 6d. each.

LITERARY PIRACIES.

THE article we published last week on the "Management of Setting Hens," and quoted from the *Colonial Farmer*, is, we find, an extract from Mr. Lewis Wright's "Illustrated Poultry Book." The practice, which seems very common among our transatlantic brethren of copying from British books and publications without acknowledgment is, to say the least of it, highly reprehensible. We are sorry to say that our own periodical press is not free from the same imputation. It may be considered by those who practise it a smart thing to do, but all honest and honourable men regard it as something very different.

CLECKHEATON POULTRY SHOW.

THE fifth Show was held on the 19th inst. in grounds admirably adapted for the purpose; and although the pens used were of a primitive description, having strained canvas for the backs, and a roll of wire tacked on from end to end for fronts, the birds showed to much advantage. In the Pigeons, however, the pens for the Pouters were decidedly too small, as the birds could neither stand erect nor comfortably turn in them. The supply of food and water was ample, and the general attention exemplary. Although for many days previously the

the National Peristeric Society, Birmingham, or the Manchester Columbarian Society, who might address a note to his fellow presidents, and so start the affair. Arrangements might be made for the show to be held in the Crystal Palace, or, if not too late, in conjunction with the forthcoming Crystal Palace Poultry Show. Success would be certain. Union would be strength, and at least fifteen or eighteen hundred peas of birds would be brought together.

If you will permit me I will say a few words how I think the affair should be worked. Make the show self-supporting, none but members of Society to exhibit. The show to be divided into two sections—old birds, and birds bred in 1873, all single birds; classes to be made for every variety of colour of Pigeons; an entry fee, say, of 3s. to be charged for each entry, half of which should be deducted for expenses, the rest divided into first and second prizes according to the number of entries in each class—that is, if there be twenty in one and ten in the other, 30s. to go to the former, 15s. to the latter; at the same time to have challenge cups in each class, acceptance £1 1s. each, exhibitor to challenge for as many as he may choose. The value of the cup would vary according to the number of acceptors in each class. All birds shown by an exhibitor in any class when he accepts a challenge to compete for the money prizes, only acceptors for the cup.

The most difficult point would be the appointment of judges to please all parties. The course I would suggest is that every Society nominate a gentleman, who should act, whether he be an exhibitor or not; if an exhibitor, let him officiate in other classes.—A.

Simple Mode of Keeping Butter.—In warm weather where ice is not handy invert a common flower pot over the butter, with some water in the dish in which it is laid. The orifice at the bottom may be corked or not. The porousness of the earthenware will keep the butter cool. A wet cloth laid over the inverted pot will soon cool-off the butter by the evaporation of the moisture.

OUR LETTER BOX.

Books (—).—Vol. xxvi. (first edition), of the "Naturalist's Library," was written by Dr. Dunbar. Apply to James Thin, Bookseller, 15, Infirmary Street, Edinburgh, and he will probably be able to furnish it, and also the works of Golding and Bevan. Dr. McKenzie's, "The Management of Bees," was published by Blackwood & Sons, Edinburgh, and cost 4s.

COMMENCING POULTRY-KEEPING (Nemo).—You can make your poultry pay without going to much expense. You do not require all the wire appliances that belong to the fancy poultry-yard. Build a wooden house, such as you will find described in Bailey's poultry book. Buy some wire netting 39 inches high, and stretch it round the run you can give them by means of stout stakes at intervals. Keep either Cochins or Brahmas. They will lay lots of eggs, and you can spare a corner of the orchard or kitchen garden for the chickens.

DARK BRAHMAS' FEATHERS (A. H. J.).—The Dark Brahma pullets would not be disqualified. It would be better if they were pencilled up to the beak, but such is very seldom the case—hardly ever. The light breast is very preferable to brown backs or wings. A purely white breast would be a disqualification, but one lightly pencilled on a light ground is not. Such a bird in competition with others that were well pencilled all over would, however, be beaten. The Game chickens hatched at the end of April might well be shown, but the cock must be dubbed, and he is full young. You may, if you have several, dub one for the especial purpose.

PARASITES ON FOWLS (O. P. Z. H.).—You will find nothing so effectual as carbolic acid. Drive a mixture of it well into every hole and crevice with a syringe. Scrub the perches and laying-boxes with hot water and carbolic acid soap; lay it on all the woodwork with a brush. Dig the flooring out about a foot deep, and fill-in with gravel, road-grit, and lime. Use your carbolic acid largely in our fowl-houses and dog-kennels. Ordinary bugs flee from the smell of camphor; you should be disposed to try it on these.

RABBITS FOR PROFIT (H. S.).—It depends entirely on what you propose to do. If you are in a neighbourhood where there is a sale for Rabbits for the table, then you should keep that which is called, and is, the common tame Rabbit. A well-fed healthy doe will fatten four "from the test," and they in London make 1s. 6d. each at seven or eight weeks old. If for a town where wild Rabbits are not to be had, and where they are bought, as the Oxford Rabbits are in London, by weight, you must have the Belgian Hare Rabbit. If you wish to breed to sell fatter Rabbits alive, you will do better with the Silver-Grey than any other. There is always a sale for them at remunerative prices. If the crusade against them is successful, and the wild ones disappear, Rabbit-breeding will become a large trade. We are in a transition state as regards food and cooking. It is enough to have more money to spend, but it is essential to make the money do more towards feeding a family, and that can only be done by laying out the money to the best advantage, but also by cooking skilfully. We often propose to devote a column to the subject.

BEE MANAGEMENT (S. A. B.).—We should advise you not to plunder your swarms of June 2nd, either in whole or in part. Let them be for another year, unless you absolutely want honey; in this case we would plunder one hive entirely, driving the bees out and joining them to the other hive. Much honey is always wasted, and the stock itself weakened, by a partial plunder. Write to the Messrs. Neighbour, of Holborn, London, or to some other purveyors, and see whether you can get into the London market through them, or else establish a market in Dublin by co-operation with other bee-keepers. If you can but open a connection with some respectable grocery firm, and supply them with really good honey in or out of the comb, you will surely find a ready sale.

BEE COMMOIONS (John Douglas).—We cannot explain without an inspection of the hive what caused your bees to be so troubled. Perhaps some young queen returning home from her matrimonial flight mistook the hive for her own, and was ejected, or perhaps it was an old queen of their own of whom they

were tired. In any case we do not think you have occasion for alarm; at this time of year bees can always replace a lost queen. Queens are liable to strange treatment at the hands of their own subjects, but the causes are not known.

BEE FLOWERS (A. P. Waters).—It is of little use to grow flowers of any kind specially for bees, unless you grow them by the acre. They are very fond of Monardella, Borage, Melilotus leucantha, blue Lobelia, Crocuses, Buddleia globosa, Thyme, Spiraea of all kinds, &c.

BEES IN ADVERSE WEATHER (P. R.).—1st. During wet or dull weather in summer, when bees are unable to leave the hive, work of some sort can generally be carried on. Combs can be built with wax secreted by the bees from honey previously gathered, so that we can often observe considerable progress to be made. Then, again, the brood, if any, requires constant feeding and attention, and when sufficiently matured their cells to be capped over. Should the unfavourable weather continue long, comb-building operations must cease. 2nd. In bad weather swarms should be assisted by feeding the bees with boiled sugar, in the proportion of 6 lbs. of sugar to 4 lbs. of water, by weight, boiled for five minutes. Feed alternate nights, giving 1 lb. at a time. 3rd. If a first swarm, which will have the old queen, breeding will commence as soon as there may be a few inches of comb available. If a second swarm or cast, with favourable weather the young queen may lay eggs within a week after it was hived, or her laying may be considerably delayed if bad weather has prevented her going forth to meet the drones.

METEOROLOGICAL OBSERVATIONS,
CAMDEN SQUARE, LONDON.

Lat. 51° 32' 40" N.; Long. 0° 8' 0" W.; Altitude 111 feet.

DATE.	9 A.M.		IN THE DAY.						Rain.	
	Baromet- er at 39 inches and Sea level.	Hygrome- ter.		Direction of Wind.	Temp. of Soil at 1 ft.	Shade Tem- perature.		Radiation Temperature.		
		Dry.	Wet.			Max.	Min.	In sun.		On grass.
1873.	Inches.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	In.	
July.										
We. 16	30.019	62.3	56.0	W.	59.2	72.6	59.1	125.6	47.6	—
Th. 17	30.091	63.9	61.6	S.W.	61.7	75.4	57.1	116.2	51.2	0.039
Fri. 18	29.892	67.2	62.4	S.W.	61.4	72.0	58.2	124.0	56.0	0.010
Sat. 19	30.191	62.7	53.6	W.	59.8	71.8	55.8	125.2	43.1	—
Sun 20	30.464	64.5	61.0	S.S.W.	61.8	82.1	62.8	128.5	50.2	—
Mo. 21	30.184	72.9	64.0	S.	63.1	88.0	57.3	130.3	54.0	—
Tu. 22	30.021	73.4	63.7	N.W.	64.0	90.1	61.4	131.9	57.4	—
Means	31.085	67.6	61.2		61.4	78.9	54.4	125.8	51.4	0.049

REMARKS.

- 16th.—A very fine day throughout.
 - 17th.—Very fine all day, a cool breeze making it still more agreeable.
 - 18th.—Wet early, but fine soon after 10 A.M., and though there were occasional showers, a very pleasant day and starlit night.
 - 19th.—Lovely day, very bright and yet cool.
 - 20th.—Rather dull at 8 A.M., but fine by 10 A.M., and afterwards; a complete summer day.
 - 21st.—Rather hazy early, but a warm fine day.
 - 22nd.—Very fine all day, and the hottest day this summer, notwithstanding that the wind was northerly and the sky occasionally cloudy. Much lightning in W., after midnight.
- Warm week, especially the last two days. The temperature reached 80° at 9.15 A.M. on 22nd, and 90° between 2 and 3 P.M. It is somewhat remarkable that the 9 A.M. temperature on July 22nd, 1872 was 79.5, and on the corresponding day and at the same hour in 1873 it was 79.4.—G. J. SYMONS.

COVENT GARDEN MARKET—JULY 23.

A VERY steady trade and good supply. The markets are well attended, and large consignments are forwarded to the midland and northern ones. All the bush fruit and standard cherries are of excellent quality this season. Strawberries alone, with the exception of one or two varieties, have not been up to the mark in point of quality. Importations continue large, including West Indian Pine Apples.

FRUIT.

	s. d.	s. d.		s. d.	s. d.	
Apples.....	1 sieve	6 0	0	Mulberries.....	10 lb. 0 0 to 0 0	
Apricots.....	doz.	2 0	0	0	Nectarines.....	doz. 8 0 15 0
Cherries.....	1 lb.	0 6	1 0	0	Oranges.....	100 6 0 16 0
Chestnuts.....	bushel	0 0	0	0	Peaches.....	doz. 15 0 3 0
Currents.....	1 sieve	2 0	3 0	0	Pears, kitchen.....	doz. 0 0 0 0
Black.....	do.	2 0	3 0	0	Dessert.....	doz. 2 0 3 0
Figs.....	doz.	6 0	10 0	0	Pine Apples.....	10 5 0 6 0
Filberts.....	1 lb.	1 0	0	0	Plums.....	1 sieve 0 0 0 0
Gobs.....	1 lb.	0 0	0	0	Quinces.....	doz. 0 0 0 0
Raspberries.....	quart	0 3	0	6	Raspberries.....	1 lb. 0 1 1 0
Grapes, hot-house.....	1 lb.	2 6	6 0	0	Strawberries.....	10 lb. 0 4 1 3
Lemons.....	100 8	0 14	0	0	Walnuts.....	bushel 8 0 12 0
Melons.....	each	2 0	8 0	0	ditto.....	100 2 0 6 0

VEGETABLES.

	s. d.	s. d.		s. d.	s. d.	
Artichokes.....	doz.	3 0	6 0	Mushrooms.....	pottle 2 0 to 4 0	
Asparagus.....	100 3	0 6	0	Mustard & Cress.....	punct 0 2 0 0	
French.....	100 6	0 12	0	Onions.....	bushel 3 0 6 0	
Beans, Kidney.....	100 1	0 0	0	Peas.....	quart 0 6 0 0	
Beet, Red.....	doz.	1 0	3 0	Parsley per doz. bunches	0 0 4 0	
Broccoli.....	bundle	0 9	1 6	Parsnips.....	doz. 0 9 1 0	
Cabbage.....	doz.	1 0	1 6	Peas.....	quart 0 8 1 0	
Capsicums.....	100 0	0 0	0	Potatoes.....	bushel 6 0 9 0	
Carrots.....	bunch	0 6	0	0	Kidney.....	do. 0 0 0 0
Cauliflower.....	doz.	3 0	6 0	0	Round.....	do. 0 0 0 0
Celery.....	bundle	1 6	2 0	0	Radishes.....	doz. bunches 1 0 1 6
Coleworts.....	doz. bunches	2 6	1 0	0	Rhubarb.....	bundle 0 6 1 0
Cucumbers.....	each	3 0	3 0	0	Salsify.....	bundle 1 0 1 6
pickling.....	doz.	0 0	0 0	0	Savory.....	doz. 0 0 0 0
Endive.....	doz.	2 0	0 0	0	Scorzenera.....	bundle 1 0 0 0
Fennel.....	bunch	0 3	0 0	0	Sea-kale.....	basket 0 0 0 0
Garlic.....	1 lb.	0 6	0 0	0	Shallots.....	1 lb. 0 3 0 0
Herbs.....	bunch	0 2	0 0	0	Spinnage.....	bushel 2 0 3 0
Horseradish.....	bundle	3 0	4 0	0	Tomatoes.....	doz. 2 0 3 0
Leeks.....	bunch	0 6	0 0	0	Turpins.....	bunch 0 3 0 0
Lettuce.....	doz.	1 0	2 0	0	Vegetable Marrows.....	0 1 0 6

WEEKLY CALENDAR.

Day of Month		Day of Week		JULY 31—AUGUST 6, 1873.													
				Average Temperature near London.			Rain in 13 years	Sun Rises	Sun Sets	Moon Rises	Moon Sets	Moon's Age.	Clock before Sun.	Day of Year			
				Day.	Night.	Mean.	Days.	m.	h.	m.	h.	m.	h.	Days.	m.	s.	
31	Th	Devon and Exeter Horticultural Show.		74.9	50.0	62.4	15	24	4	48	17	45	11	24	10	7	6 6 212
1	F	LAMMAS DAY.		75.6	50.4	63.0	19	26	4	46	7	45	3	30	10	9	6 2 213
2	S	W. Sherard died, 1728.		75.3	50.9	63.1	20	27	4	45	7	49	4	32	11	9	5 58 214
3	Sun	8 SUNDAY AFTER TRINITY.		74.9	50.6	62.8	19	29	4	43	7	39	5	norm.	10	5 51 215	
4	M	General Holiday.		75.9	50.6	62.8	17	31	4	41	7	11	6	2	1	11	5 49 216
5	Th			74.5	50.9	62.7	19	32	4	40	7	39	6	33	12	5 41 217	
6	W	Royal Horticultural Society, Show and Committee Meetings.		73.2	50.8	62.0	21	33	4	38	7	39	6	7	13	5 36 218	

From observations taken near London during forty-three years, the average day temperature of the week is 74.9; and its night temperature 50.6. The greatest heat was 92.0, on the 2nd, 1856; and the lowest cold 31.1, on the 2nd, 1854. The greatest fall of rain was 1.23 inch.

BRUSSELS SPROUTS AND WHITE BROCCOLI CULTURE.

THE first of these is, perhaps, one of the most useful of vegetables for affording a supply during the winter months, especially to the owners of small gardens. To such I confidently recommend it, and for their information I will offer a few remarks on its culture.

In the first place, a good stock ought to be obtained, and after a lengthened experience I can affirm that I know none that entered in the seedsman's catalogues as "Imported Brussels Sprouts." These usually throw-up a stem averaging 4 feet high, thickly studded with compact miniature Cabbages, ranging from half an inch to an inch in diameter. For small gardens one sowing will be enough, and this may take place about the middle of March. Here I may offer a word of warning to our amateur friends; they generally buy the seeds at a cheap rate, and sow them under a Gooseberry bush, or in some similar position. The best seed should be procured, and it should be sown thinly in an open position on soil that is not too rich.

As soon as the young plants are sufficiently advanced they may be planted out in the ground which has been previously prepared for them. This ought to be done in winter, and, to obtain the best results, it should be trenched at least 18 inches deep, and be well manured; ordinary farmyard manure is the best. The plants will be ready for planting-out as soon as they have made three or four leaves besides the seed leaves. In taking the plants out of the beds a small fork should be used to loosen them first; then pull them out gently, laying them in a box or flat-bottomed basket. When the ground is in good order, and the plants are put out early, they should be 2 feet apart each way.

In planting-out, drills should be drawn 2 feet apart, and the plants be put in with a dibber in a careful manner, making the earth firm round the small fibres. The drills will be found useful; if it be necessary to give water to the plants they will allow of its soaking to the roots. I have seen a man planting-out such crops as this; he ranges a line on the level ground, and in planting he draws the earth up to the stem with his dibber and forms a small mound over the roots; of course it is sheer waste of time to attempt to water the plants, unless the ground can be flooded, as they do on the sewage farms. In all planting during the summer months a shallow depression ought to be left round the stem of the plant to retain the water.

In many small gardens it is necessary to make the most of the ground. When this is the case, instead of planting out the Sprouts at once, let the plants be pricked-out about 3 inches apart in a bed, and when the earliest crop of Potatoes or Peas is gathered, the plants may be put out on the vacant space; or they may be planted between the rows of Potatoes, in which case

the plants will be established before the Potatoes are forked-out.

A firm soil seems to suit the growth of this vegetable best, and it is cultivated most successfully on a clayey loam.

Then as to the time when it may be used and the manner of gathering the sprouts. They are most useful between the end of October and March, and should be gathered when the little round heads are firm and compact. Some persons cut off the head as soon as the sprouts are ready for gathering. I do not see the utility of this. No doubt the sprouts near the top will more rapidly become larger if this be practised; but, on the other hand, as the stems lengthen more sprouts are formed, which come in later in the season.

WHITE BROCCOLI is another very useful vegetable; but, even more so than the preceding, it delights in heavy soils. Now is the time for planting-out the latest sorts. The ground for this should be hard, and if it is necessary to let the plants into the ground with an iron bar they will succeed all the better. Those who plant their Strawberry beds annually cannot do better than plant their Broccoli on the old beds; all that is necessary is to clear-off the weeds and Strawberry plants, and as the ground will be hard, the plants may be let in with a crowbar. The same after-treatment is necessary both for Brussels Sprouts and Broccoli, hoeing the ground over as often as weeds appear.—J. DOUGLAS.

THE WEST OF ENGLAND ROSE SHOW, HEREFORD.

As there has appeared no account whatever of the above Show, and as I heard the Hon. Secretary and others regret the absence of your usual reporter, it occurred to me that a few notes might be acceptable to you, made as they were in my double capacity of judge and exhibitor. Indeed, I should feel very sorry were so grand a Show to come and go without any notice in your paper, which in my opinion far exceeds all other horticultural papers in the accounts of all (but particular Rose) exhibitions. The journey to Hereford from all places, but particularly from the west, is a difficult one, for have we not to pass through Bristol? and is not the present station the worst in existence, and are not the platforms so narrow and crowded, that it is a matter of the greatest difficulty to preserve your blooms from annihilation by reason of the porters' desire to turn them upside down? So when I relate that we western growers were landed at Bristol just in time to see the last train for Hereford steaming out of the station while we were struggling with our boxes, no one who knows the fine the Great Western keeps will think it an unusual event.

However, we got as far as Gloucester that night, and knowing that there was a train from that place which would just land us in time at Hereford to put in an appearance at the Shire Hall before the doors were closed, we secured beds at the "Duke of Wellington," and were as comfortable as civility and good accom-

modation could make us. We do not seem, I am bound to say with all regret, to have made others comfortable, though, as the following anecdote will show. That great rosarian who swept the board this year at the Crystal Palace, taking three first prizes in the amateur classes, and one in the open—that monarch of the amateurs and your humble servant were accommodated in two rooms leading one from the other, and were called at the early hour of six. We talked and laughed without dreading of doing anybody the slightest injury. But our ignorance on this point was soon enlightened, for just before we left Gloucester a friend who had met with the same ill-luck at Bristol, told us that there were the most serious complaints against us, and he did not know whether we should be allowed to leave. It appears an old gentleman had come down to breakfast in a great state of distress, not to say anger, and accosted the waiter with the question, "Did I not ask you to give me a quiet room?" "Yessir, and so we did, the best in the house." "No, you did not; you put me in one next to where two men were sleeping, who did nothing but talk and laugh all night. I believe they were commercials, for they were talking of flowers, and vans, and telegraphing, and of taking a nursery." Our friend here interrupted, saying we, at least, were gentlemen, one was a clergyman, and the other one of the greatest cultivators of the queen of flowers. "But, no," said the aggrieved man, "they were *commercials*, and one of them had such a terrible loud voice." With this embarrassing piece of intelligence we departed, and after much labour staged our blooms in the Shire Hall. And then how we were repaid, not, I do not mean with prizes, though we had our share of them, but with the Roses exhibited by others.

When the Hall was cleared, and we commenced to judge the nurserymen's classes, I do not think we ever had a greater treat; I know I never had. Mr. Cranston showed magnificently; his seventy-two singles and his forty-eight troubles surpassed anything I have ever seen; while, to cap all, he had positively staged twenty-four blooms of Horace Vernet, each Rose of which was as large and as perfect in form as the finest Charles Lefebvre I have ever seen. Now, down here we cannot grow this Rose. Mr. Keynes has given up cultivating it; Mr. Baker, I believe, can rarely show it; I can only get it as large as a half-crown piece; but here Mr. Cranston gave us twenty-four specimens, each bloom faultless, standing high up from the moss, with the most luxuriant foliage it is possible to imagine. "Hurrah for the Manetti stock!" I cried, and Mr. Baker and Mr. Charles Turner, the two other Judges, echoed the cry, "Hurrah for the Manetti stock!"; for our friend was showing almost entirely from that stock. No more can it be said that you cannot give us show blooms, or blooms equal to the maidens on the Briar. I would that the Rev. S. Reynolds Hole could have seen those stands from King's Acre which made the Show something to be never forgotten, and he would, I am sure, in his next edition strike out from his "Book about Roses" the one blot, to my mind, the one misleading statement, that "the maiden blooms on the Briar are much superior to those on the Manetti; and that anyone who is compelled to grow Roses only on the latter stock should give up all idea of exhibiting." Mr. Turner and Mr. Baker both declared they had never seen anything like those stands in their life, and that they should never forget them. Roses, too, which most of us have long condemned were shown magnificently. Such sorts as Jean Pernet, Prince Henri des Pays Bas, Julie Touvais, Alfred de Bougement, and others were really superb. The only drawback was that there was so little competition in these classes; Keynes, Paul, and other great men were conspicuous by their absence, to the great and oft-expressed regret of the managers of the Show and general public. Mr. Cant was there, but was by no means in his last year's force, and Mr. Davidson also showed very fairly. Mr. Robert Veitch, of Exeter, too, came to the front, and considering how his blooms had been knocked about on the journey (for he was with us) showed very well.

Among the amateurs, Mr. Arkwright, of Hampton Court, Hereford, and the Rev. George Arkwright, of Pencombe, seemed to divide all the best prizes. I managed to get one first prize for twelve blooms of Madame Rothschild, which did the same good office for me last year; but I only mention this in order to introduce the following good thing. A lady was admiring my box of Rothschild, and turned to me with the remark, "You must have a very strong plant of this variety to show so many blooms." Mr. Baker was second for twenty-four singles, but would have shown very much better but for the ill treatment his boxes experienced on the journey.

Of all the places where we show the Rose, Hereford, in my humble opinion, is the best and pleasantest. The Shire Hall is admirably adapted for exhibitions of this kind. It is lofty and well ventilated, the arrangements are all good, and superior to any I have seen. There is not the slightest confusion; your tickets are given you in the form of small adhesive labels, which you fix on your boxes (a red and black number, one showing the class and the other your own number). When your boxes are ready they are taken from the dressing tent by porters to the Shire Hall, and placed in their proper place. You have only to uncover at the last moment, and they are ready for the judges. I believe this is the Leeds system, and if so, we are all indebted to Leeds, for anyone who was present at the Crystal Palace at the last show will know what confusion there was there from want of some such arrangement. Civility, kindness, and hospitality are the rule at Hereford. There is no delivering a few tickets to policemen to give away to their friends as at Bath, while the great horticulturists are ignored; there is no hot and furious contention with policemen there. On your pass ticket you are informed that there will be luncheon ready for you at a certain time, and you have only to present your card to have a most excellent one too. But not only in this way, but in all others is the hospitality of Hereford shown. I had three invitations to houses to stay the night, and my friends the same, and I only wish that we in the west may succeed in starting our Western Counties Rose Show next year, so as to offer an inducement to our Hereford friends to come and see us. I should like to welcome my friend Mr. Bulmer, who so hospitably entertained me; I should like to grasp the hand of that famous rosarian who rules over the King's Acre, and who took me round his beautiful nursery when every moment was precious to him, as on that very day he was staging for Wisbeach.

And oh! what a treat we had at that nursery! Plants! Messrs. Editors, I had never seen plants till I saw his. Roses! I had never known what a Rose was capable of till I saw his Manetti Roses. "To think," said Mr. Baker to me, "to think that you and I have been working for years, and yet we have done nothing—nothing that will bear comparison with this." I never have seen such a sight as those acres of Roses presented, and I fear I may never again. Our friend Cranston was in his might—in his glory. Fisher Holmes was there, shown as large and as perfect as my best Lefebvre; Horace Vernet—but, no, I cannot go on. Suffice it to say that Mr. Cranston had staged the day before for Hereford, and that morning for Wisbeach, and yet he had so many perfect blooms left that we all confessed we had never seen anything in the way of Roses before. Days might profitably have been spent there, and I had only one short hour to give, or I could not have got home that night, and next day I was to show at Frome, and so I was forced to bid adieu to my kind host, but not before he had made me promise to stay with him at the next show. But though I say adieu, the memory of that day will not be effaced from my mind till the blessed time arrives when I can go there again. And now, as I write, the memory of those Roses is present in my mind; the strains of the string band which discoursed such sweet music through the Hall return; the beauty of the cathedral, with its glorious Norman arches, its magnificent rood screen, its sweet-voiced choir singing praises to Him who sends and tends the flowers (His gifts) which we love so well; the genial kindness of friends, the brotherhood, the freemasonry of rosarians, more conspicuously shown surely in Hereford than elsewhere—all this and much more causes the very name of Hereford to sound sweet in my ears, and makes me love the Rose even more than I did before.—JOHN B. M. CAMM.

DISEASED POTATOES IN ORCHARD HOUSES.

I AM glad that our late disagreeable surprise—the finding much of our Potato crop diseased—has attracted the attention of such an experienced observer as Mr. Abbey, and I hasten to say that these Potatoes (see page 40), were planted last October, and fairly ripe by the 15th of April; but as the houses are unheated, and the season ten days late here, the fruit had not set so much as to require syringing to any extent capable of affecting the haulm. Of course shutting-up houses with large borders of Potatoes, and syringing heavily overhead, would not be the best way to ward-off disease just as the tubers were ripening, but it was not the case here. On searching still further I think the manure used was too fresh, a fault which is very common with hasty gardeners; but, after all, why should not

the germs of the disease have been carried in with the old garden soil, which had last season borne good and bad Potatoes? Am I to expect diseased Potatoes in these borders next season; and if so, why?—T. C. BRÉNAU.

SHADES AND SHELTERS.—No. 3.

I have to thank "E. T. B." (see page 15), for adding to my list by bringing forward his flower shade, and others would do a service by making known any well-tried contrivance, as it is not possible for one individual to be acquainted with all that are in use.

I have yet a few illustrations to add, and a few more words to say upon plant shades and shelters.

Fig. 9 is a sketch of a shade for pot and border plants, and its construction may be thus described:—Take two wooden

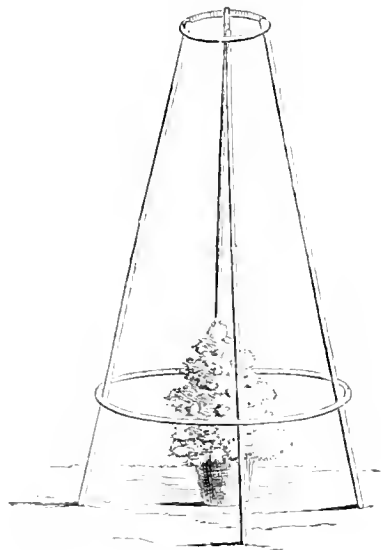


Fig. 9.

hoops, one about two-thirds smaller than the other, and four straight stakes or deal laths; tack them either inside or outside of the hoops at equal distances apart, the stakes to be cut off flush with the hoop at the top, but at the bottom the hoop may be fastened at some distance from the ground according to the size of the frame. The bottoms of the stakes should be pointed so as to fasten the frame more firmly into the ground. Having the skeleton thus made a covering will suggest itself, which must be of some opaque material—as light thin canvas, or waterproof calico; even paper coverings are not to be despised. The illustration will show that it is a very simple and inexpensive contrivance, and may be easily modified to suit any requirement. For the admission of air the top must not be closed when in use, and whatever covering is used a space of several inches must be left open between it and the ground. It is easy to see that this is a very effectual shade, and useful also for protecting individual plants in bloom from being injured, or, perhaps, destroyed by spring frosts.

I have still another one (figs. 10 and 11), made to protect large plants of Rhododendrons and various other choice spring-flowering plants, or even whole beds of plants. To make it, select a sufficient number of stakes according to the size of the plant, to stand 3 or 4 feet apart, and high enough that when the top is put on it will be a foot or more clear of the shrub to be protected, and the stakes are driven firmly into the ground. A circular frame of wicker-work (fig. 10), made of willows or any other green pliable wood, is put over the top and fastened to the stakes by rope yarn, and as long as there is any danger from frosts this framework is left over the plant, so that when necessary a covering may be put over it, which is generally garden mats or canvas. These shelters (fig. 11), may be constructed of any shape, and are very light and durable if taken proper care of when not in use. To make them is profitable employment for the garden men in winter time, and the materials are inexpensive.

Doubtless the means of shading and sheltering might be beneficially extended to all tender garden crops, as well as plants and flowers, by other means than those described in this article; but when once used they should be constantly applied, for one night's neglect may destroy all previous or even future efforts to save or restore a crop or plant to good health. There is no scarcity of materials for shades and shelters of a temporary kind, it only requires the ingenuity of man to work them up into suitable shapes for use. There are other means of protection which come into the gardener's hands almost ready made, such as common garden mats or thin oiled canvas, which may be cut into convenient widths. Either of these should be more frequently kept in readiness to use when required for protecting wall trees by being hung before them, or standards and espaliers by being thrown over them, or even to throw flat on the earth to protect tender plants just coming above the surface, and for sheltering plants from wind, rain, and sun. A common plan of mine is to tie a light pole to each side of a dozen or two of the mats or canvas, and they are always ready to stretch over anything requiring extra protection, and also for earth or turf pits that have no other covering.

Although shading and sheltering by mechanical contrivances is important to the gardener, there are other means by which the requisite shade and shelter may be obtained. I allude to natural means by the planting of hedges, and the protection afforded under the branches of trees, &c. The plant-grower, in however small a way he may be, needs the cool refreshing shade of trees and hedges for the subjects of his care, and in places where the glass accommodation is small, it becomes necessary to clear the houses of plants in order to use them for some other purpose; therefore, wherever it is practicable, a

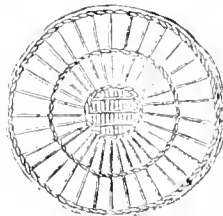


Fig. 10.

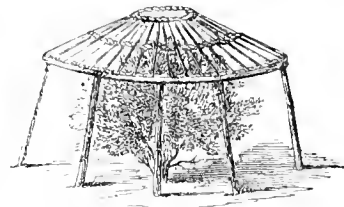


Fig. 11.

suitable-sized spot should be selected, and hedges planted at different angles, backed-up by taller hedges on the north and south sides, and, perhaps, also on the west side. Plants may then be placed in positions to receive either the morning or afternoon sun, or both, or none at all, as occasion may require. The whole should have a firm bottom covered with coal ashes to keep down worms. I need hardly mention, that those plants standing in the sun must have their pots plunged in the ashes, as no pot containing a well-rooted plant can be exposed to the sun without injury.

It may be asked, What is the best kind of plant for hedges for such a purpose? I may remark, that the common Yew makes a good hedge, or even Box, but both are of very slow growth. The common Privet is frequently planted, as also the Hornbeam and common Laurel, as being of much quicker growth; then there are Junipers and Thujas, which would be more uncommon though excellent for the purpose; in fact, there is ample choice of plants, and the above are mostly ever-green, which I should consider an advantage. Those who have such a place as I have described can fully realise the benefit derived from its shade and shelter, but those who have not cannot become fully alive to its value until they possess one.—THOMAS RECORD.

LITTLE HEATH MELON.

LITTLE Heath Melon is spherical or round, and flattened at the ends, slightly ribbed, and when not coarsely grown finely netted; altogether it is a fine-looking fruit. The flesh is thick very melting, juicy, and well flavoured, and in colour bright red. Rind thin. The plant has a good hardy constitution, is a free setter, and will succeed in a frame with a small amount of bottom heat to give it a start. It is not a gross grower; on the contrary, it is rather slender, but very free both in fruiting and growth to support fruit.

I sowed three seeds March 3rd, and planted out the seedlings

on March 31st, one plant under each light of a three-light frame. They grew and set without a drawback, on June 24th I cut the first ripe fruit, and within a fortnight had cut a dozen fruit of an average weight of 4 to 4½ lbs. I could have had them larger, but size in Melons, as in many other things, is obtained at the expense of flavour. Some fruits weighed nearly 6 lbs., although the plants were stinted of water. The plants are good for another crop. Little Heath will grow to a large size, no doubt, if well supplied with water, and slightly shaded from bright sun. If cut before it is very ripe the fruit will keep for a fortnight or more; indeed, it has no superior in keeping properties that I know, except in the old and I believe extinct Cabul Melon, which I have known kept for weeks. I should be glad of a few seeds of the Cabul, through the Editors of this Journal, if it is at present in cultivation. It is elliptical in shape, yellow outside when ripe, with a greenish white flesh. Little Heath Melon is the true Beechwood, with a fruit precisely similar, and not so strong a vine, and the flesh is scarlet. It will be extensively grown, and be everybody's favourite scarlet-fleshed Melon.—G. ABBEY.

COLAX JUGOSUS.

WHAT is Colax jugosus? This question has been asked me by many amateur Orchid-growers during the past season, and a few words respecting it will, perhaps, not be considered out of place in the pages of the Journal, for the benefit of those amateurs who may contemplate adding it to their collections.

Colax, then, is a genus very nearly allied to Maxillaria—indeed, so closely, that it is questionable if the differences are really sufficient to warrant its separation, the chief feature which has given rise to its elevation to generic rank being its peculiarly long-pointed glandless caudicle; but as the genus is acknowledged and upheld by the highest authorities, we must accept it as being sufficiently distinct.

Turning, however, to this plant horticulturally, Colax jugosus is a plant of dwarf compact habit, producing flowers of great beauty, and is well deserving a place in every amateur's collection, no matter how limited the accommodation. The full height of the plant seldom exceeds 12 inches. The pseudo-bulbs are smooth, somewhat ovate, and about 3 inches in length; from these it produces dark green leaves both from the top and base; the leaves are usually from 6 to 8 inches long, and about 1½ inch, or from that to 2 inches, broad. The scape springs from the base of the pseudo-bulb, and is clothed with large imbricating scales, bearing upon the top sometimes three, but more frequently two, somewhat globose flowers, which when expanded are about 2 inches in diameter. The sepals are very broad—indeed, almost round, and soft cream-coloured; the petals are also very broad, but more oblong than the sepals, and their colour is pure white, beautifully marked with transverse bands of rich dark purple; the lip is small, furrowed, and velvety; the side lobes white striped with dotted lines of deep purple, whilst the semicircular front lobe is also white, dotted and striped with rich velvety purple. By this description it will be seen that Colax jugosus is a little gem, and a plant that is not likely to outgrow the convenience of even the smallest stove; and when I add that its flowers are produced very freely during April and May, it must, I think, be acknowledged worthy of every attention from all lovers of the chaste and beautiful.

With a few words upon its culture I will bring these brief notes to a close. Until quite recently Colax jugosus has been extremely rare and so little heard of, that, as its name is out of the usual stereotyped genera, it having made its appearance with some frequency at the public sales during the past year, it has come upon amateurs as a surprise. Many Orchid-growers imagine it to be a cool-country plant, and to some extent it is so, but it likes a little more heat than the majority of Odontoglossums, and I have found it succeed best when treated in every respect the same as *Cattleya Mossie*, and, like the last-named plant, it is a native of Brazil.—EXPERIO CREDE.

THE NEW STRAWBERRY DWARF TOMATO.

We are perfectly willing to admit that the Strawberry Tomato is the same as *Physalis edulis*, but we are not aware that *Physalis edulis* has been used, or at all events of late years, as a vegetable. The name "Strawberry" and the description were taken from American catalogues of repute; the wholesale price 1s. per oz., and the retail price 6d. per packet, being in accordance with the current value of *Physalis edulis*. It is

not the custom with the majority of the trade to put the scientific name to vegetables, and we were justified in putting "new" against it on account of the novel application of an almost unknown esculent. Wherein, therefore, consists the deception? In the American catalogues we had observed a slightly increased charge was made for this novelty; we, however, refrained from charging more than the current value of *Physalis edulis*. If we had put the scientific name of *Physalis edulis*, probably your correspondent would then have seen a fraud in our not calling it Cape Gooseberry. Some people see deceptions where deception is not intended.—INTRODUCERS.

EXHIBITION FRAUDS.

I ENCLOSE a letter which reached me yesterday, and which I have resolved to hand to you to deal with as you may think fit. It has long been whispered that prizetaking plants and flowers are not always and altogether the property of the exhibitors; and some exhibitors have been charged with valuing the artifice of beating an opponent by borrowing, more than by the skill required to beat him by cultivating. As to the honour of winning a prize by the exercise of industry and skill, honour, not being a marketable commodity, is never thought of, or reckoned as nothing by such people. It has long seemed to me that some steps should be taken to stop these practices, or the morality of our flower shows will soon sink to the level of the ordinary race-course or the low country fair.—WILLIAM PAUL, *Waltham Cross, London, N.*

"July 21, 1873.

"To W. PAUL.

"Sir,—Would you be kind enough to send me word by return of post if you can supply me with twelve cut Roses about the last week in August, to be shown in a stand of three? Please send your terms for the same, and oblige yours—H. WALTON, *Carr Mill Terrace, Haslingden, Lancashire.*"

APPLICATION OF NITRATE OF SODA TO THE GLADIOLUS.

"D., Deal," asks, how and in what proportion to use the nitrate of soda? Perhaps the best answer I can give is, Much as you would apply guano to an Onion bed by sowing, or dissolved in water, or by mixing it with the soil during the winter turning. I do not think it is so powerful as some people seem to imagine. I hope that I am not understood to mean that it will entirely eradicate the disease, but rather that by its use I avoid wireworm, and grow the Gladiolus more gross than without it. I generally use as much as I can lift with one hand in about six gallons of water.

I am afraid we hear far too much about well-decomposed manure. This year my Gladiolus bulbs are amongst new cow manure, to which I strongly advise all your readers to give a trial, especially if their soil is light. They will then avoid its being washed and dried, and will never afterwards have reason to regret using it.

Your readers will form some idea of my love for the Gladiolus when I mention that on the 15th inst. I was to be found some 350 miles from home examining Mr. Banks's collection, for the sake of information and comparison. I am glad that I then found many as good, and growing as robustly as heart could desire; but, unfortunately, also, many were just as sickly-looking, whole beds going off together—in fact, worse than I had ever previously beheld them. I should gladly have seen "D." of Deal's at the same time, but circumstances did not allow of my doing so.

Two things in particular, in passing over that eighty-two miles of line from London to Deal, which made a deep impression on my mind, were the poverty-stricken appearance of the land on each side of the rail, and the fact of seeing men backing with scythes at old, dried, brown meadows—strangely ripe to what we cut grass in the north—and never in all that distance seeing one mowing machine. My wonder ever after shall be not that the south-country farm labourer is poorly paid, but that his employer is able to recompense him at all, seeing that the latter has to compete with such immeasurably superior arrangements. We call out—and justly so in some places—about the evil effects of the Game Laws; pray let us in future carry on a war of extermination against Nettles, Dockes, Thistles, Poppies, and other such impoverishing weeds, and the result may be a national blessing. My impression, from close observation during my long journey, was that our cultivated lands on the average do not yield half the produce that

they are capable of affording, and in some disgraceful instances not a tenth portion. Men appear to be satisfied with doing the work of only women in the south, or what is more correct, being human machines, seeming entirely to forget that this is an age of progress, when man's place is rather to cease from drudgery, to direct, and to see that the inventions of wise men are properly applied in more effectual methods of cultivation. —J. WITHERSPOON, *Chester-le-Street*.

IMPLEMENTS, STRUCTURES, AND APPLIANCES.

AT THE ROYAL HORTICULTURAL SOCIETY'S BATH SHOW.

We have hitherto omitted any notes on the implements, horticultural structures, and appliances at the Bath Show, from want of space, and also because our notes on the houses, boilers, &c., exhibited last year at Birmingham were so full that there is not much to add, and there were very few novelties exhibited at Bath that had not been shown at Birmingham.

There was a good array at Bath of glass houses by Mr. Parham, of Northgate Works, Bath; Wheeler, Humphreys, & Co., Nottingham; T. G. Messenger, of Loughborough; T. H. Dennis and Co., Anchor Works, Chelmsford; Cranston & Luck, Birmingham; Tuck & Pike, City Metal Works, Bath; W. H. Lascelles, Bunhill Row, London; Mr. E. Lloyd, Grantham; N. Voice, Handcross, Surrey; Mr. Ormson, King's Road, Chelsea; Mr. Boulton, Norwich; Mr. M. E. Horley, Toddington, Dunstable; Mr. Rendle, and others. Many of these exhibited also specimens of hand-lights, portable garden frames with loose sheets of glass, &c. The prize house of last year was not shown, nor did we see Mr. Ayres' imperishable glass and iron houses.

Those especially worthy of notice this year were a patent glass orchard house of Mr. Dennis's, where the whole of the glass of the roof is made to open upwards and outwards by means of a rack and pinion screw attached to levers, so that at any time the trees may be exposed to the full action of the outer air and rain, or protected at pleasure. The construction is such that it is a tenant's building, removable at will, having no permanent brick foundations, but resting on iron posts or pillars with wide flanges. The construction is light and strong, and displays considerable ingenuity; the cost is comparatively moderate.

Messrs. Cranston & Luck showed some good moveable frames for protecting wall trees, running on longitudinal iron rods on rollers, simple in construction, with a protecting eave, and which could be fixed to any existing wall. The lights, made something like large Melon or Cucumber-frame lights, are easily moved, so as to get to the trees for pruning or syringing, tying, nailing, &c., the ventilation easily arranged, and on the whole there was much to recommend.

Messrs. Cranston & Luck's amateurs' and gardeners' houses, with their system of ventilation, are so well known that we need not describe them.

In the other exhibits of glass houses we did not notice much novelty, although the glass was fixed in every possible different way—with putty and without putty, with laps and without laps. It is high time, we think, that patents should not be given for slight alterations in the method of fastening glass or of ventilation, or peculiar form of grooves, &c., unless there is manifest novelty or improvement. Patents are intended to stimulate invention and to protect the inventor, not to hinder invention and hamper development of thought in the public, and we maintain—where nearly every possible form of construction in iron and wood, with variations in the form of ventilation, or shape of spar, or form of groove, and the other thousand-and-one minor variations which we meet with are to be found—no further patents should be granted, but let the buildings rest on their own merits. The public will not be slow to discern what is practical, what is simple, and what is feasible, as against the unpractical, complex, and useless.

There was a great variety of moveable frames, and ground vinerias, and amongst these we are inclined to give the palm for cheapness, simplicity, and durability to Mr. Horley, though the construction of his larger house was faulty.

Mr. Parham showed some exceedingly good wall glass copings, that we preferred to his glass walls, which were made with too light iron, and which we do not think calculated to stand strong winds, though they might answer very well in protected situations.

Messrs. Pike & Tuck showed a somewhat elaborate plan of fixing glass with brass pin and nut, and lead clip, the method ingenious, but unnecessary. We quite agree with those who recommend for an ordinary stove or greenhouse, glass bedded in putty, but having no outside putty, the glass being fastened with two tees, and the putty removed level. We have seen this most effectual at Mr. W. Paul's, Waltham Cross, and elsewhere; and secondly, for glass frames, ordinary bedding-out houses, lights of all kinds, glass pushed up in a groove without putty or lap will answer every purpose, and it merely requires

fastening in its place with an iron pin or lead clip. A fruitful source of error is found in the patent ventilation of side-lights when, by means of ratchet and screw, the whole of the lights move together, and, as is generally the case, a draught is let in upon all the plants on the staging. How long will it be before people learn that ventilation means change and circulation of air, not cold draughts, and that the best ventilation is under the stages in the walls, with proper top ventilation along the apex of the roof, the glass not being made too air-tight?

Passing on from the glass structures we will take next the methods of heating those structures. Our notes on the boilers last year were so full that we need not say much on this score, as we see no reason whatever to alter the conclusions we came to then.

The best upright tubular boiler shown this year was Harlow's, the best horizontal tubular Mr. Dennis's, and the best spiral Mr. Deard's. The medal boiler of last year was not exhibited, but the Witley Court boiler, which was nearest it in construction, was there, and for a powerful useful boiler of the modified saddle form we know no better; and we still adhere to our opinion with regard to Mr. Deard's spiral boiler, which must, from its construction, have a uniform and rapid circulation. We must, at the risk of being accused of repetition, again say that no unnecessary impediment should be placed to the circulation of water by complicated pipes, small junctions, rapid curves, &c. The motive power in heated water is exceedingly feeble, and the best boiler is that which extracts the greatest amount of heat from the fuel, and has the most rapid and easy circulation, with least difference of temperature between the flow and return.

We forgot among the modified forms of saddle to name one of Mr. Ormson's, and also a combination of the saddle with horizontal pipes from Mr. Lloyd, of Grantham, which we should like to see tried, and which appears to be a very promising one.

While on the subject of heating we wish to pass high commendation on the model shown by Mr. Cowan for utilising the heat of a small lime kiln to heat a boiler. Where chalk or limestone is near or on the property, the lime is very nearly capable of repaying the cost of outlay and attention; indeed, as Mr. Cowan continues to improve and modify his present invention by economising still more the heat of the lower part of his furnace by using hollow bricks, we think that the value of the lime may be made to repay the whole of the cost. It is, of course, especially suitable for a large range of houses in constant use; but with the present price of fuel anything that can make coal answer a double purpose is especially valuable. The form of boiler adopted by Mr. Cowan is a very good one, and better than the tubular. Exception has been made as to the necessity for a great depth of stokehole, but this is rather imaginary, we conceive, than otherwise. When 13 or 14 feet can be found for the kiln, it is better to have it underground, as it is thus more easily hidden; but so long as a rise is once given to the flow pipe, it may then be made to descend, and though there would be a slight waste of heat if the pipes had to descend in the outer heating chamber previous to entering the houses, yet there is nothing practically to prevent such a system, though not the best. We publish an extract from Mr. Cowan's introductory remarks on his system. We may add, that even where lime is not an immediate product of the district, it will generally pay for its cartage.

"My first idea was to try turf or peat. I fancied that by having a good supply of it at hand, and keeping a person almost in constant attendance upon the fires, I might in some way or other (not very clear to myself, I confess) get through the season. But the continuous wet weather which prevailed all through last autumn prevented me from accomplishing my object by this means. There seemed to be nothing for it but coal at nearly 40s. per ton, or to let everything rest until the natural heat of spring called them to action, when, fortunately, the idea presented itself of combining a lime kiln with a hot-water apparatus. This plan seemed at first to be beset with a considerable amount of difficulty; but, nevertheless, I had strong hopes from the first that it would prove to be a solution of my difficulties. As the work proceeded, my faith in the experiment grew stronger, and it required only a short trial to prove that we would get heat, and plenty of it, free of cost.

"The first apparatus erected heated only one-half of our houses, and we immediately set to work and took up a boiler which had not been long set, and erected another apparatus such as the first, and for months past both have been doing their work in the most satisfactory manner possible.

"The lime produced is of good quality, and the quantity is quite sufficient to pay all expenses. The appearance of the apparatus which has been in keeping with a well-dressed garden, and there is no disagreeable smell, nor anything else offensive about it, to prevent even the most fastidious from adopting it. All who have seen our two kilns have pronounced them to be rather ornamental than otherwise.

"The proper fuel to use is anthracite coal or culm, from which there is no smoke, or, at least, so little as not to be perceptible; consequently there need be no fear of anything being done in that way by their adoption.

"The management of the apparatus is simple, and easily understood by any ordinary workman. One of the two kilns which we have at work has never been attended to more than once during twenty-four hours, and during that time the heat is kept up constantly and powerfully, and in no case need they receive attention more than twice during that period. Those who have experienced the great amount of trouble which many furnaces cause by the constant attendance which they require, will at once understand the benefit to be derived from having an apparatus which can be left with perfect safety for twenty-four hours, not once or twice, but constantly.

"I can also, at a very trifling extra expense, fit up this apparatus so that the houses can be kept quite cool, while the kiln is allowed to continue burning, the heat being shut off or on at pleasure, according to the necessity of the time.

"The production of good lime is, on most noblemen's and gentlemen's places, a matter of considerable importance, and it ought to be considered an advantage to be able to produce it with the fuel which would otherwise be lost in heating the garden structures. To nurserymen the matter ought to be of still more importance, as the present rate of fuel must be a heavy tax upon them.

"I am fully of opinion that this system will prove valuable, not only where limestone is plentiful, but also where it is not near at hand. Lime must always be had; and it will be found more advantageous to pay for the carriage of the raw material than for made lime, especially by sea, as lime is a dangerous cargo which few shippers are willing to undertake; and it must be recollected that lime is always more valuable in districts where neither limestone nor chalk are found—so that the cost of carriage is in a great degree compensated for by the local value of the lime produced."

We need not say much about the other exhibits. Mr. Chapman showed his well-known flower-boxes and exhibition-cases, with boxes for the transmission of fruit, game, &c.; Messrs. Follows & Bates a selection of their Anglo-American mowing machine, which, in our experience, is *facile princeps* of all other mowing machines, and this may be saying a good deal; Mr. Pinnell, of Bath, a most absurd watering pot, with a syphon to water plants overhead. We should much like to see an old-fashioned gardener's face if his master had made him a present of one and told him to use it. We must not, however, pass over a very beautiful collection of ornamental pottery, shown by Mr. Matthews, of Weston-super-Mare; all the work exceedingly good, both the ornamental and useful, and we can confidently recommend any persons in want of garden pots and vases, &c., to try some. We saw, by the way, that the same enterprising firm had exhibited a collection at the Hull Show, and we hope that, from the many thousand visitors who attended, there was custom enough to repay the venture.

With these few remarks we will conclude. We do not think the implements, as a rule, well represented, and we hope if next year see the Society's Show at Sheffield that that branch may be better represented than it was at Bath.

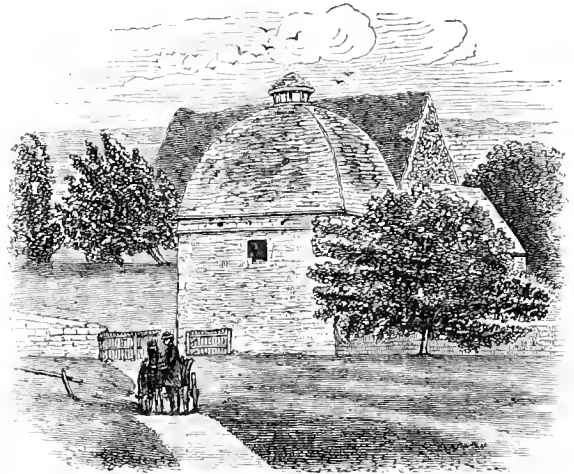
WALES AND WELSHMEN.—No. 2.

It is written that there are in England more *Smiths* than of any other two names added together, but in this Principality *Jones* is the patronymic far in excess of any three patronymics combined. How the thousand-and-one Joneses in a Welsh town are discriminated is beyond my astuteness. It might have been by leaving out one name when, as Camden writes, "in the time of King Henry the VIIIth, an ancient worshipful gentleman of Wales being called at the panel of jurie by the name of 'Thomas Ap William, Ap Thomas, Ap Richard, Ap Hoel, Ap Evan Vaughan, Ap Jones,' was advised by the Judge to abandon that old manner; whereupon he after called himself *Moston*, according to the name of his principall house." It may be useful to observe that "Ap" means "son of." Then, in the names of places the tautology is bewildering; there are 458 the names of which begin with *Llan*, and many have the same affix; so when I had occasion to inquire which *Llanfair* was alluded to, the still more bewildering reply was, "Oh! *Llanfair pell-g-gwynyll*." So, also, there are more than fifty places the first syllable of the names of which is *Pen*, and that invariably indicates that it is on a hill or headland. Knowing this, and wishing for a far look-out to sea, as well as to see the ruins of, perhaps, the most ancient of the Welsh religious foundations, I wended my way to Penmon Priory; for it was founded in the sixth century.

I could scribble about it for "an hour by Beaumaris clock," but it would be scribble not desirable for your pages, and I will but note that this, like all other monastic institutions of the olden time, bears testimony that the friars well knew that feasting is an essential as well as fasting, and that feasting needs a well-supplied treasury. There is no feasting without good water, and here is as bright a spring of it as ever flowed perpetually. So the Friars enclosed it, built a little chapel over it, placed stone seats around it, made little recesses in its walls in which offerings might be deposited, and small benefit was to be expected to him or her who did not deposit in those recesses—they were the saving banks, both of the friars and the patients—for the spring was named "The Holy Well of Saint Seinol," and those who drank of its water and deposited (that was essential) were to be cleansed of any disorder that afflicted them. That well and all its surroundings remain and bear testimony that excellent water and contributions were secured to the Priory; for this, like all holy wells, was flocked to, and was sanitary for the same reason that Beaumaris is sanitary now—there is a change of scene, change of occupations, and sea-breezes.

Excellent water is but an essential in preparing the more savoury contributions to a feast, but the sea is within bow-shot, and its endless supplies put all safe for days of abstinence from flesh; and then Puffins Island almost joins the Priory lands, and the flocks of birds which gave it its name were the most acceptable produce with which Friars could be endowed, for they are aquatic birds, which a wise Pope, infallible in this, decreed might be eaten on fish days, because, being aquatic, they partake of the nature of fish.

Next I will mention their noble Dovecote, a drawing of which from a photographer* accompanies these notes. Its



walls are very ancient, probably coeval with the Priory's re-enclosure in the thirteenth century, but the cupola which surmounts them is not older than the fifteenth century. It is quadrangular, each side being 22 feet long and 20 feet high. There are eighteen rows of nest-holes on each side, and in each row fourteen nest-holes, so, deducting the spaces for window and doorway, there is accommodation for nearly five hundred pairs of pigeons. In the centre is a circular alighting-pillar, 10 feet high and 2 feet diameter, with projections to ascend it. On the top of this pillar the pigeons alighted as they descended from or ascended to the opening in the roof.

There are near the Priory some of the largest and oldest Whitethorn trees I ever saw; they are many in number, about 30 feet high, and their stems nearly 6 feet in girth. It is easy to conclude where the orchard and garden were, and although we can trace no remains of their tenants, we do know one of the vegetables afforded abundantly to the holy fathers, though they were not pottage men, for theirs was not a vegetarian age.

The vegetable I allude to is the Alisander—Alexanders, as gardeners in the olden time called it—*Smyrnium Olusatrum*. Unblanched, it is aromatic; blanched and cooked, it is not unlike Celery. Down to a comparatively recent period sailors belonging to this coast consumed it largely as an antiscorbutic, and the supply was inexhaustible, for it grows wild and abundantly on the south-west end of Puffins Island. Its Welsh name is *Dulys cyfredin*, intimating how much it is a requisite; but it is no longer cultivated here. Sea Samphire, *Crithmum maritimum*, was also at hand on the rocks of the same island, and was known to the friars by the name of *Corn Carw y mor* (the Stag's-horn of the Sea). The holy fathers knew how to pickle it, and so they did the young puffins, but neither of those relishes seem now in request. Archbishop Baldwin, writing some seven centuries since, mentions Puffins Island as *Ynys Ilenach* (Isle of Erudition), and states that "it is inhabited by hermits, living by manual labour and serving God. If any discord arises among them all their provisions are devoured and infected by small white mice, with which the island abounds, but when the discord ceases they are no longer molested. No woman is suffered to enter the island." No doubt they were the cause of the discord and the white mice.

In a future communication I hope to be able to write more about the gardening of Anglesea; but Baron Hill, Nant, Plas

* The photograph was taken by Mr. J. W. Ambrose, Photographer, Beaumaris, to whose intelligence as an artist and lover of literature I am much indebted.

Newydd, and probably some other residences, have gardens that will each require a separate notice.—G.

FLOWERS FOR OUR BORDERS.—No. 12.

THUNBERGIA ALATA.—WING-PETIOLED THUNBERGIA.

THUNBERGIA ALATA and its varieties have, from the date of their introduction, taken high rank among popular annuals, a position which they still retain, notwithstanding the numerous competitors for public favour which the seedsmen's lists now comprise. This popularity is well merited, not only on account of their elegant flowers and foliage, but for their great utility as dwarf climbers. They also claim the attention of the amateur for the curious structure of those parts of the blossom more immediately concerned, and other features, to which a brief reference may be made.

In commencing our examination of the flower, we must beware of confounding the two large bracts by which the corolla is enveloped before its expansion with the true calyx, which is very small, and only perceptible upon a close inspection. If the two bracts be pulled aside, twelve minute teeth will be observed clasping the base of the tube of the corolla; and after the blossom has fallen, these teeth embrace the ovary so closely that the uninitiated observer would easily overlook them altogether, and imagine the more conspicuous bracts to be the calyx. If one of the satiny corollas be opened, there will be discovered within four rather short stamens, each terminated by a highly curious fringed or bearded anther. The office this fringe performs—and that it has one we may be assured—it is somewhat difficult to guess; it perhaps serves to retain the pollen after its emission from the anther until the stigma is fit for its reception, for it does sometimes occur that the pollen is mature before the stigma is sufficiently advanced to receive it, and if in this case no provision were made for the retention of the fertilising particles, they would be scattered before the impregnation of the ovules could be effected. Decidedly the most interesting part of the flower is the slender curved style with its double stigma. This organ, destined for the reception of the pollen, has, in addition to its small terminal cavity, a beautifully delicate shell-like lateral stigma of a larger size. Both of them are, however, so minute that in order fully to appreciate their exquisite finish a microscopic examination will be requisite, but a Stanhope lens of moderate power will be all that is necessary. There can be no doubt that both of these appendages to the style perform the same function, for if the terminal stigma be cut off before the pollen is ripe, seeds will nevertheless be matured, which proves satisfactorily that in this case the pollen must have been conveyed to the ovules through the medium of the beautiful organ to which we have referred. Each of the seed-vessels contains four hard cup-shaped seeds.

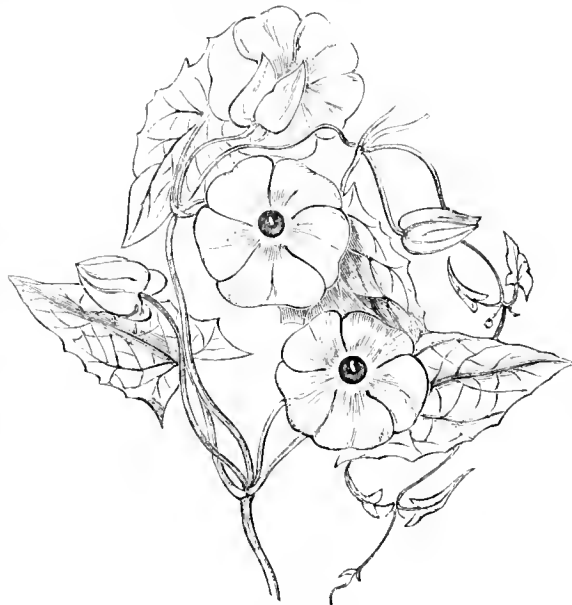
It will be remarked that the petioles have a leafy edge, or are, botanically speaking, winged, a circumstance by which *alata* and all its varieties are easily distinguished from other species.

The flowers of the typical *Thunbergia alata* are of a buff colour with a deep rich purplish-black tube or throat; in the variety *alba* the limb of the corolla is pure white; in *aurantiaca*, one of the handsomest, the limb is orange; in *sulphurea* of a yellowish buff; and in *Fryerii* both limb and throat are of a uniform orange colour.

All these are of easy cultivation, either in pots for the window or for ornamenting the flower garden during the summer. The seeds require to be sown in spring upon a hotbed, and we have sometimes found it advantageous to soak them for three or four hours previously in tepid water. A light vegetable soil, composed of leaf mould or very old and thoroughly decomposed manure, with a third of any good garden soil, will form a suitable mixture in which to sow the seeds. With a good bottom heat of 75 the seedlings will soon appear above ground, and, as the roots descend deeply into the soil of the pot, the young plants will be best potted-off separately as soon as they have made one pair of leaves in addition to the seed-lobes. In the whole of their after-treatment a free, open, vegetable soil must be used. If intended as a window ornament, as soon as the small pots are filled with roots the plants should be shifted to one at least 5 or 6 inches in diameter, if a fine specimen is desired; and an important point to be attended to is, that the leading shoot must be pinched off when it is a few inches long; and this operation must be repeated as often as the laterals threaten to outgrow their trellis, by which means a multitude of side shoots will be produced, and the plants be restrained

within moderate bounds. All the varieties of *alata* produce an abundance of flowers for two or three months in succession; and when covering, as they can easily be made to do, a wire trellis 3 feet in diameter, more striking objects cannot well be imagined.

To preserve the delicate green tint of the foliage, the plant should be shaded from the direct rays of the sun during the hottest part of the day; and as the whole of the *Thunbergias* are extremely liable to the attacks of the minute insect popularly termed the red spider, the plant should be frequently sprinkled or syringed with water. During this operation the pot should be turned on its side; the soil will thus be preserved from too much moisture, and the application of the water can be more effectually carried out. If the plant is kept in a dry hot atmosphere, and the precaution of syringing be neglected, the leaves will speedily lose their rich green hue and assume a pale spotted appearance, and upon a close examination the little pests to which we have alluded will be found in vast numbers upon all parts of the plant, chiefly, however, on the under surface of the foliage.



Thunbergia alata alba.

When cultivated out-doors a shady situation and rich light soil must be chosen, as in a hot, dry, exposed locality they will not succeed. They may be grown against a wall with a suitable trellis, or allowed to trail; but in this case the ground should be covered with a few small bushes, which the plants will quickly conceal. A very pretty effect may be produced by planting several specimens in a small bed, and training them over a few willow rods bent across from side to side. In short, in almost any situation partially shaded, and where proper support can be given to their twining stems, the *Thunbergias* will be found among the most ornamental of the summer occupants of the flower garden.

The species of *Thunbergia* are not very numerous, but include several splendid plants, nearly all of which are inhabitants of the stove. The most remarkable are *chrysoptera* from Sierra Leone, with the limb of the flower of a rich purple and the throat of a golden yellow; *fragrans* with white flowers; *Harrisii* and *laurifolia* with very large blue flowers; and *Hawtayneana* with scarlet flowers, all from various parts of the East Indies. The plant formerly known as *T. coccinea*, also a stove species, is now placed in the genus *Hexacentris*.—W. THOMPSON, Ipswich.—(*English Flower Garden, Revised by the Author.*)

MESSRS. SUTTON & SONS' TRIAL FARM, READING.

TRAVELLING down the Great Western Railway the other day I found that as we neared Reading there was a general rush to the windows of the left side, and it turned out that the

stampede was caused by the knowledge that the annuals on Messrs. Suttons' seed farm were then in full bloom; and when, in common with my fellow travellers, I looked on the sight presented to our view, I did not wonder at the movement, nor at what I was told afterwards—that when Her Most Gracious Majesty was travelling on the same line the other day, she drew up the blinds to gaze on it. As it presented itself to the view one saw all the colours of the rainbow were there, and more too—gorgeous yellows, glowing crimson, brilliant scarlet, soft pinks, dazzling oranges—yea, even deepest maroons and pure whites were there, and as my destination was Reading, I promised myself the pleasure of looking at them in detail. This I did on the following morning, and found that most of this brilliant effect was occasioned by the annuals, which are many of them so easily managed, but when grown, too often, alas! sadly neglected. I spent then a couple of hours in the trial grounds, and think that perhaps a few notes of what I saw may be acceptable to the many readers of the Journal to whom Messrs. Sutton are so well known by name. Here let me say that annuals do not receive even from those who profess to grow them that care they ought to have. If, instead of sowing them in patches, and then leaving them to take their chance, they were thinned-out so as to leave each plant separate, and so give them a better chance of doing well, and if more care were taken with the soil, better results would be achieved.

The utmost care is taken with those seeds whence supplies are taken for their customers by the Messrs. Sutton, while those grown for them by growers are severely tested in these trial grounds. All "rogues," as false plants are called, are carefully weeded-out, and only those perfectly true retained for seed; it is by this means that the correctness which is so essential a part of such a business as that of Messrs. Sutton can be obtained.

Amongst the most showy and useful of annuals are the various varieties of Tom Thumb *Tropaeolum*, of which there were here several distinct and beautiful kinds. Scarlet Tom Thumb was most brilliant, and as all the plants were regular, nothing could be more beautiful than this large piece. Then there was the crimson, not so brilliant, but still very handsome, the Rose Tom Thumb of a pleasing soft shade of colour. *Carulea nana*, which has a very faint *soupeon* of what may by euphony be called blue, as in Blue Bell *Pelargonium*, but very misleading to those who expect to see anything decided in it. King of Crimsons is another very fine variety, with deep-coloured foliage and brilliant scarlet flowers, yellow-spotted, very bright in colour.

Of the old favourite Sweet William there was a very fine patch of various shades of colour, and with large well-formed flowers, reminding me of Hunt's strain of what he called Auricle-eyed Sweet William. And who can describe the glorious colours in the large piece of Poppies from deepest purple, almost black, down through all the gradations of red, rose, pink, and scarlet, to blush and then pure white? *Eutoca viscidula* was very fine, its intense deep blue and its profusion of bloom making it a very pleasing annual. I wonder that in large places, where many a piece of ground suitable for hardly anything else might be found, Poppies are not more grown. These were past their prime, but still a large number remained in bloom to bear witness to their excellence.

In *Leptosiphons* I particularly noticed in large quantity:—*Rosens*, a very beautiful and dwarf species, which cannot fail to be a general favourite; hybrids, which is very suitable for rockwork (of various colours); and *densiflorus*, a fine lilac. Amongst the showy *Lupinus* there were *Lupinus subcarneus*, a beautiful ultramarine blue; *atrococcineus*, brilliant scarlet and white; while lovely pieces of the minor *Convolvulus*, *Batonia aurea*, *Amaranthus atro-purpureus* with its dark handsome-looking foliage afforded admirable contrasts of colour. *Godetia Whitneyi*, one of the more recent introductions of Mr. Thompson, of Ipswich, was there in large quantities, and exceedingly beautiful it is. Of the *Clarkias* there were many varieties, especially of the *integripetala* section, such as *alba* and *marginata*, and they are a very great improvement on the older *pulehiella*. *Collinsia bicolor* was nearly over, but still good. *Erysinum arkansanum*, a showy yellow flower, a different shade from the older *Peroffskianum*, was always very good. Of the many varieties of *Candytuft* the sweet-scented was, perhaps, the most interesting; while the beds of double-white *Chrysanthemum* were exceedingly good, although difficult to keep true. But time and space would fail me were I to enumerate all the various beauties that were here displayed. Enough has, however, been said to show that it was a sight well worth

seeing, and gave abundant evidence of the care bestowed by this firm in keeping their seeds select, and thus maintaining the confidence of their customers.—VOYAGER.

PRUNELLA OPTIMA.

PERHAPS there is nothing more damaging to the reputation of a plant than giving it a higher character than it deserves. Many years ago an instance of this kind occurred in the case of *Plumbago Larpentie*, which was ushered in with a flourish of trumpets, and great was the disappointment created amongst the majority of its buyers—so great, indeed, that it is questionable at the present day if there are as many plants now in the hands of growers as were sent out from the nursery that first held the stock, and yet the plant was after all not without its merits. The fact was, it was extolled so much that those who bought it, not finding it possessed of all the recommendations it was reported to have, repudiated it before making themselves acquainted with its real merits. Other instances might be named of a like kind; but it is more pleasing to turn to those of an opposite character, and such are plentiful enough, in which a really good plant has been sent out without any fuss or parade, and its real merits not fairly recognised until a year or two afterwards. An instance of this was *Geranium Mrs. Pollock*, which, if my memory is right, was sent out with not half the flourish which accompanied many of its successors, and I am not certain but that this variety holds as respectable a position now in most flower gardens as any of its fashionable offspring.

My purpose is not to speak of *Tricolor Geraniums*, but of hardy herbaceous plants, and if the good properties of *Plumbago Larpentie* were unduly set forth, there is another plant of more recent date that has been quietly making its way without any such help. This is *Prunella optima*, a dwarf-growing herbaceous plant of great beauty, which I think is not sufficiently known to the admirers of such things. I am not certain what country it hails from, but it is a credit to wherever its early home has been. Akin to the *Lamium*, it is of dwarfer habit than the best form of *L. maculatum*, or its fashionable still-more-variegated offspring; for this *Prunella* is not more than 6 or 8 inches high, and as a plant very compact, with upright flower stems, each supporting a globular head of its curiously incurved flowers tinted in two or three colours; but, as a whole, furnishing a sort of combination of red and violet, while the individual heads are large and so numerous on a healthy plant as almost to conceal it. It is also perfectly hardy, and I have not found it at all particular as to site. I need hardly say that well-established plants flower much better than newly-planted ones, but it will bear as rough treatment as anything I know of, and still do well. Its habit being of a somewhat spreading character—*i.e.*, its shoots leaning towards the ground and striking root as they touch it, propagation is easy; at the same time it is not a rambler like some of the *Veronicas*. On the contrary, it is as easily kept in a line as a Primrose, and occupies no more space in width. It flowers in June, therefore too late for spring bedding, but the admirer of the herbaceous border, and those who like now and then to vary their edgings of hardy plants, and may have in some degree become tired of *Viola cornuta*, should try this plant. It is not quite so tall, is widely different in colour, but is equally interesting as an ornamental object, and if it does not continue to furnish flowers so long, it is more interesting when it is in flower, and when not so, it is one of the class never in *déshabille*.—J. BOESON.

THE "SETTING" OF GRAPES.

THERE was a period, almost within the recollection of middle-aged men, before Californian or Australian gold was discovered, or cheap glass had become the order of the day, when Vines were generally grown in houses glazed with diminutive panes of glass, nearly one-half of the roof being formed of overlaps and the other of timber; and when also, apparently to increase the quantity under limited accommodation, the young wood was trained-in as closely together as that of the Morello Cherry generally is now. The consequence was indifferently ripened wood; and when the flowering season came round the rods showed abundance of long lanky semi-tendrils, with a few flowers here and there about their extremities. This state of matters required an amount of skill to "set" the Grapes which was not always forthcoming.

The scene has now changed. Large, light, airy structures

are the order of the day; the improvement in the Vines grown in them being nearly as great as that in the structures themselves. But notwithstanding all these advantageous circumstances, indifferently "set" Grapes are by no means uncommon. How best to "set" Grapes is hence a subject which, neither infrequently nor unprofitably, occupies the pages of horticultural periodicals, particularly at the season of the year when the flowering period again comes round. Like many other processes connected with the practice of horticulture, there is much diversity of opinion amongst cultivators as to how this "setting" can best be done.

All other conditions being favourable, it is essential, in order to maintain and keep up to the highest possible point the health of the Vine (particularly while it is forming its young wood, which includes the period of its flowering), to grow it in a moderately moist atmosphere, more or less water being applied in proportion to the amount of artificial heat used, or the strength of the sunshine. The fact that this is generally understood and generally practised, has something to do with Grapes not "setting" satisfactorily—the more so, when the weather is dull and cloudy while the flowering period lasts; because the Vine, like most other exotic fruits, "sets" its flowers most surely in a warm, somewhat dry atmosphere—not necessarily dry, however, the whole twenty-four hours, but only for a few hours during the warmest part of the day, the period when impregnation takes place. In bright sunny weather this dryness is obtained, and at the proper time, by the necessary ventilation required to regulate the temperature, which allows the moist atmosphere to pass gradually out, and to be replaced by a more congenial, drier, and warmer air. When dull sunless weather occurs at this period, special attention should be given to keep the pipes sufficiently hot to allow of a temperature of from 80° to 85° being kept up for a few hours each day, the ventilators being at the same time opened sufficiently to allow of a slow change of atmosphere, so as to carry out the extra moisture with which it may be surcharged.

Grape-growers vary their treatment considerably at this stage of growth. Some prefer a very dry atmosphere and very high temperature, which doubtless is favourable for the "setting" process in, at least, some varieties, such as Muscats, Black Morocco, &c., but is unfavourable to the health of the Vine at this critical period of its growth, while actively engaged developing its tender shoots and delicate foliage, causing the growths to "come weak," and favouring the rapid increase of injurious insect enemies, which are almost sure to make their appearance at a later period in large numbers—a standing source of annoyance and injury during the remainder of the season. Others prefer a moist atmosphere, and even recommend continuing syringing during the flowering process, if the weather proves fine and plenty of sunshine occurs, so as to admit of the atmosphere inside the houses getting dried for a few hours every day. This may be safe practice if the conditions are as just explained; but if otherwise, it is unsafe, for unless the pollen is quite dry, it will not readily act, and consequently impregnation will be none at all but impossible.

The confined state in which Vines under glass are grown is not favourable to the process of impregnation—the glass excluding them to a large extent from the action of the wind, which would otherwise largely aid in spreading the pollen, and bringing it in contact with the stigma. I have long had in use here an admirable but very simple form of trellis attached only to the top and bottom of the vineries and Peach-houses, &c., with the horizontal wires screwed tight, to which the Vines, Peaches, &c., are trained. A sharp blow with the hand makes it vibrate like a fidle string, sending up from and surrounding each bunch with clouds of pollen. This is certainly a much better plan than touching the bunches with the hand, as is generally done, saving much time, and, moreover, doing the work more effectually.

As is well known to all engaged in the culture of the Vine, there are some varieties which "set" under ordinary treatment in the greatest abundance, such as the different varieties of Hamburgh, Trebbiano, Black Prince, &c. There are not a few others which will not "set" freely, unless grown in a high temperature, and assisted in the process of impregnation in some way—by dispersing either their own or the pollen of other varieties amongst their flowers; and when this is properly attended to, I believe there are no varieties but what can be successfully "set" in all weathers. Such at least has been my own experience, with the single exception of the Muscat Hamburgh, which when started after the beginning of February "sets" with ordinary attention as freely as most other varie-

ties, but when started a few weeks earlier appears to "set" equally well, and will swell for a time till after the thinning of the berries takes place, soon after which they begin to swell irregularly, whole shoulders having more than half their berries seedless and scarcely half the usual size, while others in large numbers do not grow much larger than Peas. I have observed the same thing to a less extent with other varieties of Muscats. Is this the result of partial but imperfect impregnation, arising from the want of sunshine or light? Certainly it is not from the want of heat, or caused by a stagnant damp atmosphere.

If it were possible, in general practice, to grow each variety of Vine in a separate house, I believe the treatment of each, in the hands of expert culturists, would be slightly different. Some, such as the Muscats, Black Morocco, &c., would require both root and branch temperatures higher. Others, such as Hamburghs, Sweetwater, &c., could be grown in comparatively cool houses. Some would succeed best in strong loams, others in lighter soils, all requiring thorough drainage, and a liberal allowance of water during the earlier stages of their growth. The variety of treatment applicable to the different varieties would be doubly important during the flowering period.

All this goes to show the difficulty of giving exact instructions as to treatment during the flowering process. In general, I would recommend all the Muscats and most of the shy-setting varieties to have the temperature increased both by night and day; the night temperature to run from 75° to 72°, being highest during the early part of the night, falling a few degrees towards morning, and rising during dull weather at least 10° for a few hours in the warmest part of the day, always accompanying the rise of temperature with additional ventilation. In bright sunny weather, the thermometer, with plenty of air on, may be safely allowed to rise from 90° to 95°; never omitting in some way the dispersion of the pollen during the hottest part of the day.

Free-setting varieties, such as the Hamburghs, set readily with an average of 6° or 8° less heat than the Muscats, but all Vines should have an additional heat, both by night and day, while in flower.—A. FOWLER, *Castle Kennedy* (in *Florist*).

GARDENING IN THE WEST.—No. 5.

WESTONBIRT.

WESTONBIRT is a scantily-peopled parish on the borders of Gloucestershire and Wiltshire, and so difficult of access by rail that it can scarcely be a matter of surprise that no notice, so far as we are aware, has hitherto appeared of the magnificent mansion, not yet completed, and the ample and well-appointed gardens of R. S. Holford, Esq., who is the lord of the soil here and for miles around. It may be useful to mention that the nearest Great Western station is Tetbury Road, fully ten miles distant, but travellers from the north may take the Midland line to Nailsworth, which, by a cross-country road, is a little nearer. In the latter case they will be rewarded by some beautiful views near Nailsworth, which lies nestled between two hills, with the river at the bottom, and for the last five miles they will pass half a dozen houses, and at midday in midsummer meet half that number of people. But Westonbirt, however reached, is a place well worth seeing. Everyone about town knows what a splendid mansion Mr. Holford has in Dorchester House, Park Lane, and that which he is now completing at Westonbirt, and of which on the next page there is a view*, is on an equally grand scale. No regard has been paid to cost; everything is of the most solid character and of the best workmanship. The rooms are of noble proportions and very lofty, of a dignity corresponding to that of the mansion, which it should have previously been stated is of Bath stone, and the whole is rendered fire-proof by turning arches over every ceiling—a matter of great importance in a country house situated as this is far from water. Indeed, the absence of anything like a river or lake within view of the house is a matter of regret, and the more so, as much of the surrounding land was formerly farm ground, and consequently those ancestral trees which no money can purchase do not exist; hence there is a certain flatness in the park, though time and judicious planting would remedy this. Forming a portion of the mansion is a spacious conservatory, which will cover an area of more than 2000 square feet, but which is only in course of erection, and this is connected with the dwelling-rooms by a long glazed corridor, planted with Camellias on

the back wall and climbers on the roof, and at present chiefly filled with fine-foliaged plants.

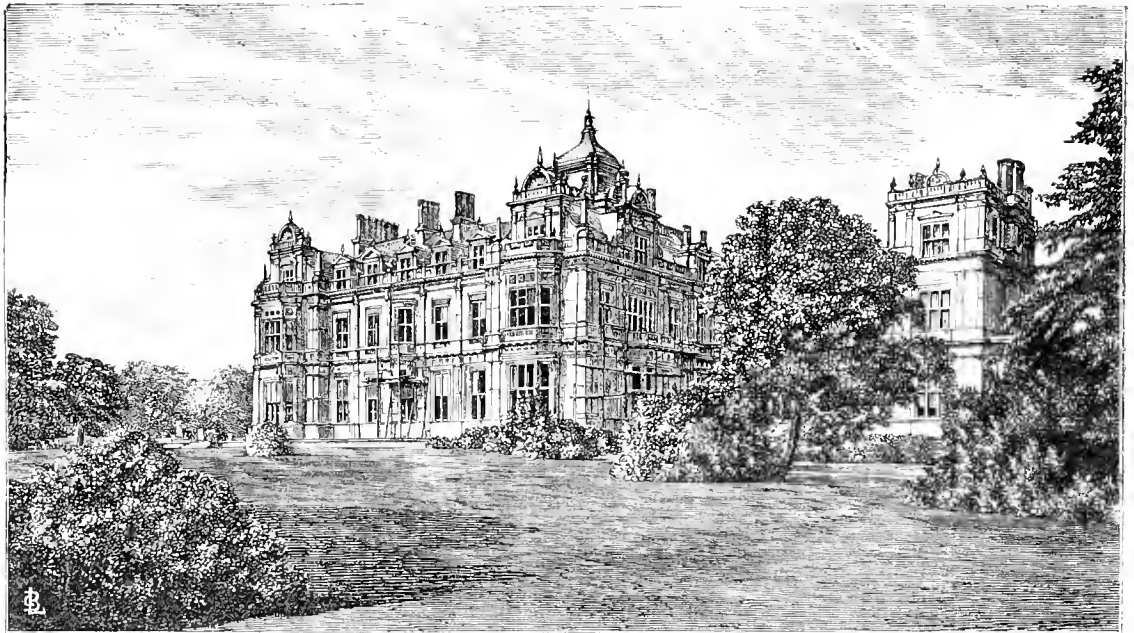
To the south-east of the mansion, in front of a terrace wall with stone pillars and brick recesses, and having handsome pavilions at each end, is the flower garden, of which the plan of one sunk panel is given on the opposite page, the other half, of course, corresponding. All the beds are surrounded by a broad stone edging, and when their summer occupants are in full bloom make a very effective display. The planting this year is as follows:—

- | | |
|---|--|
| 1. Vase, surrounded with Le Grand Geranium. | 10. Glowworm Geranium. |
| 2. Manglesii Geranium. | 11. Lord Derby Geranium. |
| 3. Purple Unique Pelargonium. | 12. Lord Palmerston Geranium. |
| 4. Manglesii Geranium. | 13. White Ivy-leaf Geranium. |
| 5. Manglesii Geranium intermixed with <i>Verbena venosa</i> . | 14. <i>Viola cornuta</i> and Cloth of Gold Geranium. |
| 6. Scarlet Tropaeolum. | 15. Yellow <i>Euothena</i> . |
| 7. Yellow <i>Calceolarias</i> . | 16. Blue <i>Lobelia</i> and <i>Gazania</i> . |
| 8. Mrs. Holford <i>Verbena</i> . | 17. Blue <i>Lobelia</i> . |
| 9. Trentham Rose Geranium. | 18. Scarlet Ivy-leaf Geranium. |
| | 19. Dwarf Blue <i>Ageratum</i> . |

The other half is planted to correspond, although the varieties used are in some cases different, and the long beds with rounded ends have an elaborate chain pattern along the centre, then come *Calceolarias*, pink Geraniums, blue *Lobelias*, and *Cerastium tomentosum*.

There is, besides, on the south side, a second terrace with

another flower garden surrounding a handsome fountain facing the centre of the upper terrace; and a Rose-covered walk with a rockery on each side leads westward. We now again approach the mansion, in front of which on this, the south, side is a smooth-shaven lawn with single specimens of trees and shrubs dotted here and there in the foreground, clumps of these at a greater distance, and farther off some old Elms. A specimen of the Japanese *Acer polymorphum* was particularly effective by its crimson foliage, though of course only of shrub-like size; we also noticed here and on the west side good specimens of *Araucaria imbricata*, *Picea Pinsapo*, *Abies Nordmanniana*, and a large *Wellingtonia*. Some rockwork, executed by Mr. Pulham, of Broxbourne, next claims attention. We have before had occasion to notice in connection with Battersea Park how well he executes this sort of work, which it must be confessed is one of the most difficult things to manage well in landscape gardening. Where rocks naturally exist the utilisation of them for ornamental purposes can generally be effected with ease and without much expense—where nature does much art is the less required—but the artificial arrangement of rocks in places where they do not naturally occur is more frequently bungled than anything we know. The biggest mountain that man can make is but a molehill to the great upheavals of nature, nor would it be desirable, even if we could attain it, to form any approach to a natural hill in



WESTONBIRT.

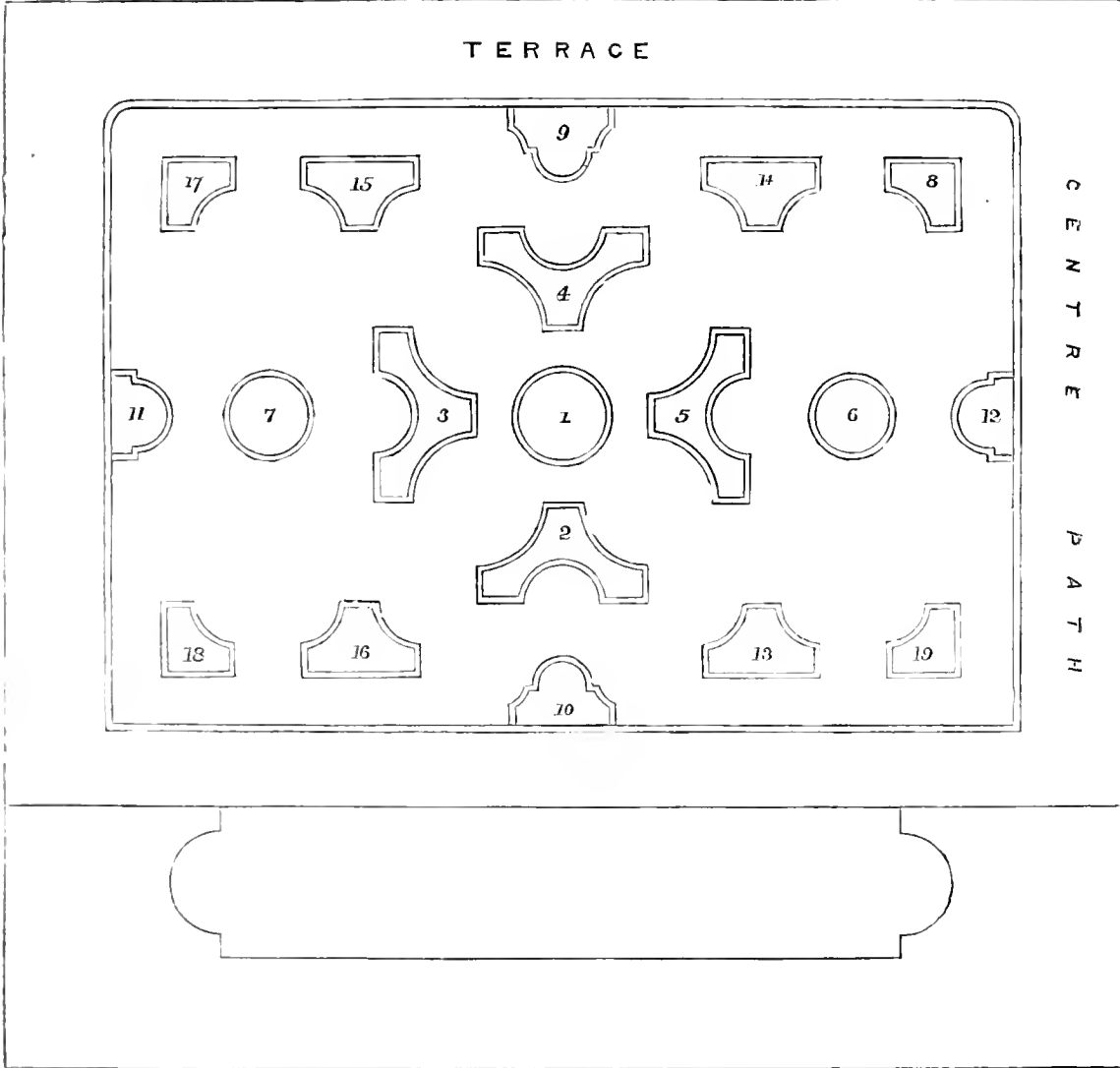
our gardens; but, on the other hand, more modest efforts are apt to result in miniature caves that no one can go into, masses of stones that a man and a barrow could take away in a few hours, and for which there is no *raison d'être* in a cultivated place. Mr. Pulham in this instance has made the rockwork so that it might be supposed to be the remains of the quarry from which the stones had been taken to build the house, and an excellent resemblance to a disused quarry the place bears. "Made to puzzle the geologists of a future age," Mr. Lucas, Mr. Holford's gardener, suggested; but geologists are a hard-headed as well as hard-handed race, and are not so easily taken in. The rockwork has not been long completed, and accordingly it has yet a raw and unclothed appearance, but it has a natural look, and when its newness shall have been mellowed by the hand of time, it will no doubt form a pleasing feature.

The extent of glass at Westonbirt is very large; one compartment of the garden being reserved for the plant structures, while the Peach houses and pits are placed elsewhere. Against the south-aspect wall of this compartment are an *Azalea* house, 40 feet by 15, and four vineries, together amounting to 150 feet run, in which were excellent crops of Black Hamburg, Mus-

cat of Alexandria, and other standard kinds. A portion of the outside border is covered with glass, and can be usefully employed for temporary purposes. In front of the vineries are nine ranges of span-roofed houses running north and south, varying from 15 to 21 feet wide, which are exclusively devoted to plant-growing, and more effectively arranged houses we have never entered. The specimens were not large, but they were well grown, clean, and in robust health, and we must repeat their arrangement deserved the highest commendation. The whole of these houses are heated by one of Cumming & Edmonds's tubular boilers, to which is attached 7000 feet of pipe, but there is a spare boiler which is worked month about with the other, and Mr. Lucas informs us that the temperature of the water in the flow pipe in the coldest night does not exceed 145°, so that he avoids that parching atmosphere and those troublesome insect attacks which an insufficient amount of piping and a highly-heated radiating surface are sure to entail. By means of sixty-seven valves the heat is so thoroughly under command that the coolest house can be rendered the hottest, or the reverse, as circumstances may require. Added to this the glass, woodwork, and other fittings are of the best and most enduring character, and there

is a thorough command of ventilation, in most cases by sashes moved by a ratchet and cog. The central and largest house in this block of nine is a Camellia house, 21 feet wide and 100 feet long, with a domed centre, underneath which the walk branches right and left, but followed in a straight line leads to the flower garden. Being thus an artery of communication it is more ornamental in its construction than the houses on each side of it, and has ornamental plate-glass doors, deluding the eye by reflections of its contents. The first house from the east side is filled in one division with Begonias, Ferns, Crotons, Caladiums, and other fine-foliaged plants, and the second division is an Orchid house, in which *Cattleyas* predominate. The next range, also in two divisions, is an East Indian Orchid and Brazilian house, with ample

provision for heating, and containing a tank capable of holding five thousand gallons of water. In this is an excellent collection of fine *Vandas*, of which *Batemanni* was in flower, *Calanthe*, *Saccolabium*, &c., together with beautiful plants of *Adiantum farleyense* and some other Ferns and fine-foliaged plants. In the second division was a choice collection of *Dendrobiums* and *Oncidiums*, with many other genera. The next range is a propagating house, also used as a refuge and hospital; and the fourth a stove, admirably set out with *Crotons*, Ferns, *Dracanas*, and miscellaneous fine-foliaged plants. This contains a two-thousand-gallons tank. At right angles to the last two and the Camellia house, which forms the centre of the block of glass, is a long fernery with another large tank containing many hundreds of gallons, with *Passifloras*, *Clero-*



PLAN OF FLOWER GARDEN AT WESTONBERT.

dendrons, *Stephanotis*, and other climbers on the roof, and further on *Thyrsacanthus rutilans* and *Poinsettias* make it aglow with brilliant colours. Another cross house, to the left, is at present filled with *Fuchsias*, *Coleus*, and the like, and in winter is kept gay with *Hyacinths* and other bulbs. The remaining four houses are respectively used for double *Geraniums* for cut flowers; for specimen *Azaleas*; for *Epaerises*, *Tree Carnations*, and *Primulas*; and for *Poinsettias*, which are plunged in the bed, but at present for fine-foliaged *Begonias*.

It is really a relief to have thus got over even this brief sketch of the contents of a block of houses so extensive that to have entered into details respecting them would have occupied a

great amount of space, and tired the reader, for Mr. Lucas does not leave things half done. His houses are amply, nay profusely furnished; his plants, though not remarkable for size, are evidently such that he could make them so if he desired, and then they are in multitudes. But he had not done with us, for he next introduced us into a *Palm* house, 50 feet long by 20 wide, in which were a lot of *Livistonas*, large tree Ferns, and a vast number of *Gloxinias* dried off; then into a north-aspect house where there were something like a thousand *Amaryllises*, a class of flowers which he makes a speciality, growing them most successfully, and having raised, in addition, many fine varieties.

Passing over an iron house, empty at the time of our visit, and some ranges of pits, a cool Orchid house, and a bulb house, the early forcing houses were the last to claim attention. In two of these pot Vines are grown with great success, and in one we noticed a lot of that brilliant decorative plant for rooms—especially when seen by artificial light—*Poinsettia pulcherrima*. Of these large numbers are grown, but the finest are the old plants cut back rather closely, which attain a height of 6 feet, producing bracts large in proportion. The soil which Mr. Lucas uses is peat, leaf mould, and loam, and he furnishes in addition occasional supplies of manure water.

The kitchen garden is not on a scale commensurate with the plant-growing department, for what are technically called "rough vegetables" are not in great demand. It amounts to about four acres, and including the forcing garden its extent must be considerably more. To Strawberries, Currants, Gooseberries, and Raspberries, four extensive quarters are devoted; all the ordinary vegetables are also grown, and for the extent of ground they occupied were yielding well. Here, again, we have more glass—a range of Peach houses, in three divisions, 130 feet long. Here the trees are fruited on spurs instead of on the succession-shoot system, and very successfully. They are remarkable for their size and vigour, and Royal George Peach and Elruge Nectarine were bearing 140 fruit of high quality on a tree. In the late house there was a splendid crop of Royal George and Grosse Mignonne Peaches, and Violette Hâtive Nectarine. At the back of this range are an Apple room and a Pear room, each 50 feet long, and a seed room as well, all of which can be heated when desired, and in front two long ranges of hot-water pits for Melons, Cucumbers, vegetable forcing, and Violet forcing, which last flower is in great demand and extensively grown. The Pear trees on the walls, horizontally trained, are in excellent condition; one tree of Gansel's Bergamot on a south-west wall, as well furnished with branches at bottom as at top, covered a length of 45 feet. Plums were a failure on east walls, but there was a capital crop of Green Gages on the south aspect, and of other kinds on the west aspects.

Altogether Westonbirt is a remarkable place, and most worthy of a visit by those who wish to see plant-growing well and extensively carried out, who wish to see substantially erected and compactly-arranged structures adapted for all sorts of purposes, and who wish to see a flower garden such as few mansions can boast of, it having cost, we believe, something like £10,000. To Mr. Lucas in a great measure belongs the credit of having devised and carried out the erection of the world of glass which is here found, and the arrangements connected therewith; and in him the visitor will find an able, willing, and instructive guide.

NOTES AND GLEANINGS.

THE POTATO DISEASE has broken out with great virulence in some parts of Sussex. In the parish of Heathfield whole patches were destroyed three weeks ago, and now it has become more general. It cannot be said in this instance that electricity and electric storms have contributed towards the development of the disease, as there have been no severe thunderstorms in the district this season.

— MR. D. ROBERTS, gardener, Aigburth Hall, Liverpool, writes—From a standard Peach tree, planted in the front border of Peach house here, I gathered on the 15th inst. a dish of eight ROYAL GEORGE PEACHES of the following weights: two weighed 9½ ozs., two 9 ozs., and four 8½ ozs., making the total of 71 ozs., or very nearly the average of 9 ozs. each. I considered them very fine for Royal George, and thought the weight of them would interest those who advocate the orchard-house cultivation of the Peach.

— ON the subject of DISINFECTANTS, which at this season is a matter requiring some attention, Dr. Domett Stone, physician to the Westminster General Dispensary, writes:—Most chemists give the preference to chlorine, which may be evolved by mixing in a bottle two tablespoonfuls of common salt, two teaspoonfuls of red lead, and half a wineglassful of strong oil of vitriol, in a quart of water. The bottle should be kept cool, tightly stopped, and in a dark place; a little of this fluid exposed in a saucer, sprinkled on the floor, or soaked in sheets of old linen and hung about the rooms, rapidly deodorises and destroys effluvia. An article bearing the name of "chlorozone," and professing to be a fluid of greater potency both as a deodoriser and as a disinfectant than any other at present in general use, has been brought before the public. In

writing on this agent in the "Half-yearly Abstract of the Medical Sciences," vol. 52, I have stated that it is essentially a permanganate so combined with chlorine, or chlorinated alkali, that nascent oxygen and chlorine are simultaneously available. The fluid is already in use in several hospitals, and in no case has any fault been found with its effects. It is claimed for this invention that it is the cheapest disinfectant in the market. At a time when cholera is likely to make its appearance in this country, it cannot, I think, be too forcibly impressed that the neglect of preventing disease frequently costs far more than the means themselves.

— We are requested to state that the "SOCIÉTÉ D'HORTICULTURE DES ARRONDISSEMENTS DE MELUN ET FONTAINEBLEAU" will hold their twenty-third General Horticultural Exhibition on the 13th, 14th, and 15th September, at Brie Comte-Robert. Roses will be a special feature of the Exhibition, in order to bring out their really perpetual or "remontant" habits. The show, we believe, will be of an extensive character.

WORK FOR THE WEEK.

KITCHEN GARDEN.

AFTER the first shower of rain earth-up Brussels Sprouts, Savoys, Broccoli, and whatever requires it. Keep the ground free from weeds. Remove the crops that are done with, and prepare it for winter crops. Any Broccoli that are now planted out should have their roots dipped in soot, earth, and water, and immediately after planting should be again watered. The Cape and Grange's intended for use in the autumn should also be watered. The principal sowing of Cabbage for spring use should now be made, if not already done. A few of the Horn Carrot may be sown to stand the winter, but another sowing should also be made towards the end of August. Abundance of water should be given to the *Celery* newly planted, also to the earliest crop, which, if wanted early, should be earthed-up. Continue to plant out, observing to take up the plants with as much soil about their roots as possible. Make a sowing of Cos and Cabbage *Lettuce* for late use. A few *Onions* may now be sown to draw young for winter use, or to stand the winter for transplanting in the spring. As ground becomes vacant another sowing of *Turnips* may be made; if the weather continue dry, water the ground after the seed is sown, and cover with mats.

FRUIT GARDEN.

As soon as the fruit begins to change colour keep a sharp look-out for snails and woodlice. To keep the first in check where they are numerous, syringe repeatedly with clear lime water, not doing it too late, otherwise a thin pellicle of chalk would be formed, and spoil the look of the fruit. Lettuce leaves, &c., may be strewed about the walls after being greased on one side, and examined every morning. The syringing will also decompose the woodlice, as they do not like wet, and cut stalks of beans may be inserted between the branches of the trees as traps; but the great remedy is to keep the walls in good order, so as to give no place for concealment. The very hot days are just the delight of the red spider, and if he once establishes his colonies on the under side of the leaves of Peach trees, he will rest secure for a time amid all the hatterings from your garden engine. Put plenty of sulphur in the engine, previously made into a paste, so that it may mix equally with the water; or, what is better, dab the open spaces of your wall with it, and then the more intense the heat the stronger the fumes of the sulphur will be. Vines, Peaches, and other fruit trees on walls should be divested of their lateral shoots, and those that are left for bearing next year should be neatly milled-in.

FLOWER GARDEN.

Decayed blooms should be removed from Roses, for if allowed to hang they have an unsightly appearance, and tend to encourage mildew. Roses, if in masses or beds, should be so arranged that their colours may be as much contrasted as possible. Where this has not been hitherto attended to, the present arrangement should be carefully examined while the plants are in flower, and any alterations noted that may be considered necessary to render the effect more satisfactory next season. This will greatly facilitate the task of making alterations at the proper season. Proceed with the propagation of favourite sorts, either by means of budding or cuttings. Many prefer having Hybrid Perpetuals, Teas, Chinas, and Bourbons on their own roots. Short-jointed cuttings taken off now, therefore, will root freely if properly made and attended to under a hand-glass, provided the situation is somewhat warm and shaded. The readiest way of propagating them, however, is by means of cuttings taken off plants grown under glass for flowering in spring. In some neighbourhoods black fly is becoming troublesome on Dahlias and Asters. Where such is the case tobacco water and soapsuds may be used with advantage. The strength of the mixture should be tested by dipping some of the shoots worst affected into it, and

using it sufficiently strong to kill the insects, but not so much so as to injure the leaves. It should be applied in the evening when there is a prospect of a bright night, using a fine syringe or fine-rosed watering-pot, and giving enough to moisten the whole of the foliage. Where the stock is growing vigorously pegging and training will involve considerable attention, and it will be necessary to inspect the beds frequently, removing decayed flowers and cutting-back such of the shoots as may incline to encroach upon the edging of the beds. Keep herbaceous plants neatly tied-up, and cut off the flower stems of any that are becoming unsightly. Keep the gravel walks smooth by weeding, sweeping, and rolling.

GREENHOUSE AND CONSERVATORY.

Now when most kinds of hardwooded greenhouse plants are out of doors, painting and other repairs for the houses should be done. As has been already stated, it is now time to provide and encourage an assortment of flowers adapted for blooming late in the autumn and early in winter. Camellias if forced into wood will be tolerably forward. They should be kept out of doors in a good place on cool flags or coal ashes to prevent worms from deranging the drainage. Chrysanthemums should now or very soon receive their last shift, if possible, using chiefly good fibrous loam for the purpose with plenty of charcoal. This is the best way to keep them stiff in habit and to preserve their lower leaves. Any necessary amount of strength may be imparted to them when the flower buds are formed by good liquid manure. Successions of Brugmansias, Clerodendrons, Euphorbias, Poinsettias, &c., should receive a last shift, in order that they may produce a rich display in the conservatory. Climbers on ornamental trellises should be occasionally cut back with the view of having a succession late in the season when flowers are scarce. A batch of such plants as Thunbergias, Ipomeas, Jasmynes, Stephanotis, Passifloras, &c., should be got up ornamental trellises without delay. Clematis bicolor and C. azurea grandiflora force well early in spring, provided they are rested behind a shady wall for a month or two about this season. These latter plants, although perfectly hardy, are well adapted for the conservatory trellis.

STOVE.

About the beginning of August some of the best gardeners treat their established stove plants somewhat like those of the greenhouse for five or six weeks. They either remove the plants to more open houses, or throw their stoves open on purpose, removing dwarf, tender, and young delicate plants into close frames. Whatever conveniences of this sort may be at hand should be made the most of at this time. Nothing can be more injurious to stove plants than keeping them growing late in the season, and thus preventing the ripening of their wood, which renders them more liable to injury in winter, and prevents their flowering freely next season.

PITS AND FRAMES.

The lights should now be drawn off at night where the plants are of the hardier kinds. Stout cuttings of *Plumbago capensis* struck now will force next spring for the conservatory, and may be afterwards planted out in beds in the flower garden, for which they are admirably suited. Propagate largely from those half-hardy plants which cannot be quickly struck in the spring, or that cannot be had of sufficient size to turn into the borders at that time. Sow Mizanotte and a few showy annuals for decorating the plant houses during the autumn and winter.—W. KEANE.

DOINGS OF THE LAST WEEK.

SINCE writing last week we have had some very hot days; on two or three occasions the maximum temperature in the shade rising to 90°. This on our hot gravelly soil has been very trying to vegetation, but it has demonstrated to us the high value of deeply working the soil in winter; especially in the case of such plants as are not considered deep-rooting. The ground for our *Hollyhocks* is trenched 2 feet deep, a good layer of rich manure is placed at the bottom of the trench, a spit and a shovelling of earth are thrown over the manure, another similar coat of manure is placed on it, and then another spit and shovelling. On this plot of ground the *Hollyhocks* have thrown-up immense spikes as thick as a man's arm, and are flowering grandly. Not a drop of water has been artificially applied to them. We also planted another lot of similar plants on ground which had not been trenched last winter although it had been trenched and heavily manured two or three winters previously, and the plants now present a miserable appearance; the largest proportion have not thrown-up any spikes, and those that have are very weak. Liberal applications of manure water would have had the desired effect, but during the press of work in summer we cannot find time to do this. The same with the bedding plants; for many weeks the beds have been quite full, and are in profuse bloom. Nor do we ever water them, always depending on our deep trenching and manuring; be it also understood

that this system of culture applies more especially to dry gravelly soils in dry districts. Our average rainfall is about 21 inches.

FRUIT AND KITCHEN GARDEN.

Here the same remark will apply as to trenching. We seldom get a crop of green Peas at this time of the year from the ground that has not been trenched. The plants show signs of distress, and the leaves turn yellow before the flowers open. In this department much time has been taken up in gathering the fruit for preserving purposes, and in looking over crops and picking-out any weeds that the hoe has missed; in such hot forwarding weather as we are now experiencing they soon run to seed.

We picked a good dish of *Strawberries* last Saturday; the variety was Frogmore Late Pine. This and Cockscumb have been our best late sorts in the present year. With such a Strawberry as Frogmore Late Pine we wonder that anybody can recommend the Elton. Of Cockscumb we had many fruit weighing 2 ozs. each, and none of them were thinned out, nor were the plants watered. We are cutting away the runners that have been rooted into small pots for planting out, and also for pot culture. We shall cut all the old plants up at once, and devote the ground to some other purpose. We read Mr. Wright's paper on the Strawberry and our experience is somewhat different from his. Vicomtesse Hérnart de Thury has been disappointing to us; it was not so early as Black Prince, but come in with Keens' Seedling. Late Prince of Wales we shall not grow again; it bears freely enough, but the fruit is of inferior quality, and only medium-sized.

The pickling Onions have just been pulled up and laid out to dry. A variety named the Two-bladed is grown for this purpose; we do not know a better sort. It is of very little use planting out any green crops during this weather, but we get the ground ready for doing so.

FRUIT AND FORCING HOUSES.

We have the *winter Cucumbers* ready for planting out, but we have not been able to do it yet. It is always best to have such work done as soon as the plants are ready, but when it is not convenient to do so the plants should be shifted into larger-sized pots before they become pot-bound. We have one house which continues to bear very freely. The only insect pests that have been a trouble to us this year have been red spider; syringing the house twice daily has kept it in check. Thrips, when once firmly established, is not easily got rid of, but persistent fumigation will ultimately overcome even this enemy. I think we fumigated one house at least six times before we thoroughly destroyed this pest.

Shading the houses becomes expensive; no material that has been yet tried lasts more than two years, so that it was dispensed with in the Pine houses this year. The plants look very well, but where fruit is ripe or ripening we place a sheet of paper lightly over it to prevent the sun from scorching it; if it do so the fruit will decay at once.

In the late vinery some of the berries on the Lady Downe's Grapes have become scalded through the house being inadvertently shut up too early one hot afternoon; it was not shut up entirely, but the lights were drawn up too closely. We have watched this Grape narrowly, and can freely say that the berries will not scald if due precaution be taken. The ventilation must not even be reduced unless the house falls to 65° or 70° in the evening. Lateral shoots had made some growth, and had to be pinched-off; even in the early houses we do not allow any laterals to grow after the Grapes are cut.

CONSERVATORY AND PLANT HOUSES.

The *Camellias* have now set their buds, and we have just repotted them. The pots are very carefully crocked, and the potting material is the most fibrous turfy loam that can be obtained, with turfy peat added to it. We did not disturb the roots very much, especially where the tender white rootlets had clustered thickly round the outsides of the balls. In cases where the roots were not in good condition the soil was picked away with a pointed stick, and the plant returned into a pot of the same size. The plants were placed in a house where they could be syringed daily, and the house shut up at 6 P.M.

Chrysanthemums have been again dipped to destroy fly, which continues to infest the points of the growing shoots; where it is not convenient to dip them they are dusted with dry snuff. The growing shoots on specimen plants have been trained down and tied to sticks; care must be taken in doing this, as the shoots are very liable to snap off at the joints, which spoils the symmetry of the plants.

FLOWER GARDEN.

The bedding plants have not required much attention, and as to the lawn, it is very brown indeed; it shows the nature of the soil; in deep clayey loam the grass would still be quite green. It will at least require no more cutting until rain come. *Hollyhocks*, which had previously been fastened to the sticks, have to be looked over every third day to prevent the spikes from being injured.—J. DOUGLAS.

TO CORRESPONDENTS.

* * We request that no one will write privately to any of the correspondents of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed *solely* to *The Editors of the Journal of Horticulture, &c.*, 171, Fleet Street, London, E.C.

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

N.B.—Many questions must remain unanswered until next week.

GRAPES MILDEWEN (*Julia*).—Your Lady Downe's Grapes are attacked by the mildew; lose no time in dusting the whole of the Vines affected with flowers of sulphur before the disease spreads to the other varieties.

ROSE-BUDS DROPPING (*J. S.*).—Reine du Portugal and some others of the same class of Rose do not seem to have the power of developing their buds; the petals are too crowded, and there is not sufficient vigour to bring them to maturity, especially on standards. Occasionally by judicious treatment and thinning the buds, with favourable weather, good blooms may be obtained, but, generally speaking, it is better to change for free-flowerers and free-openers. When there are one hundred or more better sorts it is not of much use to persevere with a bad one.

NAME OF ROSE—STRIKING CUTTINGS (*J. R. Burton, Crondall*).—We think it is Louis XIV., but the specimen was too far gone to decide. It might be Le Rhone, though darker than it usually is. For treatment of Roses from cuttings, see answers pp. 50 and 51, to "ROSE" and "ARTURUS."

STATUES IN GARDENS (*Sunny*).—We have often remarked the grotesque effect produced by statues upon light-coloured statuary in the open air, such as you complain of. These effects may already be noticed on the fine marble figures of the Albert Memorial in Hyde Park. The fact is, our moist climate is unfavourable to the erection of light-coloured statuary in grounds, and we always think that an imitation of bronze would be much more suitable than either white or stone colour.

MOVING PLANTS (*J. F.*).—*Hedysarum gyrans* is a native of Bengal near the Ganges, and is called there Buram Chadali, or Burram Chandali. This is a wonderful plant, Linnaeus observes, on account of its voluntary motion, which is not occasioned by any touch, irritation, or movement in the air, as in Mimosa, Oxalis, and Dionna; nor is it so evanescent as in Amorpha. No sooner had the plants raised from seed acquired their ternate leaves, than they began to be in motion this way and that; this movement did not cease during the whole course of their vegetation, nor were they observant of any time, order, or direction; one leaflet frequently revolved, whilst the other on the same petiole was quiescent; sometimes a few leaflets only were in motion, then almost all of them would be in movement at once; the whole plant was very seldom agitated, and that only during the first year. It continued to move in the stove during the second year of its growth, and was not at rest even in winter. (Suppl. Linn.) Swartz observes that the motion is irregular, and that it sometimes ceases entirely; that in a very hot day it is immovable, being agitated only in the evening, and that slowly. In our climate, the leaves, in general, only make a faint and feeble attempt towards the middle of the day at exerting their extraordinary faculty. This motion does not depend upon any external cause that we can trace, and we are not able to excite it by any art that we possess. It is not the action of the sun's rays, for this plant is fond of shade, and the leaves revolve well on rainy days, and during the night: exposed to too much wind or sun, it is quiet. Perhaps, says Linnaeus, there may be some part in vegetables, as in animals, where the cause of motion resides.

UNHEALTHY VINES (*E. R.*).—The Black Hamburgh and Buckland Sweet-water Grape Vines that were planted two years ago in an outside border of a lathhouse, producing a crop of fruit the first year, but failing since then to make much growth, or to produce any fruit, are evidently in their present lamentable condition through mismanagement. By taking a crop of fruit the first year you have so weakened the constitution of the Vines that considerable time and great care will be required to bring them into the healthy condition in which you first of all received them from the nursery. Whoever advised you to take up the Vines and pot them, as a curative, knows nothing of Vine-culture. If the soil of the border is, as we suspect, of a rich, close, adhesive texture, replace it immediately with turf sods chopped roughly into large pieces, or with any sweet loam soil of an open texture, lifting the roots clean out of the soil, and shading the Vines with matting or by whitewashing the glass, syringing the stem and branches plentifully with water during the operation, and as often afterwards as appears necessary. The foliage may drop for a few days, but it will soon recover. Spread each root out to its full length in the fresh soil, pruning off all decayed parts. See that they do not want water—pure water, not liquid manure. Avoid deep planting; 6 inches of soil over the roots is ample. Do not be discouraged if no great advance is perceptible this season; the most pressing and immediate want is a healthy root-action; secure this and all will be well. In autumn, when the leaves are fallen, cut the Vines back to the bottom of the rafter, and every shoot that appears next year should be encouraged to ramble as far as possible. Avoid all stopping or pinching of the growth. If the shoots grow to the top of the house and down the back wall, becoming a perfect thicket, as is very likely, so much the better. If all has gone well, in the autumn of 1874 you will have a fine sturdy lot of canes to select from. Prune all away but the permanent cane, and shorten it in proportion to its strength; then in the following years you may reasonably expect a regular supply of fruit. Do not, however, be tempted to overcrop; only let the condition and general appearance of the Vines be your guide, and you can hardly fail to obtain the success which we wish you.

CARROTS DESTROYED BY WIREWORM (*Edm.*).—As the Carrots are probably worthless, take them up now, destroying every wireworm that is found upon the Carrots and in the soil. As winter approaches throw up the soil on the ridges, and during a severe frost again stir and turn it up deeply, so as to expose as much of it as is possible to the action of the frost, which will destroy the wireworm.

TURF GROWING OVER THE ROOTS OF SHRUBS (*E. R.*).—It is advisable to keep a circle about 3 feet in diameter around the stems of newly-planted shrubs unfurrowed for two years after planting, to facilitate watering, but after that time the turf may be continued close up to the stems.

ARRANGEMENT OF A SPRING GARDEN (*C. D.*).—The general arrangement is very good. The only beds we object to are 1, 1, in which there are too many colours to be effective in such small beds. Discard the Crocus and Ivy, filling the centre with Clematis montana, and replacing the Ivy with a broad edging of Viola cornuta. For an edging of green-foliaged Ivy to be effective, the beds should be on gravel.

GROWING CUCUMBERS IN A HOUSE HEATED BY A FLUE (*W. B.*).—We fancy that your proposed plan will answer. We would place a double layer of bricks over that part of the flue underneath the beds, otherwise there will be danger of too much bottom heat. The evaporating troughs will be necessary over the flues, and you will require to maintain a night temperature of from 60° to 65°.

VINE LEAF DISEASED (*H.*).—The affection on the back of the leaf is probably caused by a current of air in the house. We have frequently seen it in our own houses to a limited extent. It is not, as far as we are aware, injurious. It is quite different from the warty excrescences formed on the under sides of the leaves from the atmosphere being over-moist.

ROSE-LEAVES EATEN-OUT AT THE EDGES (*R. L. T.*).—Yours is a beautifully perfect example of the operations of the Leaf-cutter Bee (*Apis or Megachile centurionaris*), which we figured and thus described in the first volume of our new series:—"Every cultivator of the Rose must have noticed semi-circular cuts (*g*), made in the edge of its leaves with as much accuracy as if done by a mathematical instrument. These segmental are the work of the Leaf-cutter Bee (*h*), and made by its mandibles. The process which one of these bees employs in cutting the pieces of leaf that compose her nest is worthy of attention. Nothing can be more expeditious. With her strong mandibles she cuts without intermission in a curved line so as to



Megachile centurionaris.

detach a triangular portion. When this hangs by the last fibre, let its weight should carry her to the ground, she balances her little wings for flight, and the very moment it parts from the leaf flies off with it in triumph; the detached portion remaining bent between her legs in a direction perpendicular to her body. This bee lives alone, belonging to the group of solitaries. The body is about half an inch long. The female, which is the leaf-cutter, is black, covered with ash-colored hairs; jaws or mandibles large, terminating in four teeth; antennae black, rather longer than the head; wings slightly transparent, dark tipped, veins black; legs hair, spurs dull red, pollen-bristles of hind legs golden; abdomen heart-shaped. The male's body thickly covered with yellow hair; antennae longer than head; jaws two-toothed; dense yellow beard between the antennae; fore tibiae dirty yellow at the outward tip; abdomen rather oval, extremity indented, absolutely toothless.

CUCUMBERS DISEASED (*W. D.*).—The leaf you sent us shows that the plants have had but little air, and are not vigorous. Give them more air, maintaining a temperature of 65° to 70° at night and 75° by day, and 85° to 90° with sun and abundance of air. Slight shade from bright sun is beneficial, but excepting during the last few days has not been needed. In other respects we think your treatment right, only still loam is not so good for Cucumbers as that of a medium texture inclining to be light rather than heavy. The shoots should be trained 16 inches from the glass, and in no case touching it. The leaves show evidence of the disease.

MELONS DISEASED (A. S.).—The leaves you have sent us are damaged by some insect, not woodlice nor wireworms, though the latter may have done mischief to the roots, which alone would be sufficient to account for the plants growing so badly. The only remedy would be to replace the plants and soil with fresh. Eighteen inches is a great depth for soil; we never have more than a foot. We regret not being able to help you to a remedy that would preserve the plants. If at all like the leaves sent, the plants are beyond cure.

GAMB INFESTING ASPARAGUS (G. P.).—We think your Asparagus is attacked by the larvae of the Asparagus beetle (*Circulifer asparagi*), which feeds up on the leaves, perforates the ribs, and destroys the pint of the stem. Peeking off the larvae is the only means we know of freeing the plants of this insect. The beetle may be shaken off into a sheet.

POTATO PIT LIGHTS (A. Constant Subscriber).—We recommend 21-oz. sheet glass, third quality. Your frame or pit being wide ought to have sashes 2½ inches deep, and 1½ inch thick, styles 2½ by 3 inches, and top and bottom rail to correspond. Do not have the lights wide; we find wide lights very cumbersome, and liable to get out of order. 3 feet to 3 feet 3 inches will be sufficiently wide for the pit. Have the sash bars stayed by flat bar-iron stays 1½ inch by three-eighths, two to each light; they all to the strength and durability of the lights.

ORCHARD-HOUSE FRUIT TREES CASTING LEAVES AND FRUIT (Wm. A.).—The most likely cause, and, in fact, we think the sole cause, of the trees casting their leaves and fruit is the removal of 2 inches of the surface soil, taking away with it breaking, or disturbing a great many of the roots, and those the most important, then filling up with rich compost. No more than the bare surface soil should have been removed, and that without interfering with the roots.

CUCUMBERS SHRIVELLING AT THE POINTS (H. M.).—It is caused by a check to the growth that may be occasioned by too heavy waterings, employing cold water, and keeping the atmosphere too close, moist, and cold. Probably a little more air, and not keeping the plants so moist, would set them all right.

SOIL FOR GERANIUMS (A. C.).—Your soil requires two-thirds more loam, and about a fourth of the whole of well-rotted manure.

WATERING MELONS WHEN RIPENING (P. C., Herts.).—It is not desirable to water Melons when ripening, but enough water should be given, as there are others swelling, to keep the foliage fresh, as on that depends the perfecting of the fruit. It ought to be given without wetting the surface much, pouring it between the Vines. A three-gallon watering-potful to each light will be sufficient if applied twice a week in bright weather, and once a week in dull periods. It ought to be a rule never to let water come on the stem or collar of the plants, and not only that, but it ought not to be rowled or shaded by leaves. The foliage drying up, it is likely, though the Melons will ripen, that they will be small, and in case of the foliage dying off water should be withheld.

UTILISING BACK WALL OF VINERY (A. Learner).—The back wall will not answer for Peaches after the second year, and we should not advise you to employ it for any kind of fruit trees, as the Vines will shake the wall as to render it quite unsuitable for their successful cultivation. The only plants we have found suitable are Camellias and Oranges. Either will suit. The former are the more valuable. As you do not propose to have any fire heat in the coming winter, you may plant the Vines in autumn.

ACACIA SEEDS (J. K.).—Sow them in the ordinary way and keep the soil moist. Boiling water would destroy the vegetative power.

PEACHES FOR ORCHARD HOUSE (T. W. C. M., York.).—The Peaches will all succeed in an orchard house, and they will ripen in succession. Noblesse being the earliest; but neither of them is an early variety. The Nectarines will also ripen in an unheated orchard house. If you would like one of each earlier than those you name, you may have Early Beatrice Peach and Violette Hative Nectarine.

DRIED FLOWERS (Ferd. Lutz.).—If you allow the flowers to get too ripe they will shed their seeds; but if you harvest them in good time and hang them in a dry shady place they will not do so.

MADERIA VINE (Ledy C.).—We do not know, and can find no trace of such a plant. Kindly send a specimen. You will find the culture of *Dentzia gracilis* detailed in No. 632, pages 372 and 373. Antierhinna cuttings may easily be struck in autumn and spring if treated like *Verbena*; and excellent plants, which will flower the same year, may be raised from seed sown in March.

WHEAT BLIGHTED (E. A. H. C.).—The Wheat is attacked by a fungus; *Puccinia graminis*, which is a form of the Barberry blight, *Erysium berberidis*. They are the same parasitic fungus in different stages of development. Although it was long supposed to be a popular error that the Barberry and the Wheat blight had any connection, a Danish professor, (Ersted), established the fact.

NAMES OF PLANTS (J. W.).—Your Begonia is a florist's variety, and we cannot name it. (*B. var.*—*spira*) *Pilipendula flore-plena*. (*A. W.*)—*Lactuca Frit-mas cristata*. (*B. var.*)—1, *Pteris arguta*; 2, *Alois-a inae-silifolia*, a native of Peru. (*S. Ippam.*)—*Salsibarua a laudifolia*. It can be obtained from any good nursery. (*B. var.*)—*Veratrum nigrum* (*W. D. H.*).—It is a *Cynoglossum*, but the specimen is not enough to determine what species. (*H. W. Bury.*)—*Nephrolepis exaltata*. (*C. L.*) *Dactyloctenium*.—*Mimulus cardinalis*. The Milk plant is another species of the *Lychnis* genus. (*J. D.*)—1, *Polystichum angulare Kitsonii*; 2, *Athyrium Filix-foemina*; 3, *Lactuca Frit-mas cristata*; 4, *Scopolendrium vulgare crispum*; 5, *Scopolendrium variabile*; 6, *Polystichum angulare intermedium*.

Wright attributes the success obtained in a great degree to the system being entirely carried out without exception.

"The greatest practical difficulty in keeping any non-sitting breed of poultry, like Leghorns, is that of obtaining a sufficient number of hens from other sources to hatch and rear the broods, which in a large stock is sometimes a serious obstacle. From the introduction of two such valuable races of non-sitting poultry as Houdans and Leghorns during late years, the need of a really practical incubator is more felt than ever; but even in the absence of this, much can be done to remedy the inconvenience by bringing up the chickens artificially, or without the hen, leaving her to hatch a second brood, and then dismissing her. We have already given Mr. Halsted's views in favour of this practice, coupled with somewhat of a doubt as to this mode of rearing being, however, quite equal to the care of a hen, much less superior to it. We had, however, never applied the system ourselves to the whole chickens of a season, which we have since learnt is essential to a really fair trial, since under a partial attempt the chickens with the artificial mother are tempted away to the hens with other broods, and thus get fretted. We were, however, exceedingly interested to see, in May, 1873, the working of the artificial system as thoroughly and entirely carried out by Mrs. Frank Cheshire, of Acton, Middlesex, so well known for her fine stock of Light Brahmas. We saw there upwards of seventy chickens, all brought up under an 'artificial mother,' as one brood. They ranged in age from three months to three days, but there was no fighting, or tyranny of the strong over the weak; not one had died (more than we could say of our own), and there was not one sickly or discontented chick in the whole lot; while we were most of all interested to observe that the birds were larger for their age than our own; and that the trouble was nil compared to that of a dozen hens with their broods, to which we went back with a most discontented mind.

"The 'mother' was about 4 feet 6 inches long by 16 inches wide; the top, or heating portion, consisting of a flat tank about 1 inch deep, with the top soldered on, and having only one inlet for pouring in water, or immersing the bulb of a thermometer to ascertain the temperature. This tank extends all over the mother, and is kept in position by a wooden frame, which supports it at about 6 inches high at the front, and some 3½ inches behind. Under the lower or back edge, occupying some 2 inches of the under side, a flue extends the whole length of the tank, which is provided with two chimneys, one at the end or corner near the lamp, the other at the further extremity of the flue. This is necessary for such a long horizontal flue: for without the first chimney the carbonic acid would flow back and put out the lamp when first lighted, though it will freely travel to the further chimney when the flue is warm; moreover, if the night be warm the first chimney alone may be left in operation, but if cold, the heated air is compelled to pass along the whole length of the flue. The tank has a partition soldered in it, round which the water circulates, and by this means the temperature hardly varies in any part. The lamp is merely introduced under the end of the flue. Any good lamp will do, but Mrs. Cheshire's was the most simple and yet most perfect in its action which could possibly be. A piece of small brass pipe was put through a loosely-fitted cork (loosely fitted to give air) in a common glass bottle partly filled with benzine. This bottle is laid on its side on the ground, and a wick being passed through the pipe, the nearly horizontal position of this simple wick-holder enables capillary attraction to draw sufficient fluid through such a length of pipe (18 inches if required), that the most explosive liquids can be used without the slightest danger; moreover, such a wick trims itself, as if drawn too far out the surplus is at once burnt off, and a small and nearly smokeless flame produced without any trouble whatever. This lamp is better trimmed twice in twenty four hours, but will burn tolerably for even the whole of that time without attention.

"Under the tank fits a frame which slides in and out, on the top of which canvas is stretched, to which are sewn the ends of strips of flannel or felt carpet—about 2½ inches long by half an inch wide—which give warmth to the chickens. Mrs. Cheshire informs us that she finds this better than sheepskin, never entangling and strangling the chicks. Under the whole slides a wooden floor, covered pretty thickly with dry mould, which is renewed every day. In the morning the mother would have a little unwholesome smell from the bodies of so many chickens; but our ingenious informant had found an effectual way to remove this, which was easily done by turning the canvas part of the mother upside down, throwing a few shovelfuls of dry earth among the flannel strips, shaking the earth well in, and after letting it remain a few minutes shaking all out again, the little earth that remained adherent coming off on the chickens, and thus benefiting them in another way. This, and the lamp in cold weather, was all the care required, beyond that of the newly-hatched chicks, which was rather a pleasure than otherwise. A rail fence in front of the mother prevented the chickens using it after reaching a certain size, but they were still allowed access to one unwarmed.

POULTRY, BEE, AND PIGEON CHRONICLE.

REARING CHICKENS ARTIFICIALLY.

Few people have had much success in superseding Nature's plan for rearing chickens; but it will be remembered that some time since Mrs. Frank Cheshire stated in this Journal that all her Light Brahmas of this year were so reared. In the ensuing part for August of Mr. Wright's "Illustrated Book of Poultry," there is an interesting account of Mrs. Cheshire's apparatus and method of treatment, which we copy. It will be seen that Mr.

"The few difficulties found at starting had been easily overcome. The two essentials were: first, that the chicks were immediately taken from the hen, so as never to miss and fret after her; and, secondly, that for about two days they needed keeping in a box floored with dry earth, with a small mother at one end, so that they could not wander away from it. This was "the preparatory school for young gentlemen," its sole object being to teach them to know the apparatus and how to go under it. As soon as they were perfect in this lesson they were turned down with the others, the whole being treated as one large brood, and agreeing perfectly. Mrs. Cheshire's small mother consisted of an ordinary indiarubber foot-bottle filled with boiling water, and placed over canvas about 10 inches square, stretched on a frame, and furnished with flannel strips as in the case of the larger one. This occupied half of a common wooden box, the chickens having the other half to run out n. If a few thicknesses of flannel are placed over the bottle, it will keep it warm enough for a whole night; and even when boiling will not be too hot for the chicks, the indiarubber and mother under being bad conductors of heat. Should such a separate infant nursery be thought troublesome, Mrs. Cheshire suggests that a small portion of the large mother may be penned-off and furnished with a small enclosed run in front, so that the chicks cannot wander away till they have learned to know it, which is the sole object desired.

"Both plans of rearing having been fairly tried by the lady from whom we have obtained these interesting particulars, the comparative results are stated by her as follows:—"The advantages of the artificial plan seem to be—1. Great economy of hens if they are needed for laying. If a hen be kept cooped with chicks for three weeks [and we should say five weeks is nearer the mark], she has been six weeks out of the breeding-pen; and after she is returned to it her first four or five eggs will not be fertile. 2. Economy in food; as all eggs, grits, and other dainty food go to the chicks. Special dainties for very young ones are easily given in a feeding-coop, through which the larger ones cannot pass. 3. Economy in labour of feeding and cleaning. This is very great, while there is always capital dry accommodation for the chicks on wet days. 4. The extreme tameness of the chicks. A hen often prevents her brood feeding till the attendant has gone; but under this system little chirpers of three or four days old will run and flutter up to whoever has the charge of them; and they never seem to fight or quarrel. 5. The impossibility of losing chickens by tramping. 6. The greatly increased cleanliness of the chickens, which retain the utmost purity of their beautiful down until its loss. Our experience also proves that they feather more quickly. And, lastly, increased size; we find that we get the same weights on this plan at ten weeks old which we formerly got at twelve weeks. I might add the possibility of raising fine chicks early in the year; since if cold weather comes on they can nestle even at eight or ten weeks old if they will."

"We ought to add that we are thoroughly convinced by actual inspection of the great superiority in every way of this plan of rearing, and that Mr. Halsted's enthusiastic praise of it was fully borne out. The principal reason of the success is, in our opinion, that every chick can have as much brooding as it likes, whereas, when with the hen, weakly ones may often be seen and heard entreating warmth and shelter which the vigorous ones do not need, and which the hen will not give. These chicks die off, while with the artificial mother they are nourished into strong birds. The only difficulty is to tell the different strains, which to the fancier is important. Mrs. Cheshire effected this by dyeing them on the back. By the time this disappears the memory can often be trusted; and if not they can then be marked in other ways.

"The subject is so important to many, that we have thought it well to give this further information upon it while treating of the last of the more useful non-sitting breeds of poultry."

CASTLE EDEN DISTRICT POULTRY SHOW.

(From a Correspondent.)

The sixteenth annual Show of the Castle Eden Horticultural Society was held at Seaham Hall, near Sunderland, on the 22nd inst. *Spur-tish* were a good class. Of *Dorkings* there were few, but the first and second prizes went to good large birds. The first and second *Cochins* were first-class pens. *Brahms* were of fair merit. Of *Hamburghs* there was a good number in the four classes, although several pens did not arrive until nearly noon, and of course too late to be judged. In *Game* there were several birds of superior merit. Two very good pens of *Bantams* were shown, but it was thought by some of the fancy that the commended pen should have been placed second. The class for *Malays* excited considerable interest, as many of the fancy had subscribed for a cup, and most of the supporters of this breed sent their best birds. The first pen consisted of a very beautiful cock bird and a good Partridge-coloured hen, the latter of a colour which is more required in Malay classes. The second-prize pen from the same exhibitor was moulting, but to

my fancy I should have given a preference to the second-prize cock, as being of the true type of Malays. I never saw a better tail, and he was long in the legs and neck. The third-prize birds were the largest in the Show, but the cock lacked condition, and was of a very dark colour; the neck had too many feathers on—a fault with all the rest of the birds. This pen, to my fancy, should have been fourth. The fourth-prize cock bird was of fair merit, but deficient in the true style of a Malay, especially in the length of the leg and neck. The hen was too much of the common colour. The Rev. N. J. Ridley sent a pen, of which the cock was the best coloured bird in the class, and the hen of fair merit. The cock certainly seemed shorter in the legs than the other prize birds, which was no doubt his only fault.

- SPANISH.—1 and 2, R. Moore, East Rainton. 2, A. Buglass, Durham.
- DORKINGS.—1, Mrs. Bardon, Castle Eden. 2, A. Buglass.
- COCHIN-CHINA.—1 and 2, G. H. Procter, Durham. c, J. Lawson, Sunderland.
- BRABMA POOTRA.—1 and 2, R. Moore. c, W. Whitfield, Hutton.
- HAMBURGH.—*Silver-pencilled*—1, R. Moore. 2, W. Laing, Sunderland. *Golden-pencilled*—1, R. Moore. 2, G. Howey. *Golden-spangled*—1, A. Buglass. 2, W. Whitfield, Hutton. *Silver-spangled*—1 and 2, R. Moore. c, W. Whitfield.
- GAME.—*Black-headed or other kind*—1, E. Aykroyd, Leeds. 2, C. Venables, Sberston, Castle Eden. *hc*, A. Buglass. *Any other breed*—1, W. Laing, Sunderland. 2, R. Moore.
- BANTAMS.—*Game*—1 and 2, G. Hall, Kendal. 2, J. King, Walsontown. *Any other variety*—1, R. Moore. 2, Mrs. G. W. Elliott, Ponsler.
- MALAY.—1, Cup, and 2, Roy. A. G. Brooke, Shrovsbury. *hc*, G. Hall.
- DUCKS.—*Applebury*—1, W. Laing. *Rouen*—1, Mrs. Saook, Seaham. *Windsor*—2, J. H. Seaman, Hutton.
- ANY VARIETY.—*Chickens*—1, Mrs. Bardon, Castle Eden. 2, C. Venables, c, Mrs. M. Cust (Brahma Pootra); J. H. Lawson (Brahma Pootra).
- GESE.—1, Mrs. Matthews, South Hetton.
- EXTRA STOCK.—1, A. Buglass (Silver Poland). 2, W. Whitfield (Black Hamburgh). c, R. Moore (Black Hamburgh).

JUDGES.—Mr. A. Sutherland, Mr. Charles Barker.

LEICESTER POULTRY SHOW.

The following awards were made at this Show, held on the 29th inst. We must defer our comments till next week.

- DORKINGS.—1, M. M. Cashmore, Sheepshed. 2, E. Miles, Leicester. *Chickens*—1, Prize, E. Miles. *hc*, H. Yardley, Birmingham. *Cock-reel*—1, Prize, E. Miles. c, E. Kendrick, jun., Lichfield.
- SPANISH.—1, H. F. Cooper, Walsall. 2, M. Brown, Ab Kettleby.
- COCHINS.—*Common and Buff*—1, H. C. Woodcock, Leicester. 2, J. Ward, Ashby-de-la-Zouch. c, H. Yardley. *Chickens*—1, H. C. Woodcock. c, J. Hassall, Wigston Magna. *Cock-reel*—1, Prize, W. A. Burnell, Southwell. c, H. Yardley.
- COCHINS.—*White*—1, R. S. S. Woodgate, Pembray, Tanbridge Wells. 2, G. Barker, Aylestone. *Chickens*—1, Prize, W. A. Burnell. *hc*, H. L. Sanders, Apperly, Leeds; Mrs. A. Williamson, Leicester; Rev. R. Story, Wensley, Bedale. *Cock-reel*—1, Prize, Rev. R. Story.
- COCHINS.—*Black and White*—1, H. Yardley. 2, H. F. Cooper, Walsall. *Chickens*—1, Prize, T. Sheppard, Humberstone. *hc*, H. F. Cooper; Rev. R. Story. c, G. Barker. *Cock-reel*—1, Prize, F. Sheppard. *hc*, Rev. R. Story.
- BRABMAS.—1 and *hc*, Mrs. A. Williamson, Leicester. 2, H. C. Woodcock. c, E. Kendrick, jun. *Chickens*—1, Mrs. A. Williamson. Extra 2, E. Kendrick, jun. *hc*, W. Ford, Humberstone; J. Watts, King's Heath, Birmingham. *Cock-reel*—1, Prize, E. Kendrick, jun. *hc*, Mrs. A. Williamson.
- GAME.—1, E. Bell, Burton-on-Trent. 2, A. Peake, Soutney, Oakham. *hc*, W. E. Oakeley, Atherstone. *Chickens*—1, Prize, E. Bell. *hc*, W. E. Oakeley. c, Lord Mauchline, Duntunton Park. *Cock-reel*—1, Prize, Lord Mauchline. *Cock*—1, Prize, W. E. Oakeley, Atherstone.
- HAMBURGH.—*Golden or silver-spangled*—1, J. Watts. 2, M. M. Cashmore, Sheepshed.
- GAME BANTAMS.—1, E. Bell. 2, Lord Mauchline. *hc*, J. Watts.
- BANTAMS.—*Clean-spangled*—1, H. Yardley. 2, J. Watts. c, J. W. Argyle.
- SELLING CLASS.—*Cock or cock-reel*—1, T. Sheppard, Humberstone. 2, H. F. Cooper, Walsall. *hc*, W. A. Oakeley, Atherstone; W. A. Burnell, Southwell. c, G. Barker, Aylestone; G. B. Bradshaw, Staveley. *Hens or Pullets*—1 and 2, T. Sheppard, Humberstone. *hc*, H. L. Sanders, Apperly; G. Barker (2); J. Watts; T. Sheppard. c, G. V. Heathwaite; M. Brown; H. F. Cooper, Walsall.
- DUCKS.—*Applebury*—1, Prize, T. Soar, Tnewick. *hc*, E. Kendrick, jun., Lichfield. *Rouen*—1, Prize, E. Kendrick, jun. *Any other variety*—1, Prize, H. Yardley, Birmingham. *hc*, Hon. H. Hastings, Derby; Sir A. G. Hazlerigg, Leicester; J. Watts, Birmingham.
- FRIGES.—1, Prize, W. H. Johnson, Braunstone.
- GESE.—1, Prize, J. Parker, Kirby Endon.

PIGEONS.

- CARRIERS.—1, H. Yardley. 2, J. Watts.
- POSSERS.—1, H. Fray, Handsworth. 2, H. Yardley. c, H. Yardley; H. E. Emberton, Oadby; J. Watts.
- BANTAMS.—1, H. E. Emberton. 2, H. Yardley. *hc*, J. F. Loversidge, Newark; M. M. Cashmore, Sheepshed. c, W. H. Tomkinson, Newark-on-Trent.
- FERRIES.—1 and 2, H. Yardley. *hc*, J. Watts.
- MAGPIES.—1, J. Watts. 2, J. F. Hinks, Humberstone.
- ANY OTHER VARIETY.—1 and 2, H. Yardley. *hc*, R. C. Hon. Lord Mauchline, Derby; J. T. Hinks, Humberstone; J. Watts; M. M. Cashmore.
- SELLING CLASS.—1, H. Yardley. 2, C. Norman, Westfield.

- RABBITS.—*Lop-eared*—1, F. Banks, London. 2, W. Canner, Leicester. *hc*, Hon. P. Hastings, Derby; M. M. Cashmore. *Any other variety*—1, E. S. Smith, Boston. 2, J. T. Hinks. *hc*, F. Banks; S. C. Pignat, Huckleby; F. Sabbage, Northampton (2); E. S. Smith.

JUDGE.—Mr. E. Hewitt, Sparkbrook, near Birmingham.

LISKEARD POULTRY SHOW.

(From a Correspondent.)

The fifth annual show of poultry was held at Liskeard on the 21st inst. The entries were more numerous than in any former year, there being upwards of 180 pens of poultry and Pigeons, divided into twenty-nine classes, competing for prizes varying in amount from five guineas to three shillings. *Game* headed the list, and were most numerous, and the class for single cocks of any White-legged variety, for the improvement of table poultry, brought out as fine a lot of Heggies as were ever exhibited, together with some Muffs and Tassels. There could scarcely be

a doubt as to those birds being of the pure old type of Game fowl, as some of the best birds were disqualified for being trimmed or cut for the pit. In the class for Reds, Brown Reds took first and second honours, the first being a gamey-looking pen in good feather. The second went to a pen of large size, with a body old co-cockers would describe as being "as long as a ship," and with a coarse long head—in fact, one of the true exhibition breed. Third came a good-coloured pen of Black Reds, a little stilty in leg. Pen 12 with a bad hen contained the best cock in the class, and of the perfect symmetry and cone-like shape we were wont to see at the first Birmingham Shows. The first-prize pen of Duckwings deserved second and third also, as there was nothing besides in the class worth looking at, and with the exception of the cock being faulty in the feet, this was the best pen of Game shown. *Dorkings* were good, especially the White Rose-combs, and the second-prize pen of Coloured should be cheap at the price (£2 2s.), they were entered at. *Spanish* were moderate, and *Minorcas* were one of the best classes in the Show. *Malays* or *Indian Game* made a very fair class, and the first-prize pen was awarded the piece of plate for the best pen of *Malays*, *Cochins*, *Brahmas*, or *French*, and well deserved it. *Cochins* were moderately good, the best pen being disqualified for making and trimming tails, and although they had passed muster at other recent shows, the experienced eye of the Judge detected the manipulation. *Brahmas*, with the exception of the winning pens, were scarcely up to the average quality. The same may be said of the *French*, and nothing of any especial merit could be found in *Polish* or *Hamburgs*. *Game Bantams* were out of condition; a small stylish pen of Black Reds were first, Brown Reds second. In the class for *Bantams* of any other variety, first came fair Golden Sebrights; second, Black Rose-combs. The winners in the Variety class were White Sul-tans and Black Hamburgs. In the *Selling Class* Partridge *Cochins* were first, and a pen of *Spanish* that would have been first in the *Spanish* class if shown there, were second.

Pigeons, although not numerous, were represented by some good birds, and the *Pouters* were the best both as to quality and numbers ever shown at Liskeard. The Variety class contained some excellent birds, Frillbacks being first, Runts second, and *Jacobins* third.

Mr. Clogg, the Hon. Sec., was most assiduous in his attention to the birds, in the care of which he was assisted by an experienced Committee. The awards were made by the Rev. G. F. Hodson.

SWEETSTAKES FOR SINGLE GAME COCKS.—*Henniss, Tassels, Muffs, or any other White-legged Game, adapted for table purposes.*—1, Miss B. Short, Liskeard. 2, H. Jones, Avonwick. 3, J. Jones, Looe.

GAME.—*Black-headed or other Reds.*—1, W. Craig, Duloe. 2, J. T. Browne, St. Austell. 3, Coon Bros, St. Austell. *Any other variety.*—1, J. T. Browne (Blackwing). 2, and 3, Mrs. B. Short.

DORKINGS.—*Coloured.*—1, F. F. Fowler, Lismore. 2, C. H. White, Liskeard. *Any other variety.*—1, J. H. Nicholls. 2, F. Rundle, Lostwithiel.

SPANISH.—1, J. Bassett, Lostwithiel. 2, H. Feast, Swansea.

MINORCAS OR ANCONAS.—1, R. Box, Bodmin. 2, T. P. Burton, St. Austell.

MALAY OR INDIAN GAME.—Cup and 1, W. H. Huxtable, Barnstaple. 2, Rev. W. Hickman, Warminster.

COCHINS.—1, J. H. Nicholls. 2, H. Feast.

BRAHMAS.—1 and 2, H. Waterman, Devonport. 3, J. H. Nicholls.

FRENCH.—1, H. Feast. 2, J. Godfrey, Liskeard. 3, W. H. Copplestone, Lostwithiel.

POLANDS.—*White-crested.*—1, Miss F. Solomon, St. Blazey. 2, G. Liss, Par Station. *Any other variety.*—1, S. Frobert, Lostwithiel. 2, Miss F. Solomon (Silver-spangled).

HAMBURGS.—*Gold or Silver-spangled.*—1, J. Clark, St. Day, Scourie. 2, H. Feast. *Golden-pencilled.*—1, G. Liss. 2, H. Feast.

BANTAMS.—*Game.*—1, F. Scamfield. 2, W. Garrah, Par Station. *Any other variety.*—1, Miss A. Clogg, Liskeard (Sebrights). 2, J. Nicholls.

ANY OTHER VARIETY.—1, S. Probert (Sultans). 2, W. W. Beckerley, Lostwithiel (Black Hamburgs).

SELLING CLASS.—1, W. W. Eckerleg (Partridge Cochins). 2, J. Bassett (Spanish).

DUCKS.—*Aylesbury or Rouen.*—1, Mrs. S. R. Harris, Cugarne, St. Day (Aylesbury). 2, C. H. White (Rouen).

PIGEONS.

CARRIERS.—1, G. Packham, Exeter. 2, H. Yardley, Birmingham.

POTTERS.—1, H. Yardley. 2, H. Holloway, Stroud.

TUMBLERS.—1, H. Yardley. 2, J. Broad, Plymouth.

FANTAILS.—1, G. Packham. 2, J. Crook, Exeter.

DRAGONS.—1, H. Yardley. 2, G. Packham.

ANY OTHER VARIETY.—1, H. Denham, Exeter (Frillbacks). 2, J. Crook (Runts). 3, A. Darnell, Exeter (Jacobins).

BLACKBURN POULTRY SHOW.

This was held on the 21th inst. The following awards were made by Mr. R. Trebay, the poultry Judge:—

DORKINGS.—1, J. White. 2, J. Robinson. *hc.* T. Hornsby; W. Harvey.

BRAHMAS.—1, T. F. Ansell. 2, H. Beldon. *hc.* F. Wadlington; T. F. Ansell.

SPANISH.—1, L. Leeming. 2, Furness & Suddell. *hc.* H. Beldon.

GAME.—1 and 2, C. W. Brierley. *Cock.*—1 and 2, C. W. Brierley.

COCHINS.—1, T. Aspin and Nuten. 2, W. Harvey.

HAMBURGS.—*Golden-pencilled.*—1, J. Robinson. 2, H. Beldon. *hc.* J. E. Wenses. *Silver-pencilled.*—1, H. Beldon. 2, J. Robinson. *hc.* J. Bowness. *Golden-spangled.*—1, H. Beldon. 2, J. Robinson. *hc.* G. & J. Duckworth; J. Bowness. *Silver-spangled.*—1 and 2, J. Robinson. *hc.* H. Beldon. *Black.*—1, H. Beldon. 2, J. Robinson.

BANTAMS.—1, H. B. Smith. 2, H. Beldon. *hc.* J. Warts; E. Walton; T. Waddington; T. Copper. *Game.*—1, L. R. Robinson. 2, and *hc.* W. F. Entwice. *Cock.*—1, W. F. Entwice. 2, W. F. Adhe. *hc.* J. R. Robinson.

POLANDS.—1, H. Beldon. 2, T. Waddington. *hc.* W. Harvey.

HOLLANDS.—1 and 2, G. W. Hibbert.

SELLING CLASS.—1, J. Bowness. 2, Furness & Suddell.

GRSE.—1 and 2, J. Walker. *hc.* L. Anson; S. H. Stott; J. Houker.

DUCKS.—1 and 2, J. Walker. *hc.* J. Higham; T. Tomlinson. *Rouen.*—1 and 2, T. Wakefield. *hc.* J. Walker. *S. H. Stott.* *Any other variety.*—1 and *hc.* H. E. Smith. 2, C. W. Brierley.

TURKEYS.—1, F. E. Rawson. 2, J. Walker. *hc.* W. Section.

RABBITS.—*Long-eared.*—1 and 2, J. Boyle. *Angora.*—1, G. C. Hutton. 2, J. W. Harling. *Humblyton.*—1 and 2, S. Ball. *Silver-Grey.*—1, S. Ball. 2, J. Boyle, jun. *Any other variety.*—1, J. Boyle, jun. 2, J. Irving. *hc.* S. G. Hudson.

HITCHIN POULTRY SHOW.

The following is the list of awards made at the Show held at Hitchin on the 24th inst., at which Mr. Martin and Mr. W. B. Tegetmeier were the Judges respectively for poultry and Pigeons.

DORKINGS.—*White.*—1, J. Robinson. 2, O. F. Crosswell. *Coloured.*—1 and Cup, J. C. Bunnell. 2, Rev. E. Bartrum. *hc.* Rev. E. Bartrum (2); J. Robinson; F. Barlett.

COCHINS.—*Ruff.*—1 and Cup, Lady Gwydyr. 2, T. F. Ansell. *hc.* J. K. Fowler. *White.*—1, J. K. Fowler. 2, K. S. S. Woodgate. *hc.* R. S. S. Woodgate; J. J. Malden.

BRAHMAS.—*Dark.*—1 and Cup, T. F. Ansell. 2, H. Lingwood. *hc.* R. Fulton. *Light.*—1, M. Leno. 2, H. Feast.

FRENCH.—1 and Cup, J. Robinson. 2, R. B. Wood. *hc.* R. B. Wood; W. Dine (2); H. Feast; E. Lutton; J. J. Mahlen (2); J. K. Fowler; G. R. Hibbert.

SPANISH.—1 and Cup, Nicholls Bros. 2, J. F. Sillitoe.

GAME.—*Reds.*—1, J. Jekin. 2, S. Matthew. *hc.* E. M. L. Cocksedge; R. Swift. *Any other colour.*—1 and Cup, S. Matthew. 2, H. E. Martin.

HAMBURGS.—*Spangled.*—1, Cup, and 2, J. Robinson. *hc.* H. Feast; J. B. Bly. *Frilled.*—1 and 2, J. Robinson. *hc.* T. Edmunds.

POLISH.—2, G. W. Boothby.

ANY OTHER VARIETY.—1, Lady Gwydyr (Silky). Extra 1, J. Robinson (Black Hamburg). 2, J. K. Fowler. *hc.* Rev. N. J. Bidley.

SELLING CLASSES.—(3s.).—1, T. F. Ansell. 2, Lady Gwydyr (Cochins). (£1 1s.).—1, L. Wren (Brahmas). 2, Cross & Mansfield (Dorking).

LOCAL CLASS.—1, S. Tuke (White Cochins). 2, S. Lucas (Light Brahmas). *hc.* A. Ransom.

BANTAMS.—*Game.*—1 and *hc.* R. Newitt. 2, G. Garrod. *Any other variety.*—1 and Cup, M. Leno, Dunstable. 2, C. Reed. *hc.* M. Leno; W. H. Tomlinson, Newark.

NEWCASTLES.—1, J. K. Fowler, Aylesbury. 2, M. Leno. *hc.* Rev. R. L. Story; W. Drog, Faversham; J. Robinson, Garstang; E. Lounour; J. J. Malden, Biggleswade.

PULLETS.—1, M. Leno. 2, Rev. R. L. Story. *hc.* A. Darby, Bridgenorth; W. Drog; J. K. Fowler; J. Robinson; A. Hanson (2); E. Lantur (2); J. J. Malden. *hc.* G. H. Fitz-Herbert.

DUCKS.—*Aylesbury.*—1, Cup, and 2, J. K. Fowler. *hc.* G. Kirby; J. Robinson. *Rouen.*—1 and *hc.* J. K. Fowler. 2, J. H. Barnes. *c.* J. H. Barnes; Rev. E. Bartrum. *Any other variety.*—1 and 2, M. Leno (Vidua and Aumannal). *hc.* Capt. C. F. Terry (2); J. J. Malden.

GRSE.—1, J. K. Fowler. 2, J. H. Barnes.

PIGEONS.

POTTERS.—*Cocks.*—1 and 2, R. Fulton, London. *hc.* R. Ashton; W. Nottage.

HENS.—1 and 2, R. Fulton. *hc.* R. Ashton.

CARRIERS.—*Cocks.*—1 and *hc.* R. Fulton. 2, H. Yardley. *c.* R. Blacklock.

HENS.—1, Cup, and 2, R. Fulton. *hc.* T. Chambers, jun.

BARBS.—1 and 2, R. Fulton. *hc.* H. Yardley. *c.* C. Norman.

TUMBLERS.—1 and 2, R. Fulton. *hc.* H. Yardley. *c.* G. Lucas.

OWLS.—1, R. Fulton. 2, H. Yardley.

TRUMPETS.—1, O. E. Crosswell. 2, H. Yardley.

JACOBS.—1 and 2, R. Fulton. *c.* W. Larkins.

FANTAILS.—1, J. F. Loversidge. 2, O. E. Crosswell. *hc.* R. Fulton; W. H. Tomlinson.

ANY OTHER VARIETY.—1, W. Larkins (Yellow Dragons). 2, L. J. Price (Loughon Hunt). *hc.* H. Yardley.

SELLING CLASS.—1, W. Nottage (Barbs). 2, J. Ford (Carriers). *c.* W. Larkins.

RABBITS.—*Long-eared.*—1 and 2, F. Banks. *Silver-Grey.*—2, G. Beckley. *Any other breed.*—1 and 2, F. S. Schage. *hc.* F. Banks. *Selling Class.*—1, F. Banks. 2, E. Day. *hc.* Rev. — Loughborough. *c.* G. Beckley.

WESTWARD HO POULTRY SHOW.

We have often thought that Falstaff would have had more bread to his sack had one been as accessible as the other, or had facility been afforded to him. The tapster was deaf to the cry for bread, but alive to the cry for another pottle. This, added to the inclination for the liquid, caused the undue consumption of one as compared to the other. It is a great thing to have at hand all that you are likely to want. Acting on this principle, our good and kind western friends had on one day poultry, Pigeons, and horses; on the other day poultry, dogs, and donkeys. The great magician of the north, so long known as the "Author of Waverley," made the fortunes of the inhabitants of the places he described by attracting people to see them, and so our magician of North Haunts has created a place by his vivid description of Hildford, the Tor, and the surrounding country, the abode of the admirable Mrs. Leigh, of Frank, of Amyas, good Sir John Brimblecombe, sterling Will Cary, gallant Grenville. As we walked the streets we thought to meet "The Rose of Torridge," and we looked about for something to connect us with the time of "good Queen Bess" and the deeds of the giants of those days. We did not look far. The first name we saw on a shop front was "Heard." We thought of Michael "of that ilk" striking down the noble Spanish captain, and sinking with him and his ship. As it is said you should always leave off with a success, we sought no farther in the town, but sought the new creation, "Westward Ho," a mighty pleasant spot in summer and autumn, but we should think somewhat dreary in winter. It is struggling through its present, but it must have a future. There is a gradual rise from the unique pebble beach, two and a half miles in length, to the top of lofty wood-clothed hills, and the embryo town stands midway. The unkind storms and the ground swells have twice

carried away the pier, but, nothing daunted, another is built, and was opened on Thursday last.

The show ground was well chosen—a level space, with the woods and the sea below. On it stood a large tent containing poultry and Pigeons, a very large one to cover a hundred and forty horses; the Channel Islands cattle stood without cover. A capital grand stand was erected, facing an enclosed space, where for three hours the spectators were indulged with "high jump," "double jump," "water jump," to the great delight of the numberless ladies who crowded the stand. Then a large lifeboat came out from somewhere or other fully manned, the crew in red caps, and encased in cork jackets, seeking every opportunity of taking her into bad water or rough surface, but it was useless. She was in every respect above it; she hardly seemed to float on the waves, but to skim over and touch them, as we sometimes see swallows. The access to the show yard was only prevented by a hedge in some parts and hurdles in others. We fancied these latter would prove an insufficient barrier, but our friends are wise, and just before the time for admission drew nigh they were thickly smeared with liquid tar. This answered the purpose.

The number of entries of poultry was affected by a similar show—i.e., poultry and dogs, being held at Liskeard, and another being advertised at Exeter within a few days. We publish a list of the prizetakers. The best classes were *Dorkings*, *Game*, *Cochins*, *Brahmas*, and *Bantams*. It is a matter of regret that everywhere the *Spanish*, the *Hamburghs*, and the *Polands* show so badly. It must sooner or later bring about a change in the prize sheets. The *French* breeds, at least the *Crève-Cœur*s and the *Houdans*, challenge notice, and deserve it. Light *Brahmas* should have a class. The *French* breeds we have named are excellent layers. If it be the characteristic of any birds to lay in the winter, these may claim the property. The *Ducks* would have shown better, but some good specimens were put in the wrong classes. The *Geese* were very heavy, and the *Whites* unusually good. The *Turkeys* were good, and showed, as they do almost everywhere, that the American is spreading all over the country.

The *Pigeon* show was an excellent one, bringing many first-class birds. There were large numbers of people on the first day, but the weather was very unfavourable on the second.

- DORKINGS**.—1, J. Heal, Parkham. 2, H. Feast, Swansea.
SPANISH.—2, H. Feast.
GAME.—*Black-breast or other Reds*.—1, J. Boyle, Barnstaple. 2, N. H. Parker, Tawstock, Barnstaple.
COCHIN-CHINA.—1, Mrs. Christie, Tapeley, Instow. 2, H. Feast.
BRAHMAS.—1, Miss B. How, Woodville, Biddeford. 2, H. Feast.
HAMBURGH.—*Gold-pencilled*.—1, H. Feast. *Gold-spangled*.—1, H. Feast. *Silver-spangled*.—1, H. Feast. *Silver-pencilled*.—1, H. Feast.
POLANDS.—1, Mrs. Viall, Langtree. 2, H. Feast.
SELLING CLASS.—*Cock*.—1, J. W. Tacott, Barnstaple. *Hen*.—1, Mrs. Christie, Tapeley, Instow. 2, J. A. Lyne, Newport, Mordenouth.
BANTAMS.—*Game*.—1, Miss E. How, Woodville, Biddeford. 2, J. Heal. *Any other variety*.—1, F. Braund, Biddeford. 2, S. Synnolds, Barnstaple. *hc*, A. M. Pigott, Braunford Speke, Exeter; W. Willis, Liskeard.
GUINEA FOWLS.—1, W. Gilt, Tawstock, Barnstaple. 2, Miss B. How, Woodville, Biddeford.
DUCKS.—*Rouen*.—1, J. Heal. *Farmyard, any other variety*.—1, Miss Turner, Abbotsham, 2, J. Heal.
GEESE.—1, J. Heal. 2, Mrs. Christie, Tapeley, Instow. *hc*, J. A. Chapple, Biddeford; J. Heal.
TURKEYS.—1 and 2, J. Heal.
PIGEONS.
CARRIERS.—1, H. Yardley, Birmingham. 2, Bullen & Joce, Newport.
POPPERS.—1, H. Yardley. 2, G. Holloway, jun, Stroud.
BARBS.—1, J. L. Smith, Newport. 2, Bullen & Joce. *hc*, F. Braund, Biddeford; J. L. Smith, Bullen & Joce.
FANTAILS.—1 and 2, J. L. Smith. *hc*, H. Yardley; F. Braund.
JACOBINS.—1, H. Yardley. 2, F. Braund.
TROUPEPIERS.—1, Bullen & Joce. 2, F. Braund.
TURBETS.—1, J. Crook, Heavitree, Exeter. 2 and *hc*, J. Geary, Moreton.
OWLS.—1, F. Braund. 2 and *hc*, J. L. Smith.
TUMBLERS.—1, G. Packham, Exeter. 2, F. Braund. *hc*, H. Yardley.
NUSS.—1, Bullen & Joce. 2, F. Braund. *hc*, J. L. Smith.
DRAGONS.—1, H. Yardley. 2, G. H. Gregory, Taunton. *hc*, F. Braund.
ANY OTHER VARIETY.—1, H. H. Clarke, Biddeford. 2, J. Geary.

- RABBITS**.—1, C. King, St. John's Wood. 2, T. V. Greet, Biddeford.
 Mr. Bailly was the Judge.

GAINSBOROUGH POULTRY SHOW.

For many years the heat of the weather has not been so great as it was at the time of the Gainsborough Show. The sole motive of allusion to this fact is, that it leads to a subject of vital interest to the owners of first-class exhibition birds. It appears that two valuable specimens, an American Turkey cock and a fowl of great size, the latter exhibited by the owner under the name of "Pookain," were both found dead when received at Gainsborough. It should be remembered by exhibitors that though travelling baskets closely covered with thick canvas are suitable for the conveyance of poultry in winter, or even in ordinary weather, yet during times of great heat, and the day oppressively sultry, if such baskets are (as usual) packed closely in a horse-box on the railway, it is not uncommon to find plenty thoroughly exhausted on their arrival, and some dead. It is but just to remark, had it not been for the careful and prompt attention of those having the management of the poultry tent, several other pens of poultry would have been utterly ruined as

show fowls, for they arrived so thoroughly prostrate as to be unable to stand even for a moment. Baskets cannot be too airy under such circumstances.

The Show itself was limited as regards numbers, but the majority of the poultry were very superior specimens. The *Game* fowl were unquestionably very fine, the major portion being in really good plumage. The *Golden Polands* and *La Fleche* fowls were capitally shown, as was also one of the best pairs of perfectly white *Guinea fowls* ever exhibited. *Dorkings* were very large well-grown specimens, but dropping fast into moult. *Cochins* were not equal in quality to those of former years, and the same remark applies with equal force to the *Hamburghs* and *Game Bantams*. Good Silver-laced *Sebrights* and *Black Bantams* were respectively the winners in the division appointed for them. The *Turkeys*, *Geese*, and *Rouen Ducklings* were of a very superior character. The *Dark Brahmas* were also very fair, but the Light-feathered ones were exceedingly poor. A small but really good collection of *Pigeons* appeared to be very popular with visitors.

The arrangements in the Show tent for the poultry were well managed; in fact, it was generally remarked that the poultry tent was the coolest and most comfortable spot in the whole exhibition field. The attendance was satisfactory, and the Judges were Mr. Tegetmeier, of London, and Mr. Hewitt, of Birmingham.

- DORKINGS**.—1, W. Roe, Newark. 2, T. F. A. Burnaby, Newark. 3, W. Harvey, Upperthorpe. *hc*, J. Waters, Elham.
COCHINS.—1, T. Livesley, Eastgate. 2, W. Harvey. 3, W. Whitley, Clough. **BRAHMAS**.—1, W. R. Garner, Bourn. 2, W. Whitley. 3, W. Harvey.
POLANDS.—1, W. Harvey. 2, J. M. Proctor, Hull.
FRANCE.—1 and Extra, Rev. N. J. Ridley, Newbury. 2, W. Harvey. 3, Mrs. Cross, Brigg.
GAME.—1 and 2, C. Chaloner, Whitwell. 3 and *c*, J. Pearce, Sturton.
SPANISH.—1 and Extra, J. Powell, Bradford.
HAMBURGH.—1, J. Waters, Elsham. 2, J. Smith, Lincoln.
GAME BANTAMS.—1, R. E. Duckering, Northorpe. 2, A. Garfit.
BANTAMS.—1, J. M. Proctor. 2, K. H. Ashton, Mottram. *hc*, J. Elgar. *c*, Mrs. Cross.
ANY VARIETY.—*Cock*.—1, C. Chaloner, Whitwell (Game). 2, O. E. Cresswell, Burslow (White Cochins). 3, H. M. Julian, Hull (Game). *hc*, Rev. N. J. Ridley (White Leghorn).
GEESE.—1, J. B. Hepworth, Doncaster. 2, T. M. Derry, Gedney. 3, S. H. Stott, Preston.
DUCKS.—*Aylesbury*.—1, E. Kendrick, jun., Lichfield. 2, J. Hornsby, Grantham. *Rouen*.—1, S. H. Stott, Preston. 2, E. Kendrick. 3, W. Hutton, Gainsborough.
TURKEYS.—1 and Extra, Rev. N. J. Ridley. 2, M. W. Marret Overton. *hc*, E. Kendrick, jun., Lichfield.
GUINEA FOWLS.—1, O. E. Cresswell. 2, No Competition.
SELLING CLASS.—1, R. E. Duckering, Northorpe (Black-breasted Red). 2, T. F. A. Burnaby, Newark (Crève-cœur). 3, J. Waters.
PIGEONS.—*Carriers*.—1, W. Harvey. 2, H. Yardley, Birmingham. *hc*, J. Elgar. *Pouter*.—1, W. Harvey. 3, H. Yardley. *Tumblers*.—1, H. Yardley. 2, W. Harvey. *hc*, A. B. Douglas, Hounslow. *Any other variety*.—1, H. Yardley. 2, W. Harvey. *hc*, J. Elgar (White and Blue Fantails).
EXTRA.—1, E. G. Fane, Grantham.

GAINSBOROUGH CAGE BIRD AND RABBIT SHOW.

As the Lincolnshire Agricultural Society's Show was this year held at Gainsborough, and prizes were offered for poultry and Pigeons, the Gainsborough Society waived their claim in favour of the Agricultural Society, and held only a floral fete, gala, and bird and Rabbit Show, at which the prizes were but small and the classes somewhat limited. The consequence was that in the Rabbit section the entries were not numerous, though some of the classes of *Cage Birds* were well represented.

First in the section to which we refer was a class for *Yellow Canaries*, the first prize for which was borne off by a nice Norwich, the second being also taken by that variety; in *Bufs* the Norwich fancy was likewise to the front. In *Green* or *Variegated* the first was a *Jonque Norwich*, which was the best of these three sections; the second prize going to a *Yellow-marked* bird, and an extra prize was awarded to a very handsome *Cinnamon* nestling, which through some mistake was placed in the wrong class. An almost perfect *Golden* bird stood first in the *Lizard* class—in fact such a bird as is rarely seen; and the second-prize bird was a *Buff*, also of fair quality. The *Goldfinches* and *Linnets*, as is usually the case in this part of the country, were well shown, in nice plumage, and very tame, and the *Parrots* and *Parraquets* also in good feather. In the *Variety* class a pair of *Love Birds* stood first, with a *Thrush* of this year second; and a *Brambling* or *Mountain Finch* was highly commended.

In *Lop-eared Rabbits* only the winners were noticeable. In *bucks* the first prize went to a *Black-and-white* 21½ inches by 1½ in ear, and the second to a light *Tortoiseshell* 21½ inches by 1½. The does were, first a splendid *Tortoiseshell* 21½ inches by 1½, and second a *Fawn* 21½ inches by 1½. The *Himalayans* were all good specimens, and the heaviest *Rabbit* weighed 14½ lbs., the second being 13 lbs. 12 ozs. in weight.

On the first day of the Show the visitors were not so numerous as we could have desired, but we hope to hear better reports of the second day.

CAGE BIRDS.

- CANARIES**.—*Yellow*.—1, G. Eason, Gainsborough. 2, F. R. Gilling, Worksop. *hc*, T. Green, Gainsborough; F. M. Barton, Gainsborough. *Buff*.—1, W. Dill, Gainsborough. 2, T. Green. *hc*, G. Kayner; A. Burdett, Gainsborough. *c*, F. M. Barton. *Green or Variegated*.—1, W. Hill. 2, T. Green. *hc*, G. Kayner; T.

Green; R. Wykes; Gainsborough; F. M. Burton; J. Forrest, Gainsborough. *Gold or Silver Spangled Lizard*.—1 and *hc*, W. Hill. 2, G. Rayner. *GOUDINCH*.—1, G. Rayner. 2, W. Temperton, Burnham, Bawtry. *LINNETS*.—1, T. Kirk, Burnham, Bawtry. 2, W. Temperton. *AC*, T. Green; J. Lynnes, F. Worth. *PARROT*.—1, T. King, Gainsborough. 2, A. Kirk, Gainsborough. *hc*, W. Anderson, Gainsborough.

PALM-PIGEON.—1, J. Bloom, Gainsborough. 2, J. Tait, Gainsborough. *ANY OTHER VARIETY*.—1, J. King (Love Birds). 2, J. Landin, Gainsborough (Thrush). *AC*, Mrs. Forrest, Gainsborough (French Chat).

RABBITS.—*Lop-eared*.—*Buck*.—1 and 2, Shaw & Allison, Sheffield. *hc*, J. Hannam, Gainsborough. *Doe*.—1 and 2, Shaw & Allison. *Himalayan*.—*Buck or Doe*.—1, S. Ball, Bradford. 2, S. J. Hudson, Hull. *AC*, S. Ball, Bradford; G. Aylesby, East Retford; F. Ledger, East Retford. *Beanoet Buck or Doe*.—1, Miss F. Booth, Gainsborough. 2, W. Anderson, Gainsborough. *Extra*.—*hc*, D. S. Mackay.

BRAMLEY POULTRY, PIGEON, AND RABBIT SHOW.

The schedule of prizes offered was a slight improvement upon that of last year, and the increase of entries fully answered the expectations of the Society. The specimens were placed under a light and airy tent, in which ample shade from the almost tropical sun was found for large numbers of visitors. The pens used were those of Mr. Turner, of Sheffield, and the birds and Rabbits were well fed and attended to with water.

Of *Spanish*, two pens were extremely fine in quality of face and drop, but the third pen proved coarse, and the cock's face was almost red. *Cochins* were but a poor lot, and the birds in two of the pens had badly diseased feet; the winners were Buffs. *Brahmas*, which were all of the Dark variety, were very much better, and may be termed a fair lot. *Red Game* were but poor as a class, though the cock in the first-prize pen and the hen in the highly-commended pen were fine birds; the chance of the latter, however, was entirely destroyed by the cock, which, in addition to being bad in colour, was both duck-footed and unsound in feet. The second prize went to Black-breasted Reds, but in bad feather. In *Game*, any other variety, there was no entry. *Polish* were good in all particulars, and all of the Golden variety. *Hamburghs* had five classes; the entries were not numerous, but the lot was almost uniformly good. In *Red Game Bantams*, chickens in full feather won both prizes; an adult pen, which was highly commended, was also very good. In the Variety class for *Gaiole*, Piles were first and second, no others being worthy of notice. In *Black Bantams*, the first prize went to a very neat pair, although the cock's comb was rather large. The second-prize pair were neater in head, but not so small, and good in style. *White Bantams* were first in the next class, and silver *Sabrights* second. *Ducks*, Rouen or Aylesbury, were a grand class. In the Variety class, which was very attractive, *Kawarkas* stood first and *Pintail* second.

There was one class for chickens, in which some good and forward specimens of several varieties were shown, and many were noticed, *Spanish* of great promise being first, and fine *White Cochins* second. In the Variety class a capital pair of *Grey Dorkings* were first and *Guinea Fowls* second. In the Selling class the first prize went to *Light Brahmas* and the second to *Spanish*. The cup was won by Mr. Beldon with *Spanish fowls*.

Pigeons were more numerous than the poultry, and throughout the classes the birds were very good in quality, although some were to a certain extent faulty in feather; but we are sorry to say that several pens were empty on account of some delay in the transit. *Carriers* were first on the list, the first-prize bird being a capital young *Black cock*, and the second a *Dun*, good in wattle and eye, but rather crowded in head. *Pouters* were a pretty even lot; the first prize went to a *Red* and the second to a *White cock*, being large birds and in good show. *Dragoons* came next, both winners being *Blues*; the first prize went to a particularly well-shown pair. Of *English Owls* there were but two pairs really in competition, the rest being either in bad feather or half bred foreign, a fault not to be admitted now that the class is well supported with birds of the old English type. The first-prize *Turbits* were *Blues*, spike-crowned, and full of character, but foul on the thighs, the second being very good shell-crowned *Reds*, but out of feather. *Jacobins* were very good in all particulars, and the first place was taken by *Reds*, the second by *Blacks*. The winning *Trumpeters* were of the foreign variety: *Mottles* first and cup, and *Blacks* second. *Tumblers* were mostly *Red Mottles* in the Long-faced class, the winners in both cases being nearly perfect birds of that variety. In *Short-faces* both pairs were *Almonds*, good in head properties, and well broken in markings. *Fantails* were a beautiful lot, and an extra prize was offered for this variety, which was won by Mr. Loversedge with an exquisite pair. *Barbs* were good, and both prizes were won by the same exhibitor, the first with *Blacks* and the second with *Duns*. In *Long faced Antwerps* the winners were *Red Chequers*, and in *Short-faces* capital *Silver Duns* were first and *Red Chequers* second. There were some bold birds in the single *Antwerps*—birds that seemed possessed of extraordinary powers of flight,

and the prizes were given to a *Red* first and a *Blue Chequer* second. In the Variety class the first prize went to *Spangled Ice*, the second to *Nuns*, both pairs being very handsome.

The Selling class contained some very costly birds, which we doubt not would be secured at the very earliest opportunity. The first honours were taken by an *Almond cock*, and the second position by a *Black Swallow*.

Lop-eared Rabbits came next, and the measurement was tolerably good, but the heat seemed to affect some to an alarming extent, and had not it been for this the order of the winners would, in our opinion, have been reversed. The first prize was taken by *Grey-and-white*, 21 inches by 4½ in ear-measurement; and the second-prize, *Fawn-and-white*, 20 inches by 4½, was larger than the first-named. *Silver-Grey* were good in fur, and almost uniform in colour, as well as of good size, and the pretty *Himalayans* left little to be desired in point of colour and marking. The Variety class contained capital specimens of the *Angora*, which stood first; a handsome *Black-and-white* specimen of *Dutch* was second, and a *Belgian Hare Rabbit*, which in point of fur might easily have been taken by a novice for a common *Hare*.

We published the names of the Judges and prizetakers last week.

CARBOLIC ACID FOR DESTROYING PARASITES ON FOWLS.

In the Journal of July 17th, page 53, an extract from Mr. Wright's "Illustrated Poultry Book" [see page 70], recommends for chickens a few dustings with a very few drops of carbolic acid mixed with powdered brimstone when they require purifying. Let me recommend all poultry managers to let carbolic acid alone, and only use brimstone, as I have seen the effect of the former on a dog. A very little carbolic acid had been put in his bath, and the effect was most alarming. The dog could not stand after it, and not till sweet oil had been applied to him both externally and internally did he begin to recover from the sort of fit he was in. Therefore, let no one try it without knowing exactly the proportion that may be used safely.—BEWARE.

TO COLUMBIAN SOCIETIES—PROPOSED PIGEON SHOW.

In answer to the able letter in your last issue from "A." I must say a few words. The Northern Counties Columbian Society (Manchester) some weeks ago issued a challenge in your valuable columns to any Columbian Society to have a friendly meeting, giving every Columbian Society in England, Scotland, Ireland, and Wales, the chance of challenging, or accepting the challenge laid down. This challenge still remains open, and I trust some steps may soon be taken in order that two societies may meet. I have written very fully to two societies on the subject of a friendly rivalry, and therefore am not anxious now to trouble you with a long letter, but in conclusion I must say that I do not at all approve of the prize list "A." proposes, and think the first show ought to be held in the town from which the challenge emanates. The return show might be held in the acceptor's town; and as the object of a Columbian Society is to improve the breed of Pigeons, and not to promote financial speculations among exhibitors, money prizes should be entirely omitted.—PRESIDENT OF THE NORTHERN COUNTIES COLUMBIAN SOCIETY (MANCHESTER).

POINT CUPS FOR PIGEONS.

When I promised my next should be on the point cup question, I did not expect to be so long in giving my opinion.

In the first place, I would give Mr. Maynard every credit for his excellent letter of May the 15th on the subject, for he proves very feebly how wrong it is of committees to give cups to be so competed for, as they encourage the dishonourable system of borrowing, and end in (as Mr. Maynard observes) disappointing purchasers, who are led to believe that the birds at home are the same strain. This alone is sufficient to condemn the practice. I am not going to dispute the fact that generally where a point cup is given there are not more entries than there would otherwise have been; yet not always in such cases of abundance is it owing to the existence of a point cup; for money prizes, class cups and medals, and the appointment of good judges, have far more power over small exhibitors than the sight of a cup as a present to one of the largest exhibitors. When a prize list has been got up, everything considered to please small exhibitors, it is a certainty that the large ones will enter as well, and that there must be all that committees could wish for. Committees must not overlook a fact very perceptible at shows now-a-days, that fanciers are much more wide-awake than a few years ago; for the question seems now to be, "If I cannot borrow so-and-so's birds it will be of no use trying to win the cup with

my own few breeds, as the three-deck sweepers will be there and what chances have I? So I shall see what other shows, there are on the same date." Such is the question with many a would-be exhibitor. There is also a highminded kind of fancier who would scorn to possess a cup won by the aid of birds other than his own, for his conscience would never allow him to be proud of such a cup, as he would feel that it was not all his own.

However, the question is whether a point cup makes a show really a financial success, and just and satisfactory to all exhibitors? I have endeavoured to prove that it does not, and far from it, for it is discouraging to exhibiting fanciers, and disgraces the fancy at large; and if any committee dispute my statement, there need only be a voting paper sent out to all exhibitors, and the result would prove how few there are in favour of the point cups.—IMPARTIAL.

FRUIT IN TIN CANS.

THE Boston Journal of Chemistry says:—The impression prevails among those who use freely fruits which are put up in tin cans that they are injured thereby, and this impression is in many cases correct. We have long contended that all preserved fruits and vegetables should be stored in glass, and that no metal of any kind should be brought in contact with them. All fruits contain more or less of vegetable acids, and others that are highly corrosive are often formed by fermentation, and the metallic vessels are considerably acted upon. Tin cans are held together by solder, an alloy into which lead enters largely. This metal is easily corroded by vegetable acids, and poisonous salts are formed. Undoubtedly many persons are greatly injured by eating Tomatoes, Peaches, &c., which have been placed in tin cans, and we advise all our friends who contemplate putting up fruit to use only glass jars for the purpose.

OUR LETTER BOX.

POULTRY-KEEPING FOR PROFIT (Gallus).—What is your space, and how is it covered? Is it planted, or is it grass, or is it sand? Fowls are not so amenable to pre-arrangements as it is sometimes wished, and that which looks easy on paper is found impossible in practice. We advise you to start on a smaller scale. We believe in your neighbourhood there is a good sale for eggs during the summer and early autumn. You may depend on them, but if your hens are confined they will not lay as many as if they were at liberty. For that market you should keep some non-sitters—say Creve Coeurs; for your chickens, Dorkings. You must know what the consumption will be in your neighbourhood. It may be, as you say, one thousand per month, but we do not think they will bring you 6s. per couple after July. We have our raisings about artificial rearing. It is very easy to hatch, but difficult to rear, and you should, therefore, have hens to come off when you are hatching, and thus contrive to make a hen take from twenty to thirty chickens. They must have a run. Chickens cannot be reared in confinement. They must be well fed from the time of hatching, and should then be fit to kill at from fourteen to sixteen weeks. They will never fatten in such a place as you describe, with food always before them. They should be fed four times per day on soft food, and it would pay to put up a few and feed as peckers, making them rather better. Our advice on the whole is to begin on a small scale, and to try to produce your chickens earlier, as they will be worth more.

POLAND HEN SITTING (B.).—We are much obliged for the interesting fact you send to us. It was curious to hear of a Poland hen sitting, still more to find her a good mother; but having done so three years in succession, it is a second nature with her.

DARK BRAHMAS WITH DISTENDED CROPS (L. H. C.).—We keep a large number of Brahmans, and know nothing of the disease you mention. They have loose crops sometimes, but they do not die of it. We hold them up by the legs till the crops are quite empty, then shut them up, giving them but little food, and that in the smallest possible quantities. In very bad cases we give water with a preparation of alum in it. They have a very small quantity three times per day, and generally recover after a few days. We cannot think your birds have died from crop disease.

EXHIBITING DORKINGS (T. C. E.).—Whenever two birds are to be shown together they should be used together, or it is likely when in a small pen they will disagree, and disfigure each other, destroying all hope of success. Turn the bird out when he comes home, and he will soon be at home again. We do not think it would answer to operate on the crop. Let her alone. It is rather an eyesore, but the hen is not injured by it as to her utility. We know no one who undertakes a poultry post mortem. Be your own operator.

REARING YOUNG PHEASANTS (Cranford).—You will have no difficulty whatever in keeping your Pheasants. They have arrived at an age when they cease to trouble. You must enclose a place, on grass if possible, about 20 feet by 20, with hurdles made of split fir or other wood. The hurdles should be 14 feet high, and the laths forming them 1 inch apart. They should be fastened to upright poles, to which they should be attached. This is all that is necessary, as the birds require no shelter of any kind, and in such a place ten Pheasants may be kept as long as it is wished. Their food should be barley. It is necessary to cut one wing before they are put in such a pen; and as it may be desirable to turn some out, and to keep in others, you should select the best and strongest, cut their wings, and put them in. Let the others fly away as soon as they will. As a rule, they take to roosting in the hedges, they go higher and higher till they reach the trees; in the same way they become less punctual at feeding time, till they absent themselves altogether. If you keep only four birds you will require a pen only half the size of that we have mentioned. You may change their food at times by giving Indian corn or dough made of barley meal, and shaken with milk or water. They should have fresh water always by them.

MUD BATH (H. S.).—As a rule we find rain, dew, and the frequent upsetting of the water vessels generally supply all that is requisite in the way of

moisture. We are, however, always glad to learn, and will try your plan. We have sent your other question to the gentleman you name.

ARTICHOKE BOTTOMS TO KEEP (Amateur, Cirencester).—Boil your artichokes till you can pull off all the leaves, and thoroughly clear the bottom; put them into salt and water for an hour; then take them out, and lay them in a cloth to drain. When they are dry put them into large, wide mouthed glasses, with a little mace and sliced nutmeg between, and fill up with distilled vinegar; cover them with mutton fat melted, and the down with leather or bladder.

METEOROLOGICAL OBSERVATIONS, CAMDEN SQUARE, LONDON.

Lat. 51° 32' 40" N.; Long. 0° 8' 0" W.; Altitude 111 feet.

Table with columns: DATE, 9 A.M., IN THE DAY, Barometer at Sea level, Hygrometer (Dry, Wet), Direction of Wind, Temp. of Air at 5 ft., Shade Temperature (Max, Min), Radiation Temperature (In sun, On grass), Rain.

REMARKS.

- 23rd.—As bright as yesterday (the warmest day of the season), but temperature moderated by a cool breeze; frequent lightning in E.N.E. from 10 P.M.
24th.—Another brilliant day, but much cooler, the wind at times being very strong; rather storm-like in the evening.
25th.—Morning fine with pleasant breeze; afternoon fine, but with more wind; storm-like between 4 and 5 P.M.; fine night.
26th.—Dull morning, slight rain till noon; fine afternoon and evening.
27th.—Fair but cloudy morning, fine by 11 A.M.; occasional showers during the afternoon; heavy rain for short time about 6.45 P.M.; fine starting night.
28th.—Lovely morning, bright, yet cool; rather cloudy at noon; fine afternoon and evening.
29th.—Hazy early, but soon clearing off; cloudy at noon, and rather so at intervals during the day.
Air temperature very nearly the same as last week, but that of the earth much higher, owing jointly to time being required for heat to penetrate even 1 foot of soil, and to the influence of the cool breezes not having any (or, at any rate, any appreciable) effect on earth temperature.—G. J. SYMONS.

COVENT GARDEN MARKET.—JULY 30.

The supply is well kept up, and business generally is sound and good, last week's rates being fully maintained with one or two slight exceptions.

FRUIT.

Table listing various fruits and their prices: Apples, Apricots, Cherries, Chestnuts, Currants, Eggs, Filberts, Gobs, Gooseberries, Grapes, Lemons, Melons, Mulberries, Nectarines, Oranges, Peaches, Pears, Pine Apples, Plums, Raspberries, Strawberries, Walnuts.

VEGETABLES.

Table listing various vegetables and their prices: Artichokes, Asparagus, Beans, Beet, Broccoli, Cabbage, Capers, Carrots, Cauliflower, Celery, Colewort, Cucumbers, French Beans, Garlic, Herbs, Horseradish, Lettuce, Mushrooms, Mustard & Cress, Onions, Parsley, Parsnips, Peas, Potatoes, Radishes, Rhubarb, Salsify, Savoy, Scorzano, Sea-kale, Shallots, Spinach, Tomatoes, Turnips, Vegetable Marrows.

POULTRY MARKET.—JULY 30.

LONDON is fast going out of town, and the trade feels the effect of it. Prices are falling, and the demand for goods of high quality becomes daily less.

Table listing poultry prices: Large Fowls, Smaller ditto, Chickens, Goslings, Green Geese, Duckings, Pheasants, Partridges, Hares, Rabbits, Wild ditto, Pigeons.

WEEKLY CALENDAR.

Day of Month		Day of Week		AUGUST 7-12, 1873.		Average Temperature near London.		Rain in 49 years.	Sun Rises	Sun Sets.	Moon Rises.	Moon Sets.	Moon's Age.	Clock before Sun.	Day of Year.			
Day.	Night.	Mean.	Days.	m.	h.	m.	h.	m.	h.	m.	h.	Days.	h.	m.	h.			
7	TH	Crewe Horticultural Show.				74.6	59.9	62.7	16	35	4	36	at 7	15	7	14	2	11
8	F					74.5	59.4	61.9	18	36	4	34	7	16	8	37	3	12
9	S					74.9	59.6	62.2	16	38	4	32	7	19	8	11	7	16
10	SUN	9 SUNDAY AFTER TRINITY.				75.1	51.9	63.5	19	39	4	31	7	17	8	14	6	17
11	M	Half-quarter Day.				75.8	50.7	63.2	20	41	4	29	7	13	9	14	3	18
12	TU	Weston-super-Mare Horticultural Show.				75.1	50.5	62.8	16	43	4	27	7	27	9	12	9	19
13	W	OLD LAMMAS DAY.				74.5	50.0	62.3	19	44	1	25	7	44	9	6	11	20

From observations taken near London during forty-three years, the average day temperature of the week is 71.0°; and its night temperature 50.4°. The greatest heat was 95°, on the 19th, 1842; and the lowest cold 33°, on the 11th, 1831. The greatest fall of rain was 1.11 inch.

STRAWBERRY CULTURE IN A POOR SOIL.



F all garden fruits the Strawberry is most highly esteemed, and it is certainly worthy of its high position as the general favourite. Perfectly hardy, very prolific, the choicest and most highly flavoured kinds, however delicately constituted, being equally amenable to the simple method of culture that suffices for the most sturdy or robust, it might reasonably be expected that an abundance of fine fruit would be the general

result, and not so frequently the exception as it is. A variety of reasons might be adduced for such frequent failures, or rather partial successes, but it will be enough for my purpose if I take that which I think is more generally applicable than any other—namely, ignorance of the real requirements of this plant, leading to an untimely and, I fear in some instances, slovenly system of culture, if it can be fairly called a system at all. It is not at all uncommon, when looking at fine crops of Strawberries, to hear such exclamations as, "Ah! my soil will not produce such fruit as this." To this I have only to reply that Strawberries of all kinds may be cultivated perfectly well, and with little, if any, difficulty in the poorest soil, and to impress this as clearly and forcibly as I can upon many who evidently would like to succeed, I cannot do better than state something of my own experience.

The garden of which I now have the care is a new one, and a very short time ago its site formed part of an extensive wood, a remnant, probably, of that huge forest which for hundreds, perhaps thousands, of years overspread so much of the counties of Sussex and Hampshire. After clearing away the trees the soil proved to be very shallow, and of the poorest description it has ever been my lot to cultivate. Starved and exhausted by successive generations of trees, it was about as ungenial a staple for Strawberry-culture as could well be found. The portion selected for the first Strawberry bed was trenched about 18 inches deep, taking care not to bury the surface soil, but only turning it over, and chopping it to pieces; then 6 or 8 inches of rich farmyard manure was spread over it, and well worked-in with forks. The Strawberries were next planted, and well watered till they became established in their new quarters. This was done late in autumn, yet, notwithstanding, the whole of the plants survived the winter, and made a respectable growth next spring, most of them throwing-up some flower-trusses, which were promptly removed. An occasional dose of liquid manure was given during the summer, more manure forked into the soil between the rows early in August, and in the following summer of 1872 a full crop of fine fruit was taken. Meanwhile other beds were made in a similar manner, and in the present season the entire crop of fruit has been equal in size and abundance to any I have ever had or seen in those rich loamy soils which so many of us vainly sigh for.

Thus it will be seen that no very scientific appliances,

or uncommon skill were necessary to produce such desirable results, but only the ordinary care and painstaking that most other crops require. The only difference that has since been made, is to plant as early in June or July as is practicable, so as to have the plants sufficiently established to produce an early crop of fruit in the following season. Plants that have been forced in pots are in every respect to be preferred, because they yield a full crop next season. Failing such, excellent beds may be made by securing the earliest offsets from established plants, and even when plenty of forced plants can be secured, an annual bed of the young runners or offsets is very useful, as the fruit, being less shaded by the foliage than that on the older plants, ripens earlier, and thus lengthens the season. Another important point is always to destroy exhausted beds. No Strawberry plant will continue in full bearing longer than two seasons. It is true that fruit may be taken for several years from the same plants, but such fruit is invariably of a paltry description, quite unfit for the dessert.

To reduce these notes to the form of a few simple rules, it may be stated that—

1. The soil must be drained, stirred deeply, and thoroughly manured.
2. The plants, if forced pot-plants, should be planted in June, or if not, as early in July as they can be severed from the old plants, taking care that they do not suffer from want of water, either then or at any subsequent period.
3. Immediately after the fruit is gathered give a liberal dressing of rich manure, forked slightly into the surface between the rows.
4. Destroy the old beds after the second, or at most the third, year of planting.
5. Let your beds be large enough to enable you always to supply the finest-picked fruit for the table, the aim being that every dish of fruit shall be fit to compete for a prize. The small fruit is always as useful for culinary purposes as the large.

Owing to the prevalence of wet weather during the present Strawberry season some valuable experience has been gained concerning the relative value of many varieties, more particularly as regards the development of flavour and sufficient firmness of texture to withstand the hurtful effects of excessive moisture. The fruit of the early and prolific Marguerite, fine as ever, suffered so much that I should be glad to find a substitute for it; its splendid fruit was almost flavourless, and very much decayed before it was ripe. A variety that is as fine, prolific, and early as it is, with the high flavour of Keens' Seedling, and the firmness of Newton Seedling, would be a great acquisition; till such a kind is forthcoming I must keep Marguerite, for it is much too useful a variety to be lightly discarded. The huge fruit of Cockcomb suffered a good deal from rotting, notwithstanding that wire supports were used; and to my surprise, that most excellent kind Sir Charles Napier suffered very much, its large clusters of fruit being so crowded that the accumulation of moisture among the berries induced decay to a serious

extent. President has been most useful; it suffered more from the loss of flavour than from premature decay. The varieties that have proved best of all for flavour, and for resisting the attacks of damp, are Lucas, Dr. Hogg, and Frogmore Late Pine. These were all good, ripening in the order in which they are named, and yielding an abundant crop of fruit of much excellence in every respect. It would, of course, be unwise to discard any good kind simply because its fruit was spoiled by the excessive dampness of the season, but it is certainly advisable to let those sorts predominate that are found to possess such valuable properties as are fully developed in Dr. Hogg and Frogmore Late Pine.—EDWARD LUCKINIST.

BLUE FLOWERS.

A SHORT time ago Mr. Hobson communicated to the Journal an interesting letter on the white flowers of the garden, and certainly this colour, by its cool, quiet, contrasting effect, is indispensable in the setting of a floral picture. In the many examples of floral criticism—for on this question nearly everybody claims the right and power to criticize—there are a thousand verdicts every year of "too much scarlet" or "too much yellow," against one of "too much white," and the odds are nearly as great in the matter of "too much blue." No colour is more universal than blue, none more admired, and none more expressive. It is the colour that pervades the very elements of Nature and reigns there and in the petals of flowers a very queen of beauty whose loveliness can never be impeached. It is found only occasionally in the feathered tribe, and never without increasing the beauty of plumage. In the vegetable economy it is never found in the stern working department of leaf, branch, or stem. Amongst the wondrous beauties of earth we can, besides the normal green, find foliage draped in white, and brown, and yellow, and red, and even nearly black; but no blue leaf has yet been seen, or stripe or blotch, save in the flower. Above all other colours it is honoured as the emblem of constancy and truth.

It is, however, a fact that the flower gardens of the present day are singularly destitute of the ever-admired and charming blue. There are, it is true, the blue *Lobelia* and the exceedingly useful varieties of *Viola*; *Ageratum*, too, where it is used, gives a gentle touch of it, and the pure rich gloss of *Salvia patens* is occasionally admitted. But can this be all of the numerous array of blue flowers that are admitted into the garden? It is verily so, and why? The imperious fashion of "bedding-out" has driven the rest away. I will not rail against the fashion, but would prefer it to have its sting. It gives enjoyment, demands skill, and reflects credit to owner and handicraftsman. But in saying this, I say also, bring back the blues, and let them have a plot too. Use them in simple natural mixture. There will be new delights every morning, and the blue flowers will afford a refreshing change from the monotonous masses of the formally-planted beds.

I am led into this dissertation by the verdict of a garden party—a party of ladies intent on flowers and criticism. They were new-fashioned ladies in an old-fashioned garden, but the old garden was in new fashion in the matter of colour—a predominance of blue. To see these modern ladies admire the ancient flowers was a treat. They were under the thrall of blue, for it was just then *Delphinium* and *Campanula* time. What a list of blues do these two names alone afford! Still the plants are as varied in habit as their flowers in colour. Look up at the 6 to 8-foot pillars of *Delphinium*, the rich deep blue of *Hybridum Raunenilorum*, and the old *Hendersonii*, at the pale or faded blue—just now fashionable—of *Mrs. Gerard Leigh*, at the dazzling dancing azure of *Felix Poulett*, and grant at once that these things are worth growing. The colour of the last-named is "altogether lovely," and compels a pause of every passing lady. Look down from the *Delphiniums* to some of the dwarf *Campanulas*, and do not disdain them. Do not disdain the old and sterling *Carpatica* with its mass of telling colour of its own peculiar blue. To descend lower, do not disdain even the annual forms of this family; only to see them in their beauty they must be turned into biennials by autumn sowing. Without enumerating I will take the simplest and commonest of all, and venture to assert that no one can disdain it when grown as it ought to be and seen in all its richness in June and July—I mean *Venus's Looking-glass*, *Speenaria Speenham*. What! name low common things like these! Yes, however "low" it may seem to be in high gardening days, "these common things" shall have a niche because they deserve it, and because they are old

friends, with a long history behind them and a long future before them, for they can never be driven away. Their native beauty will ever preserve them from annihilation, in spite of fancy, prejudice, and fashion.

Are they transient? So is the Rose, so are all things beautiful. They are admired the more for that. Even an everlasting bloom of Roses would pall on the vision and deaden appreciation. Condemn not flowers for being transient. If we sometimes regret their departure the regret is momentary, and new hopes arise in new births and an ever-recurring succession. Is not this transient character, so much deplored, one of the greatest gifts of Heaven? It gives new life, new hope, new appetite, and the earth seems always young, and yields fruit of ever-fresh enjoyments. But blues are not transient. Employ in addition to the families named the old blue *Salvia* freely. Turn the *Veronics*, the *Myosotis*, the *Nemophila* to account. Cherish the *Viola*. Throw in the old *Trachelium* and the venerable and rich-robed *Tradescantia virginica*. Let the *Convolvulus* have a place in summer, and the little *Scillas* and *Anemones* in spring, and tell me not blue flowers are transient. They are not transient, but too sparingly used, or a host of ladies coming from gardens of their own would not exclaim in pleasure on seeing their favourite colour alive and in flowers.—J. WRIGHT.

KENT.

OUR county, on which we rather pride ourselves, has received but scant justice lately at the hands of travellers. A Mr. l'Estrange has lately published one of those books which seem to be got-up for Mudie's, in which one writes most charmingly about the decaying villages of Romney, &c., which are in effect more flourishing than they have been for some time. And now, *proh pudor!* Mr. Witherspoon, whose love for the *Gladiolus* one must honour, runs through the county and records his impressions, in which he pours great contempt on our farming, and deplores the miserable condition of our south country labourers. Travellers' tales are proverbial, and travellers' impressions are often hastily put to paper and pass current for shrewdness.

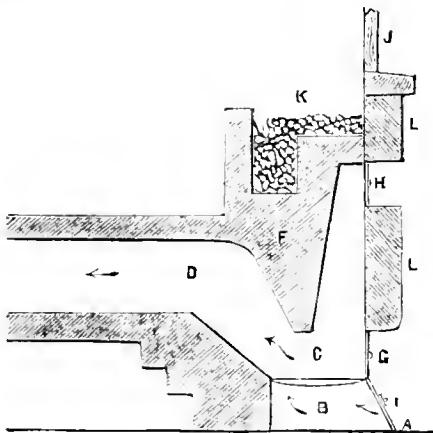
Now let me tell my tale. First as to the laud. Railways do not always run through the best land of a country. Who would judge of the north of France by the line of country from Boulogne to Paris, or in our country of the midland counties from the line from Huntingdon to Peterborough? And it so happens that the South-Eastern Railway runs for part of its course through some of the worst land of the county—hard "clity" clay: and no worse punishment could we wish to any farmer who had wronged his fellows, than to set him down to farm this land. Hungry and cold, no farming can ever make it remunerative. Mr. Witherspoon expatiates, too, on the use of the scythe on brown meadows, and the absence of the mowing machine. Ours is not a pasture but an arable county, and probably there are fewer mowing machines here, for the simple reason there would not be employment for them to repay their outlay. In my own parish there are farms where not a ton of hay is made this year, but the mowing machine is in use here where there is any breadth of laud laid down. We do not cut our grass brown, and I should not be at all surprised to find that what Mr. Witherspoon saw was men brushing meadows where sheep had been fed, but where the grass had grown "strandy," and in consequence had to be brushed over. Then as to the matter of wages. I do not know what Mr. Witherspoon calls poorly-paid labourers, but the lowest rate of wage here is 16s. 6d. to 17s. per week, independently of harvest work and hopping; and if he had kindly paid me a visit I could have taken him into cottages, and that not one or two, but many, where he would have seen neatness and comfort such as I venture to say he would not find in the houses of our much-belauded and overpetted mechanics. I am sorry he falls into the loud talk about an age of progress, &c. About the Docks, Thistles, &c., let me say there is a worse weed than any of these which we ought to do more to eradicate—the drinking habits, which from all we hear are as prevalent amongst Durham miners as Kentish labourers.

This is not, strictly speaking, horticultural matter; but, as a "man of Kent," my back was rather put up by what I cannot but consider hasty judgment and wrong opinions. There is one thing Mr. Witherspoon might have observed, which is not surely an indication of bad wages or unsound condition—the well-kept gardens attached to the cottages, in which many an old-fashioned flower is cherished, and where vegetables and

small fruit sufficient for the use of the family are produced. I am convinced that in this neighbourhood there is not a labourer who does not, taking the year round, earn £1 a-week, besides what the women and children earn by the not very laborious work of Hop-tying and other matters connected with our peculiar cultures. I was in the north lately, and saw a good deal of bad farming and bad cottages, but I should be sorry hence to infer that this is the normal condition of the counties through which I passed.—D., Deal.

SELF-FEEDING FURNACE FOR HEATING SMALL GREENHOUSES.

HAVING noticed inquiries as to heating small greenhouses, I venture to submit to my brother readers a section of a self-feeding furnace, which will be found effectual and economical. I built the original three years since, and have proved it to work sixteen hours, and even more, with one charge, at a regular heat, using only the cinders and refuse from the dwelling-house.



Description of sketch, which is drawn half an inch to a foot. A, Level of stokehole; b, ashpit; c, furnace; d, flue; E, hopper; F, bridge severing hopper from flue; G, furnace door; H, hopper door; I, damper closing front of ashpit (a plate of iron, with circular regulator in centre); K, sill and frame of house; L, stones, &c., retained in place by bricks set on edge, forming the lower strata of a hotbed for striking cuttings; L, end wall of house. The arrows show the course of the air, which, prevented by the door H from passing through the bulk of the fuel, seeks the flue as the easiest means of exit, and thus the fuel, slowly passing down the hopper, is consumed only on reaching the grate. There is a damper in the chimney outside the house, to assist the ashpit damper in high winds.

The fire, when thoroughly alight, is pushed to the back of the grate, the furnace door closed, and the hopper filled with fuel; the only attention then required is an occasional raking of the ashes through the grate by means of a hooked rake passed between the bars of the grate from the ashpit; the furnace door is only opened about once a-week to draw clinkers.

The size illustrated, with 10 feet of flue, heats a house of about 500 cubic feet contents, but sheltered from north and east winds.—G. W. G.—(*English Mechanic and World of Science*.)

OLD FRUITS AND VEGETABLES UNDER NEW NAMES—THE NEW STRAWBERRY DWARF TOMATO.

I HAVE waited for some weeks for an abler pen than mine to expose the untralesmanlike manner of sending out the Emerald Gem Pea. It reminds me of the anecdote of the parson who preached a sermon, and asked one of his hearers how he liked it. "Oh!" he replied, "I have admired it these forty years." Just so with the Emerald Gem; I have known and approved of it these forty years under the name of Kendall's Superb. That I might be certain of its identity I brought some old gardening friends to look at it, and they instantly recognised it as an old favorite. It is deserving of all that can be said in its favour, but I think it is too bad to palm off an

old thing as a new variety at a price which ought only to be attached to really new and improved varieties.

Some years ago a friend of mine sent me from Mansfield, twenty Peas by post, called Stewart's Paradise. I sowed them and saved the finest pods for several years, till their original size and appearance were very much improved, so that my friend could scarcely believe they were the same variety. Well, they got into a neighbouring seedsman's hands, who called them — Prolific. I instantly on view recognised them, and asked him if he was growing Stewart's Paradise Peas. "No," said he, "they are — Prolific." I replied, "You obtained them from one of your men." He was obliged to confess the truth, and then he changed their name to — Eschells," which synonymy they are known by at present until they get another.

Again, having read a good account of Princess of Wales Pea, I got a neighbouring seedsman to obtain some from London. These proved equal to description, and became very popular under the synonym of — Conqueror. I think it is very wrong to mislead people by giving things new names, but it is dishonest to charge the price of new varieties for old ones.—JOSEPH BURGESS, *Knutsford*.

THE answer to the "INTRODUCERS'" inquiry, "Wherein lies the deception?" must be patent to all. Permit me, however, to ask them if it is consistent with their views of fair dealing to call such an old and well-known fruit as the Cape Gooseberry a new Tomato, thereby inducing the public to purchase as a novelty that which it had so long cultivated.

Wherein lies the novelty of application? For many years it has been in general cultivation solely for its fruit, which is eaten as dessert, and also preserved as a jam, which is much esteemed, and I fail to see that those who term themselves its introducers propose to do more with it. In the supplement to Johnson's "Gardeners' Dictionary," it is stated that *Physalis edulis* (or catalpa Cape Gooseberry), is a native of South America, introduced into this country in 1773, just a hundred years ago.—E. LUCKENST.

I HAVE to thank Mr. Luckhurst for putting us on the alert against the "New" Strawberry Dwarf Tomato, and I at the same time take the opportunity of protesting against such attempts to pass off old things as novelties merely because they appear as such in American catalogues. In this country we generally suppose that nursery and seeds-men know their business and act upon their knowledge. Suppose an American seedsman were to offer seed of the "New Green Gage Tomato" (*Solanum tuberosum*), would "the introducers" be justified in offering this to their customers as new, merely because the American said that Potato berries might be used as Tomatoes? I think it would be better if some of our seed-men exhibited more judgment and less eagerness in the introduction of novelties.—AMATEUR.

WALES AND WELSHMEN.—No. 3.

WHILST I am writing these notes Mr. Justice Keating has been here for the purpose of holding the assizes, and he made this remarkable and, probably, unparalleled address to the grand jury:—"Gentlemen—your duties will consist of listening to the gratifying announcement that there is no prisoner for trial at the assizes. I have received a return of the state of business at the assizes corresponding to the present during the last three years. From that return I find that in 1870 there was but one prisoner for trial, against whom no true bill was found; in 1871 there were four prisoners for trial, three of whom were found not guilty; in 1872 there were no prisoners for trial; and in 1873 there is once more a blank calendar. This is a state of things reflecting the greatest credit not only upon the magistracy, clergy, and all concerned in the preservation of the peace in the county, but also upon the population at large. I have the satisfaction of stating that this gratifying condition of things is not confined to Anglesea, for as far as my experience has hitherto gone, this immunity from crime appears to be general in the Principality. Up to the present time I have had the honour of bringing Her Majesty's commission into four counties, and in all of these I found only four prisoners for trial, the offences with which they were charged being so slight that I deemed justice would be satisfied by passing a sentence of fourteen days imprisonment upon each.

This affords a glorious contrast to the characteristics of four centuries ago when one of our nursery rhymes was composed

and justified. In those days the Welsh retained possession of the mountains, and the English of the lowlands. When, says Mr. Flavel Edmunds, opportunity served or provisions became scarce, the Welshmen made a foray upon the herds of the English and hurried back with their booty to their fastnesses. The nursery rhyme records this in

Taffy was a Welshman,
Taffy was a thief,
Taffy came to my house
And carried off my beef.

By-and-by retaliation was attempted—

I went to Taffy's house,
Taffy wasn't at home.

He was too prudent to await his visitors when inconveniently numerous, but whilst they were seeking for him he sometimes made a wide detour, came down upon the English homesteads left unguarded, and carried off the remainder of the herds he had previously thinned, or, as it is rhymed,

Taffy came to my house
And stole a marrow bone.

That is, all that remained worth taking.

Since last writing I have had more opportunities of seeing and hearing of the gardening in the island. At Baron Hill and other high-class places it is very superior, but of these I shall speak and illustrate in future communications. Among the agricultural labouring classes the absence of gardening—rather should I say of gardens—is most lamentable. There is no want of a fondness for the culture of plants, both ornamental and useful, but space for useful gardening is rarely attached to the cottages. There are frequently plots in front of them, each of which plots might be covered with a tablecloth, and in these you see huge bushes of the *Fuchsia coccinea*, Rose bushes, Nasturtiums, and Pinks. In the windows are pots of praiseworthy Geraniums, many varieties of the double among them; *Calceolarias*, and *Minulules*. I saw one old dame sitting paralysed before her cottage door, with some especial pet Geranium in her lap. Such tastes might be expected among those among whom crime is so rare, but it is a taste that lingers even among the deprived of cities, and is still more ardently fostered by those who find it a solace in poverty. "My Pinks," was the pathetic comment of a permanent inmate of a workhouse, "My Pinks came from the garden I once had;" and a letter now before me from a lady at Ipswich says, "I was in the workhouse this afternoon, and there one woman who cannot leave her bed had made quite a pretty little garden on the window-sill by her side. It was only small bottles and jars filled with such flowers as she could obtain, but they were prettily arranged and set upon little mats which she had made. This was not much, but evidently her window-sill is a solace to her, and in the workhouse there is very little to make life at all bright."

Of useful plots attached to the cottages, and to the shame of the landed proprietors I record the fact, there are but few, and these very small. It is a disgrace to them, because they must know if they thought at all what would improve the home comfort of their workmen, that a garden capable of yielding a Cabbage, an Onion, or a mess of Beans to the support-pot, is as valuable to the cottager as the better-stored larder is to his employer. It is true that the farmers are accustomed to let out a field in plots to their labourers on the conditions that they manure the plots, plant them with Potatoes, and keep them well weeded. But this is to secure a benefit to the farmers, for such manuring, forking, and hoeing as is needed for the Potatoes prepares the field for the Wheat crop. To obtain the requisite manure the produce of the labourer's pigstye, if he owns one, is appropriated, and, in addition, the horse droppings on the roads, which you see arching scraping and sweeping-up.

It is a fact that wherever in Anglesea any part of a parish boundary touches the sea shore on that part the church stands. Probably this was because in Roman Catholic days the ecclesiastics found a supply of fish most desirable; but as lay residences were necessarily attracted to the vicinity of the church, they were at the same time attracted to the most exposed and least fertile spots on the island. One parish about six miles from Beaumaris is remarkably so. I refer to Llanddona. Here the church is little more than a stone's throw from the rocks, and the ways to it—they do not deserve the name of roads—are so precipitous and rough from rock points stubbling their surface, that no carriage can proceed further than to within a mile from the church. Yet even here in the rectory garden the Lichen crop, and the Apple trees

are most healthful and prolific. Their culture, therefore, should be encouraged, and landlords would do well for their own interests to insist on their cultivation. You would aid in effecting this by promoting the circulation of Mr. Lea's little volume in this island.* How much such cultivation is needed requires no other evidence than the deficient supply at Beaumaris, and that supply is of bad fruit and vegetables. This is explained by the fact that there is not a market gardener, nurseryman, florist, or seedsman in the whole island, and the greengrocers receive their supplies from Liverpool! I except from my condemnation the Potatoes, which are the best possible, and are evidence to the success that would attend the culture of other garden produce.

Mentioning Llanddona reminds me of its most energetic and praiseworthy rector, the Rev. Peter Jones. The old church was unsightly, devoid of the slightest architectural pretensions, and was some two years ago in such a dilapidated, not to say discreditable and unseemly condition, as to call for immediate attention, otherwise it would in the course of a very short time have degenerated into a tumble-down structure, such as that ruined edifice misnamed the parish church, which at present disgraces the adjoining parish of Llangued. The old fabric boasted considerable antiquity, and its foundation is traced so far back as the seventh century, tradition ascribing its erection to the pious St. Dona, the son of Selyf. So the rector resolved to have a new church, and he affords one more instance in support of my life's maxim—a clear head, a strong arm, and a good heart, expunge "impossible" from their owner's dictionary. The new church was opened for divine service a few days since. The works, which occupied about eighteen months in completion, were done by day work under the superintendence of the rector, to whose indomitable perseverance and energetic efforts the erection of the new church is solely due. Mr. Jones, in addition to acting as secretary and treasurer of the building fund, furnished the plans, acted as clerk of the works, and superintended the construction of the building from its very foundations. In addition to working single-handed in this good work, he had to depend a great deal upon extraneous pecuniary assistance, Llanddona being a not over-wealthy and very thinly populated parish. In the face of great difficulties and obstacles which would have disheartened many parish clergymen, he has succeeded in erecting a pretty and substantially-built church at a cost barely exceeding £600, and in opening it with a very trifling incubus of debt still remaining. His appeal for pecuniary aid was very liberally responded to, Sir Richard Bulkeley headed the subscription list with £50, Captain Verney, R.N., contributed £30, and Lord Penrhyn, whose name figures prominently in every fund for the erection or restoration of a church in the Principality, was also a liberal donor. Still, there is a small debt remaining, and any of your readers will do worthily who send a contribution directed to the rector, "Llanddona, near Beaumaris." It might be sent in postage stamps now that that thoughtless requirement about registering has been rescinded.

The new church is about five miles from Beaumaris, far off the beaten tourist track, and about a mile beyond the village proper of Llanddona. It occupies the exact site of the old fabric, and nestles at the foot of a mountain on the east side of Red Wharf Bay, commanding a splendid view of the wide expanse of sea, and the rugged mountain scenery, and its widely extending sands are firm and stoneless.—G.

ALLEGED NEW POTATO DISEASE.

A NEW Potato disease is described as having made its appearance near Jena, differing from the one commonly known in its directly attacking the tubers, and not the leaves. The tuber becomes covered by a purplish felt, which is the mycelium of a fungus. The skin of the Potato is sometimes apparently not penetrated by the mycelium, the contrary being the fact in other cases. In the latter event, the tuber becomes completely destroyed by a cancerous disease. The fungus belongs to the genus *Sclerotium*, and according to Professor Holliss, the remedy will probably be the same as in the ordinary Potato disease—namely, the selecting of early kinds, using only mineral and no animal nor vegetable manures, and with a careful selection of the best adapted soil. The Rev. M. J. Berkeley, the eminent fungologist, has lately

* The name of this volume is "Small Farms: How they can be made to answer by means of Fruit-growing."—London, Journal of Horticulture Office, 171, Fleet Street.

announced that this is the well-known "Copper Web," which in some years is very destructive to Asparagus, Mint, and other crops, and has been known, to some extent, to attack the Potato. It is figured in Tulasne's "Fungi Hypogaei," under the name of *Rhizoctonia*.—(*American Paper*.)

ROYAL HORTICULTURAL SOCIETY.

August 6th.

THE Show on this occasion was of very limited extent, by no means filling the western conservatory corridor; but as a set-off it was well arranged, and the Phloxes and Orchids made an effective little show for this season.

Phloxes formed the main feature of this Show, and of these Messrs. Downie, Laird, & Laing staged a remarkably fine twelve in 10-inch pots, and took the first prize. Among the varieties were Bridesmaid, white, shaded with lilac; Philippa Penglass, fine lilac rose, carmine centre; Monsieur Domage, M. Malet, Madame Domage, Lohair, salmon red; Madame Dombain, M. de Launay, John Laing, and Marguerite de Turenne, lilac. Mr. Ware, Hale Farm Nursery, Tottenham, was second with, among others, fine examples of Countess of Breckinridge, magenta; Ada, deep rose, crimson eye; and Mrs. Laing, lilac. Mr. Ware also sent a collection chiefly consisting of seedlings; but from Messrs. Downie & Co. came a far finer collection, for which an extra prize was given. There were no amateur exhibitors.

Petunias, for which there were four classes, had not a single representative, and of Cannas there was but one collection. This was exhibited by Messrs. L. G. Henderson & Son, Wellington Nursery, and consisted of large plants of Abundance, with red bronze-veined leaves; Red Lantern, deep green; Musafolia hybrida, of a brighter green; Princes de Nice, yellow-flowered; Schubertii; and Reera superbissima with dark bronze veins and suffusion. The best six Hydrangeas were excellently-bloomed specimens of the common kind, shown by Mr. Aldous, Gloucester Road, South Kensington.

Of miscellaneous subjects Mr. Ware, of Tottenham, sent a group of herbaceous Lobelias, but with the majority of the flowers only partially expanded. A first prize was awarded to Mr. Denning, gardener to Lord Londesborough, for a collection of Orchids, including splendid specimens of *Saccolabium Blumei*, with seventeen spikes; *Epidendrum vitellinum*, with thirty-eight flowers; *Oncidium macranthum*, and *Disa grandiflora*, all of which had cultural commendations; also a fine *Thunia alba*, *Saccolabium Blumei* superbum, and *Cattleyas*. From Mr. Aldous, Gloucester Road, came a miscellaneous group, which took an extra prize; Messrs. P. & A. Smith a very fine collection of Balsams, both as regards size and colours of flowers; and from Mr. Ware, Tottenham, a dozen Pentstemons in pots in very good bloom. From Mr. C. Turner, Royal Nurseries, Slough, came splendid stands of Carnations and Picoetes, of which Carnation King of Yellows, large, canary yellow, had a first-class certificate. From the same exhibitor came also a splendid stand of Verbenas, Prince of Wales, crimson scarlet, being especially effective. Messrs. S. Dixon & Co., Amlurst Nurseries, Anton Street, Hackney, again exhibited their fine new double-flowered dwarf Lobelia; and Mr. Maurice Young, Milford Nurseries, Golding, his beautiful Golden Chinese Juniper, which had before been certificated.

For the best dish of early Plums, Mr. B. Porter, gardener to Mrs. Benham, Lion Lodge, Isleworth, was first with Early Morocco, and Mr. Parrow, gardener to G. Batters, Esq., Enfield, second with Jaime Hative. The best collection of Gooseberries came from Mr. Walker, nurseryman, Thame, who had some very large fruit; the second best from Mr. Record, gardener to J. Whatman, Esq., M.P., Vinters Park, Maidstone, and the third best from Mr. W. Martin, Sherrinbury, Hurstpierpoint. Mr. Clarke, gardener to J. Hall, Esq., Sutton, and Mr. Hepper, gardener to C. O. Leonard, Esq., Acton, also competed. The first prize for the six heaviest Gooseberries went to Mr. G. Kirkland, Bletchington, Oxon, weight 5 ozs.; the second to Mr. Walker, Thame; the third to Mr. Kirkland, Albion Nursery, Stoke Newington; and the fourth to Mr. Tomkins, Bletchington.

FLORAL COMMITTEE.—W. B. Kellock, Esq., in the chair. The subjects exhibited on this occasion were not numerous, but a good number of certificates were awarded. One of the first-class went to Messrs. Veitch, of Chelsea, for a charming white *Lilium* named Philippeum, with a tube nearly 6 inches in length; also for *Olearia Haussii* in a basket, but lifted from the open ground, densely covered with white sweet-scented flowers—indeed a mass of blossom. *Cypripedium Sedeni*, a hybrid between *C. longiflorum* and *C. Sehmii*, was also certificated, and is a pretty lively-coloured kind. A first-class certificate was awarded for *Begonia* William Spinks, a cream yellow-flowered variety, raised at the Society's garden at Chiswick.

From Messrs. J. & C. Lee, of Hammer-smith, came several examples of trees and shrubs. *Robinia pseud-Acacia* a tree with beautifully golden-tinted leaves, had a first-class certi-

ficate; also *Prunus variegata* with white variegated foliage, and *Alnus glutinosa laciniata*, with broad rather deeply-lobed leaves. *Ligustrum lucidum angustifolium* with, for a Prize, very long leaves, and a variety of the same species called tree-color, with much broader and shorter foliage, margined with yellow and edged with rose, were also exhibited. The latter is a very pretty variety.

From G. F. Wilson, Esq., Weybridge, came a fine double Tiger Lily, called *Lilium tigrinum erectum*, together with photographs of varieties of *Lilium longiflorum*. Mr. Ware, Hale Farm Nurseries, sent collections of perpetual Carnations, and an excellent lot of seedling Pentstemons; whilst from Messrs. Wood & Ingram, of Huntingdon, came stands of seedling Carnations and Picoetes. The Rev. Lord Hawke exhibited a number of new Hollyhocks, of which his name alone is a guarantee for their quality. First-class certificates were awarded for Mrs. Chater, primrose with an orange-tinted centre; Catherine, pale salmon; Red Cross Knight, red and maroon; and Octavia, rose. From Dr. Denny, Stoke Newington, came *Pelargonium Jessica*, deep scarlet; from Mr. Douglas, gardener to P. Robinson, Esq., Womersley, well-grown Cockcombs of a good strain; and from Messrs. Dicksons, Waterloo Place, Edinburgh, some excellent early-flowering Phloxes, much the worse for their journey, of which we especially noted Edinburgh Castle and Callar On. Mr. Rowe, The Bakery, Rochester, sent a large specimen of *Polyporus squamosus*.

PRIZE COMMITTEE.—Alfred Smee, Esq., F.R.S., in the chair. Mr. H. J. Hardy, Bures, Essex, sent Hardy's Pedigree Windsor Beans. In reference to these, it was decided that all vegetables before receiving certificates be grown at Chiswick, on the recommendation of the Committee, except where a decision can fairly be made. Mr. William Bull, King's Road, Chelsea, sent a Cucumber, called Excelsior, which was considered past its best. Messrs. Monro & Wilkinson, Potter's Bar, sent specimens of a Cabbage, called Little Heath, which was considered a good sample of the Fulham or London Market, but not worthy of a new name.

Mr. Henry Plummer, gardener to R. Thornton, Esq., Cannon Hill Park, Merton, sent two Queen Pines, a Smooth-leaved Cayenne, and an Abayah. The last being a variety unknown to the Committee, it was cut. This is a medium-sized conical fruit, of a deep yellow colour, and prominent pip. The flesh is deep yellow, very juicy and sweet, lacking acidity. The Committee were of opinion that this is Havannah. Mr. Baker, gardener to A. Basset, Esq., Sister House, Clapham, sent a distinct-looking Pine Apple without name. It was imported from the West Indies four years ago, and as it was not quite ripe it is to be seen again. Messrs. Monro & Wilkinson sent Little Heath Melon, good specimens of the third crop borne by the plants.

Mr. Bowman, gardener to Sir Joseph Hawley, Leybourne Grange, sent a hybrid Melon with red flesh, which was very inferior in flavour. Mr. Cox, of Reddih, sent a dish of Pears, somewhat resembling Doyenne d'Été, but inferior in flavour. They were from an old tree grown in the neighbourhood of Penhurst under the name of Early Milton. Mr. Clark, gardener to J. M. Robertson, Esq., Rochester, sent a dish of Citron des Carmes Pears, and also a dish of White Joaneuing and Red Margaret Apples. Mr. Earley, gardener, Valentines, sent a collection of fruit, consisting of a dish of each Apricots, Apples, and Pears, one of Early Orleans Plums, and fifteen dishes of Gooseberries, for which a letter of thanks was awarded, and a cultural commendation was awarded to the Apricots. A letter of thanks was awarded to G. F. Gregory, Esq., Addison Road, Kensington, for a dish of well-kept Apples. Mr. William Paul, of Waltham Cross, sent a bunch of a new Grape, called Seedling Sweetwater, which Mr. Paul was asked to give an account of as regards its growth and bearing.

Mr. J. Henson, gardener, Newark, near Peterborough, sent a seedling Gooseberry, called Henson's Seedling. This is a decided acquisition, being a fruit of good size, and both in that respect and in colour not unlike the Red Warrington, but the flavour partakes very much of the Red Champagne, and is quite rich. It is a very fine highly-flavoured Goodberry, and, judging from the spray laden with fruit which was exhibited, it has the appearance of being an abundant bearer. This was awarded a first-class certificate.

ADVANTAGES OF HOEING.

1. The loosening of the soil in the operation of hoeing is beneficial to the plants—as much as the destruction of the weeds, or more so.

2. Moisture abounds in the atmosphere during the hottest months, and is absorbed and retained most abundantly by a soil which is in the most friable state. Prof. Schubler found that 1000 grains of stiff clay absorbed in twenty-four hours only thirty-six grains of moisture from the air, while garden mould absorbed forty-five grains, and the top soil absorbed seventy-six grains.

3. Then, again, pulverising soil enables it better to retain the moisture absorbed.

4. The soil, in order to be healthy and active, must breathe. A light porous soil admits the air, and thus it is fed and greatly invigorated by the atmosphere.

5. The sun's rays heat a hard soil much quicker than a loose one, and the hotter the soil is so much greater will be evaporation from it. So that a hard soil is deprived of its moisture much sooner than one of a loose texture.

6. The roots of plants can find their way through a moist loose soil in search of food much better than they can through a hard dry soil.

7. The soil that has been ploughed well and then kept loose near the surface by the action of the hoe, will receive and hold the rain water that falls, while a hard soil will allow most of it to run off into the valleys and streams as it falls.—(*New England Farmer*.)

ORNAMENTAL PLANTING.—No. 6.

RHODODENDRONS and their allies are associated under the convenient title of American plants. From the great and peculiar beauty of the entire class, but more especially of the Rhododendrons, they are certainly most worthy to hold a superior rank to shrubs in general; but it is questionable whether the practice of separating them from other shrubs in the catalogues has not contributed materially to the very prevalent but erroneous impression that, in order to succeed in their culture, a peculiar mode of treatment and costly preparation of the soil are necessary; and it is also probable for the same reason that we so seldom find mixed groups or shrubby borders enriched and beautified by the presence of any varieties of this lovely genus. What contrast could surpass in beauty or effect the deep rich crimson trusses of Rhododendron John Waterer with the profuse clusters of the deep golden yellow flowers of Berberis Darwinii? Not that I would often plant two such striking objects side by side, but rather sufficiently near each other for the contrast of rich colours to produce its due effect, which would be much heightened by the intervention of a Conifer with deep green foliage, such as Libocedrus decurrens or Arthrotaxus selaginoides. Then there is a host of other excellent kinds, with other shrubs, all equally valuable for mixing—ranging in colour from a deep purple through all the various shades of crimson, scarlet, pink, and white, all very striking and ornamental, forming a perfect treasury of objects rich and rare, surpassing almost all other shrubs in the bright and varied loveliness of the flowers that are produced in such profusion, and that never appear to greater advantage than in the setting of living deep green foliage, which from its ever-green character, beautiful disposal, and fine form adds so much to the value of Rhododendrons as decorative plants.

There are in a few gardens in this country masses of the famous old *R. ponticum* 20 to 30 feet high that are objects of rare beauty; and as it is quite within the bounds of possibility that the most robust hybrid varieties will in time become equally large, this important fact should duly influence our present and future planting arrangements. Well-formed specimens of even 12 feet high of such kinds as the pure white Mrs. Clutton, or the newer crimson and scarlet varieties, would form objects of such incomparable magnificence as it is hardly possible to conceive; and so in my advocacy for a more extensive use of plants of this class, I would urge upon those who contemplate planting, to afford space for a few select kinds as single specimens. Apart from that association with other shrubs which it is desirable should become more general, the practice of massing the various kinds in groups and borders by themselves is an excellent one, and the fine appearance of such groups during the flowering season is too well known to require one word of commendation at my hands. Some caution is, however, necessary in the arrangement of these masses, for however brilliant and dazzling may be the effect of the flowers, yet it must be granted that very much of the spirit and brightness of the scene fades with the flowers, and that the foliage, which alone is visible for so long together, is apt to appear somewhat tame and monotonous; hence the frequent attempts to introduce Hollyhocks, Lilliums, and Tritomas among them are sufficiently significant and expressive of how prevalent this feeling is. It is true we may relieve and brighten the effect, as we do with hardy Azaleas, Kalmias, and Ledums; but none of these continue in flower long after the others, and it must not be forgotten that it is of pure and simple groups of American shrubs that I am now treating. It seems to me, therefore, that the best remedy for this obvious defect is to introduce

groups of other shrubs sufficiently near and among them to relieve the monotony and sustain an interest in the scene by imparting variety, and by the production of flowers at a later period of the year.

In forming a Rose garden upon an exposed position where violent gales frequently swept across with great power, it became necessary to make a shelter to break the wind's force, so as to screen the tender growth of the Roses in spring. Now, I had seen various screens used for this purpose, but all of them were very formal, not at all ornamental; they were, in fact, just screens and nothing more, very efficient for shelter; but then, in forming a screen of living shrubs or trees, by the exercise of a little care and judgment it may be rendered as ornamental as it is useful; and so in the instance to which I allude, instead of a row or two of shrubs of no particular interest, groups and belts of American shrubs, interspersed with a few choice specimens of Conifers standing singly upon the turf, were introduced with excellent effect; for as the Rhododendrons began to fade, the clumps of Kalmia began to expand into beauty, the persistent flowers lingering on till the first opening Roses gave promise of the rich display to follow; and thus by this arrangement a scene full of brightness and beauty was secured for a much longer period than would have been possible from the use of either class separately.

Very interesting and pretty beds may be made with many of the dwarf-growing American plants, such as the Kalmias, Gaultherias, Ledums, Menziesias or Daboecias, Pernettyas, Daphnes, Ericas, Andromedas, and dwarf Rhododendrons, and a group of these will be included in the following arrangements:—

Mixed group of Rhododendrons (*fig. 1*).

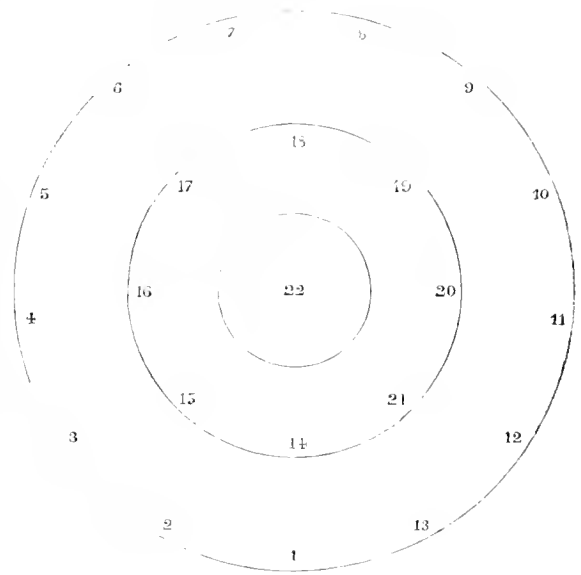


Fig. 1.

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| 1. Blandyanum. | 12. Everestianum. |
| 2. Lady Clermont. | 13. Maculatum nigrum superbum. |
| 3. Titian. | 14. Alarm. |
| 4. Mrs. John Clutton. | 15. Fleur de Marie. |
| 5. John Waterer. | 16. Album grandiflorum. |
| 6. Elfrida. | 17. Duc de Brabant. |
| 7. Jago. | 18. Lady Eleanor Cathcart. |
| 8. Old Port. | 19. Minnie. |
| 9. Mrs. R. S. Holford. | 20. Mrs. John Waterer. |
| 10. Purity. | 21. Barclayannum. |
| 11. Mrs. G. H. W. Heneage. | 22. Majesticum. |

Mixed group of American shrubs (*fig. 2*).

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|--------------------------------------|--|
| 1. Daphne Cneorum major. | 14. Pernettya mucronata. |
| 2. Andromeda polifolia. | 15. Ledum latifolium. |
| 3. Daboecia polifolia. | 16. Azalea Nancy Waterer. |
| 4. Kalmia glauca. | 17. Kalmia angustifolia. |
| 5. Gaultheria procumbens. | 18. Andromeda floribunda. |
| 6. Rhododendron formosum. | 19. Pernettya angustifolia. |
| 7. Daboecia polifolia alba. | 20. Azalea cehriena. |
| 8. Andromeda polifolia angustifolia. | 21. Shimmia japonica. |
| 9. Kalmia rubra. | 22. Daphne pontica. |
| 10. Ledum luxifolium. | 23. From this number to 30 a circle of Kalmia latifolia. |
| 11. Kalmia nana. | 24. Rhododendron John Waterer. |
| 12. Andromeda floribunda. | |
| 13. Azalea amica. | |

Mixed bed of Heaths (*fig. 2*).

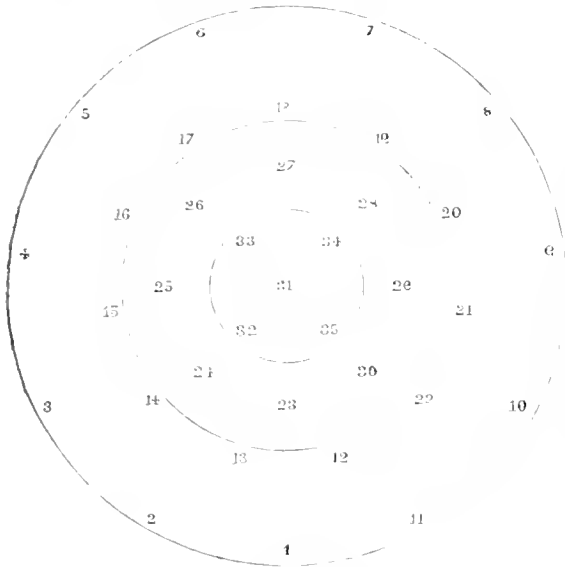


Fig. 2.

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|--------------------------------|-----------------------------------|
| 1. <i>Erica pilosa</i> alba. | 19. <i>Erica vulgaris</i> tenuis. |
| 2. carnea. | 20. cinerea alba. |
| 3. <i>vulgaris pygmaea</i> . | 21. carnea. |
| 4. alba major. | 22. <i>vagens grandiflora</i> . |
| 5. carnea. | 23. Alportii. |
| 6. cinerea coccinea. | 24. carnea. |
| 7. <i>vulgaris Hammondii</i> . | 25. <i>vagens rubra</i> . |
| 8. carnea. | 26. carnea. |
| 9. cinerea rosea. | 27. <i>Tetralix</i> . |
| 10. <i>vulgaris aurea</i> . | 28. carnea. |
| 11. carnea. | 29. <i>vagens alba</i> . |
| 12. Foxii. | 30. carnea. |
| 13. <i>Tetralix Mackyana</i> . | 31. <i>nil</i> . |
| 14. <i>vagens alba</i> . | 32. <i>Erica mediterranea</i> . |
| 15. carnea. | 33. australis. |
| 16. cinerea atro-purpurea. | 34. lanceolata. |
| 17. <i>vagens rubra</i> . | 35. Alportii. |
| 18. carnea. | |

A similar arrangement to the foregoing would answer well for a bank of Heaths, or there might be three or more plants of each kind together in little clumps, so as to impart a greater breadth of colour; but whatever style be followed, it is desirable to introduce the lovely *Erica carnea* to brighten the bed

with its gay flowers long before the other varieties come into bloom.

A circular bed of Heaths, each ring of a distinct kind surrounding a central group (*fig. 3*).

Another very beautiful bed may be made by surrounding a mass of *Andromeda floribunda* with a broad edging of *Erica carnea*, the clustering white bells of the *Andromeda* appearing in most beautiful contrast with the bright pink flowers of the Heath. Then, again, a group of one or several kinds of *Rhododendrons* has a pleasing air of neatness and finish when surrounded with an edging of *Ledum latifolium* or the pretty Japanese *Azalea amena*. Many other pleasing combinations may be wrought out with little trouble, for the store of materials for the work is so rich that all may find some kinds to please and interest them.—EDWARD LUCKHURST.

SLUGS.

THESE pests are too numerous and common everywhere, and with all our care they will find their way even into our greenhouses. Last year I visited the gardens of Earl Somers in Herefordshire, and was told of a method practised by the gardener there for ridding the ground of slugs—at least, of thinning them to a great extent. We all know that quicklime causes them rapidly to disperse, but I have found that it often sends them to where of all places we would not wish to see them. The plan is to finish as many of them off as possible, and to be conclusively done with them. Well, the gardener managing Lord Somers' grounds (Mr. Coleman) adopts the following method, which may be known to some of your readers, but it was new to me.

A lad is sent along all the walks of the garden each evening with a bag or bucket full of bran, and he places a handful of it on the borders, at every 8 or 10 feet or so, in a heap. Early next morning he traverses the same ground with an empty bucket, dustpan, and small broom. Bran is an article slugs are very fond of, and it seems to attract them from all around; the heaps are, therefore, found covered with them, often a complete mass. The lad then sweeps the whole into his dustpan, empties it into the bucket, and by the time he has finished his walk many hundreds, if not thousands, are thus captured. A week or two of such work, or even a day or two now and then, must be the means of saving a great deal of our garden produce.

I would recommend that when collecting the slugs a little salt and water be in the bucket, which will effectually prevent the escape of a single member when captured, as the salt causes them to sicken and die at once. Will some of your readers please try this simple affair and report?—J. HUIE.

THE GREEN ROSE.—I am sending you by this post a specimen of the bloom of one of my green Roses, which I think you will admire. We have had the plant from which I cut the bunch of flowers for about sixteen years; it was moved this spring. The green Rose was mentioned in THE JOURNAL OF HORTICULTURE some months ago, and as it is uncommon, I thought you might be interested to see such a fine bouquet of flowers on one stem.—ELIZA C. BISCOE, *Holton Park, Oxford*.

The specimen is a very fine one, and contained twenty-two flowers.—EDS. J. OF H.]

SOILS, THEIR VARIETY AND USES IN CULTIVATION.—No. 2.

STIFF soils usually contain but little sharp gritty matter or sand, and the unctuous mass clings together in such a manner as to be almost impenetrable to the roots of plants and the tools of the cultivator. They are invaluable to the brickmaker; but the husbandman complains of their adhesiveness and of water not percolating freely through them. They are, however, capable of considerable improvement, especially by draining, although the effects of the latter are not always immediate, for a tenacious clay is not converted into a friable fertile soil all at once, and a wet, adverse season tends to undo what has been done before.

Of heavy soils some have as a substratum a yellow tenacious clay, through which water finds its way very slowly; others a clay mixed with a sandy gravel; others, again, a clay sometimes forming a blue mass of great depth with comparatively little water, and not so adhesive as always to retain the shape in which it is excavated. Clay of this kind is of little value as

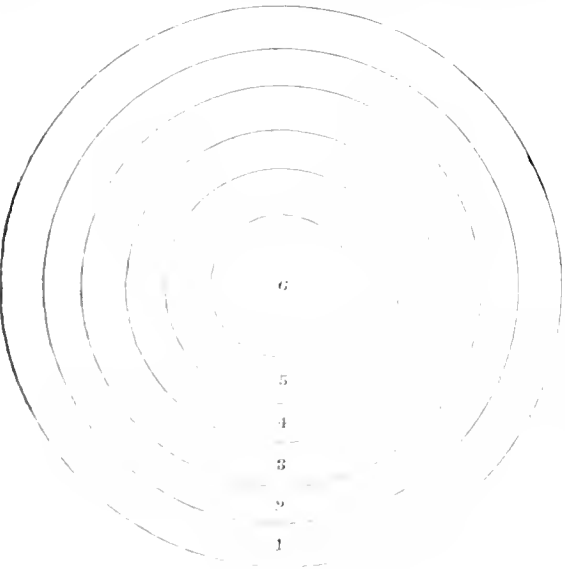


Fig. 3.

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| 1. <i>Erica alba</i> major. White. | 4. <i>Erica rosea</i> . Deep pink. |
| 2. cinerea coccinea. Bright pink. | 5. <i>vagens alba</i> . Very fine white. |
| 3. atro-purpurea. Deep purple. | 6. mediterranea. Purple. |

a fertiliser except for light sandy soils, to which it gives more solidity, but it is more remarkable for the great depth to which it extends. Clays of other kinds also abound in places, and all tints of grey are represented; some clays of this hue are the most useful for cultivated plants. In many instances lime may be advantageously employed in diminishing the adhesiveness of clay soils and rendering them more productive; but to the gardener who has a choice of soils I would not recommend one of a very stiff nature except where long droughts prevail, and scarcely then.

Let us now turn to some of those high dry moorlands of which Derbyshire, Staffordshire, and the north-western counties, afford such numerous examples, a considerable breadth also occurring in Surrey and on the south coast. There the hilly districts present two or more kinds of soil, to a certain extent differing from each other. The dry, black peaty skin of thickly-rooted matter of heath and fern is often desired for the potting-bench, as Heath and Azaleas, as well as several other plants seem to luxuriate in such a soil; but it is not well suited for cultivation, for it is often shallow, with a hard stony bottom, and on high naked situations deficient in shelter and altogether unsuited for cultural purposes. Patches of it, however, are found on a lower level and exhibit great fertility after cultivation, and have less rooty matter amongst the soil than occurs at greater elevations.

I will not here enumerate the plants which a peaty soil from a dry upland heath is said to suit, but I may remark that for many years it was thought to be the only one in which Rhododendrons would succeed, but they have been found to thrive in soils that to outward appearance bear little resemblance to peat, still there are many choice plants for which this is indispensable in pots.

The above dry upland peat must not be confounded with that obtained in the morasses at the base of the hill, which is often pernicious to vegetation—perhaps containing iron, which I have known to kill Rhododendrons; but such peat, after having been cut for fuel, left for some time exposed to the weather, and then immersed in a manure tank, may often be used with advantage for the same purposes as fibrous peat; but care ought to be taken how it is used, for it frequently does much injury.

Resembling in some degree the bog soil just alluded to is that which occurs by the sides of tidal rivers, where large tracts of level land have been overflowed by high tides, rendering the land like bog in colour, but differing from it owing to the water not being impregnated, as in the case of bogs formed by springs, with the substances through which the water passes before reaching the surface; and in the two cases a different kind of herbage prevails, so that the same crops can hardly be expected to thrive in each alike. Another distinction often exists. The marsh land by the sides of large rivers, or where the tide has overflowed at some former time, often contains more sand than the inland bog; and after cultivation for a series of years this sand forms an important element in the composition of the soil, as it exhibits itself in greater abundance after the vegetable fibre which once bound the whole into a mass has perished, and some very productive land is often the result.

Taking next another description of soil—that of a sandy district, where rain helps to make the ground and roads cleaner rather than dirty by consolidating the sand. Such soils are not unfrequent, and have these advantages, being more especially useful where rain falls often and in great quantity. Of their value for garden purposes little need be said, as much depends on the character of the season. Some crops luxuriate in sand—for instance, Asparagus where it has been liberally assisted with manure; and it is nowhere cultivated to greater perfection than in some of the sandy plains that border our tidal rivers. In dry sandy districts, again, there is often a soil that will almost blow away with a brisk wind, but underneath many such tracts there is marl at no great depth below the surface, and this can be dug up and spread over the field in sufficient quantity to meet the requirements of vegetation. Marl and marl pits are common enough in many places, and they have played an important part in husbandry.

Perhaps the most fertile of all soils are those formed by the alluvial deposits at the sides of rivers beyond the reach of the tides, and of ordinary fresh-water floods. Most rivers have a bordering of this kind of land in some part of their course, and on it occur the richest of our pasture and the most productive of our arable land. There the soil is deep, of rich earthy matters, and in all respects capable of supporting vegetation. Land of

this kind often gives us the earliest and certainly the most abundant crops, and it is well adapted for most vegetables; Celery, Rhubarb, Lettuce, and even Asparagus, doing remarkably well. Some of the best market gardens in the kingdom and not a few private ones are placed in such situations; their great drawback is their liability to suffer from early and late frosts, and in midwinter the frosts are often more severe than in more elevated sites.

Flinty gravels occasionally occur in districts where water is scarce; they are not at all enviable soils, and yet in favourable seasons good crops of corn are often reaped, even when the stones may be shovelled up in cartloads all over the ploughed ground. These stones, be it remembered, are not without their uses, and help to keep in what moisture there is in the land, and help also to keep it open. It is partly due to the stones that the soil does not harden into a solid impenetrable mass; for in many cases where angular or rounded flints abound in such quantities the intervening substance is a much stiffer and more adhesive material than it is often thought to be. The gardener, at all events, ought not to select a soil of this description, at least not the scalp of such a hill, but the valley may often be better, in consequence of the best soil being washed down by the rains; but dry hot seasons affect such lands severely, and in some places the absence of water is a great defect in domestic as well as cultural matters.

There are many other soils of an intermediate character comprising portions of two or more of those described, while there are some to which it would be difficult to give a definite character; amongst them are some of the shallow clayey soils resting on a shaly gravel—such soils are not generally productive. There is also a sterile gravel now and then met with of a bright yellow colour, evidently one of the worst to deal with, and patches of this in a naked condition often occur in waste places without exhibiting a vestige of vegetation, as on some of the moors of Derbyshire and Cannock Chase, in Staffordshire. Such soils require more time to render them fertile than would pay the cultivator to make them so, and the epithet barren applies to them; yet they are not absolutely so, for seeds will vegetate upon them, but they cannot sustain vegetable life for any considerable time.

Let us now suppose ourselves to be going from London by rail; we have not to travel far before we see several of the soils previously referred to, and a glance at the character of the crops, coupled, of course, with other considerations, will in many instances convey a good idea of what the soil really is. Most of the land near London may be said to be in an artificial state of cultivation—*i.e.*, it has for many years been so highly manured that the original character of the soil is almost lost sight of; but farther from town this result cannot so well be accomplished, and we have there the land in a condition more nearly resembling what it naturally is, and its productiveness may generally be estimated with some exactness by the character of the trees and hedges, and even the weeds. Nettles, notwithstanding the hostility most people bear to them, are one of the best indications of good land, much more so than Fern or Bracken. Crowsfoot is also a sign of good land; while wild Thyme and Daisies indicate inferior ground. The Ox-eye Daisy prevails in meadows of retentive soil, where it often blooms in a mass at the end of May or beginning of June in such a manner as to emulate the best-arranged flower garden. The scarlet Poppy in cornfields indicates a dry soil, while the purple Loosestrife is only seen in wet places, and amongst trees when in a condition of nature or nearly so. The Elm selects the best land, and is there capable of maintaining its supremacy, but on such land the cultivator has often a difficulty to rear the Spruce Fir, and has the mortification to find it often dies or becomes diseased at a very early age. Light land with a rather shallow soil more or less appertaining to peat suits the Scotch Fir best, while a calcareous soil is best fitted for the Beech, but both accommodate themselves to circumstances. The Oak is so often met with in soils of such widely different characters that it is difficult to define that which is best adapted for it. The light upland soils, where it is so often met with in a natural state in connection with Hazel, Birch, Maple, and other trees, is not the place where it attains the largest dimensions, yet every stiff soil does not suit it; a certain depth of soil for its roots to penetrate would seem to be necessary, and the best examples, I believe, are on rather stiff soils overlying a mixture of stiff loam and gravel.

Having extended my remarks to a greater length than was intended, I have only one further observation to make, and

that is what in the gardening world may sound something like heresy; nevertheless, I venture to ask this question, Are we right, when describing mixtures for growing choice plants, in recommending a mixture of peat and loam? I have given up the practice for many years and never use such a mixture. Soils intermediate in character between these two are plentiful enough, and where these can be had they are unquestionably better than the mechanical mixture. I am not sure that some other of our mixtures are not likewise open to objection. In conclusion I will remark, that a study of the soils which form the outer covering of our country is worthy of more attention than it has hitherto received.—J. ROBINSON.

THE CULTURE OF HARDY AND HALF-HARDY ORCHIDS.

It has often occurred to me that these plants should be more generally cultivated than is at present the case, more especially as many of them are, when well grown, scarcely less beautiful than the more expensive epiphytes of our Orchid houses. Terrestrial Orchids ought, as a general rule, never to be disturbed when making their growth, or in the flowering state; still I know from experience that many gardeners continually receive them from their employers or their friends, who happen to be travelling on the continent when these beautiful plants are in flower. The best way of collecting these plants is to mark them when in flower, and afterwards to remove them when the foliage has died off, and the tubers are thoroughly ripe and dormant. They (the tubers) should be carefully packed in moist earth or sphagnum during transit, and must be potted off as soon as received at home. The soil best suited for their requirements is strong fibrous loam, with a mixture of leaf mould and coarse sand; other species, as many of the Ophrys and Cypripediums, affect a chulky soil, or lumps of limestone may be broken and mixed with the fibrous or turfy compost. The pots should be well drained, and the soil pressed firmly around the tubers, after which plunge the pots in ashes, sand, or cocoa-nut fibre, in a cold frame, where they may remain all winter; all the attention they will require is to keep the soil moderately moist, nothing being more injurious than to let them get dust-dry. In a state of nature all bulbs and tubers get a copious supply of water during the winter season, or while they are at rest; and I have often thought that the reason many cultivators fail in growing these plants is, because they dry them off during the winter months. The pots should be protected during heavy rains and severe frosts, either by having the glazed lights drawn on, or an oil-cloth spread over the pit or frame in which they are plunged.

The foregoing instructions may be followed out in the case of rare or delicate continental species; but many of the British and American species may be planted out in the rock garden or herbaceous border, and will in most cases be found to succeed to perfection. One of the most beautiful of all hardy terrestrial species, *Cypripedium spectabile*, grows vigorously planted out in a peat bed on a cool clay bottom; while our only British species, *C. Calceolus*, grows best in a chalky loam, fully exposed to the east, but sheltered from the midday sun. In Messrs. Backhouse & Son's nurseries at York, these two beautiful species grow vigorously and flower profusely every summer, along with many species of Orchis and other continental Orchids. When these plants are grown outside, select a partially shaded spot well furnished with other herbaceous plants, and plant the tubers 5 or 6 inches below the surface; they will find their way through in due time, and will not suffer from the vicissitudes of the weather as they would if planted just below the surface of the ground. The contiguity of other herbaceous plants prevents undue evaporation from the soil in which they are planted. During winter a mulching of short litter, leaves, or manure, will protect them both from frost and cold rains.

I sincerely hope these beautiful plants will meet with every encouragement in our gardens, for amongst terrestrial Orchids there are many species not yet introduced to our collections that will bear comparison with the choicest epiphyte in point of beauty and fragrance. At the same time they may be grown without the unpleasant heat and extra labour required by tropical species.—B. (in *The Gardener*.)

DISEASE AMONG THE APPLE TREES IN THE NIAGARA DISTRICT.—The *Lockport Journal* makes some statements about a disease which does not appear to belong to the Apple "scare," so com-

mon about this season. Niagara is one of the largest, probably the largest, Apple-growing county in the State of New York. The above journal says a disease is prevailing in the orchards there that has destroyed many trees. It manifests itself in a curling of the leaves; the bark dies, then the body of the trees dies upwards about a foot from the ground; the disease also extends into the roots several feet, and kills the whole tree; the bark tightens and adheres firmly to the tree, and does not crack or peel. There seems to be no perceptible cause for fatality among the Apple trees; no grubs can be found nor anything else that would be likely to destroy. About fifteen trees in a splendid orchard belonging to Mr. Geo. W. Tower, in the town of Porter, have been attacked with this disease and killed. The trees were from fifteen to twenty years old. Several other instances in various towns are mentioned where fine, healthy Apple trees have been destroyed in like manner.

WHAT I KNOW OF PRUNING.

A THEORY as to pruning fruit trees, which has many recent advocates, is that the trees be suffered to grow as they please. To this there is earnest protest from careful cultivators. I doubt whether those who condemn pruning mean what they say—that is, that they would not cut out a single limb; if they do, it seems to me they do not understand the nature of trees. I suspect that they are beginners, and that when they come to know more they will change their views. I grant that the no-pruning theory has, nevertheless, some able advocates, men who really understand their business, but I doubt whether they would include Peach and all kinds of Apple trees. It is customary for the gardener in the Capitol Grounds at Washington to show Pear trees which, it is alleged, have never been pruned, and they look like it, but they bear well and are in a thrifty condition. It is to be noted that it is only Pear trees which are shown, so that the theory in this instance seems only applied to these trees. I grant that there are some varieties of Apple trees, slow growers and upright in habit, which need no pruning, and which probably will do better without it. But there are other sorts, having a bushy growth, which send out suckers and branches in every direction, and which, if permitted to have their way, will make a jungle of branches wholly unfitted for bearing fruit. If fruit does set it will be small, and being covered with foliage, will be without colour or flavour. To say that such varieties do not need pruning is absurd. It might as well be said that it is of no advantage to their fruit. What may be true of a variety that grows slowly and that makes dense hard wood even under high cultivation, cannot be true of a variety that grows like a weed, all its pores overflowing with sap, and the wood of which is spongy. Of this last class the Peach has a resemblance. So that the whole question resolves itself into a consideration of varieties, and the conditions of the case. There is no such thing as having one rule applicable to different conditions. A man must have judgment and sense. We may say, then, that the natural habit of a tree is to be considered, and that it should have its bent, providing it is not at the expense of fruit. Interfering branches, superfluous limbs and suckers never can be allowed, and whenever a good fruit-grower sees them he will cut them away.—AMATEUR (in *New York Tribune*.)

THE BEAUTIFUL AND USEFUL INSECTS OF OUR GARDENS.—No. 7.

I was afraid the meteorological tables published in Britain at the time of the Roman invasion, some 1900 years ago, were not very correct, or else our climate has considerably changed, and got much warmer (which is contrary to geological theories), otherwise the soldiers would never have thought of bringing with them the seed of a Nettle, presumably *Urtica pilulifera*. Their notion was, according to old Camden, that they could sow this plant, and as its growth was rapid, they would soon be furnished with an agreeable stimulating application, with which they could rub themselves when they found the cold weather trying, as they had been led to expect. Tastes differ; and we moderns find the sting of *U. pilulifera* a little too virulent to be preferable even to the endurance of some amount of cold. But, possibly the story is after all a *canard* of Camden's; historians have been known to lie.

But I have been led to connect this anecdote with insect life. The assertion that certain biting or stinging insects have, as part of the business of their lives, the duty of attacking us

so as to provoke us to cleanliness, is as old as many school books, and we take it for what it is worth. There is another theory, that certain of these seeming pests act somewhat on the principle of the Roman Nettles—they keep us up to the mark, and prevent our blood from stagnating, and drive it from the central organs of the body to the limbs, where congested vessels would do less harm. Who knows whether the sting of a wasp or the puncture of a flea has not saved some from sunstroke or fever? The idea is quite as plausible as that Tenterden steeple was the cause of the Goodwin Sands. Even the barb of the gnat, an insect we were discussing recently, and whose weapon is here figured, may be as wholesome as a surgeon's lancet, and give the species and its allies a new claim to be deemed useful visitants in a garden; that they are not without beauty we have already noted.

Among our garden visitants in the autumn is a lively and tolerably handsome moth, though it has no bright colours, and its claim on our admiration rests partly upon the fact that it exhibits the "poetry of motion," its attitudes in flight and in semi-repose being elegant, though not so grand as are those of others of the Hawk-moth tribe. This is well known to entomologists as the Humming-bird Hawk† (*Macroglossa stellatarum*), taking its English name from its rapid course on the wing, and the sound which frequently accompanies this. The Latin was suggested by the long tongue or proboscis, and, I conjecture, by the supposed attachment shown by the species to stellate flowers. This is an insect which has at times sorely vexed the souls of newspaper paragraphists, who have recorded its appearance under the heading, "Humming Birds in England," and have been compelled thereafter to explain the error into which they had unwittingly fallen. In some years, as in 1868, for instance, quite a swarm of communications have been sent to editors by persons in all parts of the country, describing this tropical phenomenon, because the insect was

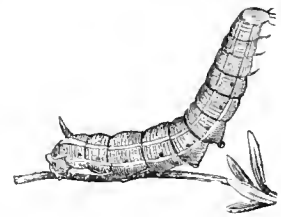


Lancets and Tongue of Gnat.

more abundant than usual, and often exhibited itself in towns and about conservatories. Vain in many cases is it to assert what was the real nature of the marvel—

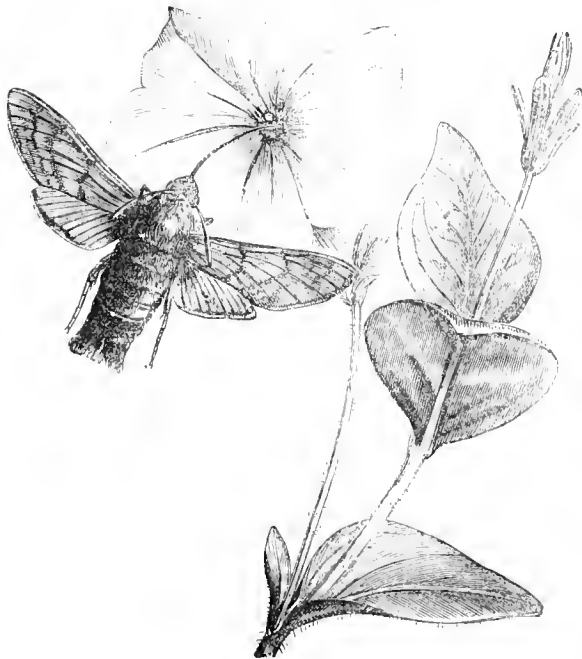
"Convince a man against his will,
He holds the same opinion still."

Did they not witness themselves the mysterious arrival of the interesting exotic, which stole upon them at the dusk, and poised itself over some fragrant blossom, "fanning" its tail, and then with a melodious hum dashed off to other flowers, its eyes all the while sparkling like "diamonds of the Orient?" And you would have them believe that this object was no bird, nay, more, actually an insect which had been bred on a bank not far from their own doors? Preposterous! Vain is it to show such persons specimens of the insect, unless, as may not often happen, you can secure the identical one they saw, otherwise they will still maintain that their's was "quite different." That there is a resemblance between the motions of this moth and that of the bird in question is granted, and the fact is noticeable that in some parts of France, where the children know, probably, little or nothing about natural history, they call this moth the "Bird-fly."



Macroglossa stellatarum—Caterpillar.

It has been questioned if *Macroglossa stellatarum* ever flies at night; and this is certain, that it prefers daylight, or at least twilight, for its aerial journeys, which are always taken with a purpose. In warm weather I fancy the moth is less inclined to be on the wing during the period the sun is high in the heavens; but on cool days, and later in the season, as during October, I have seen "Humming-birds" at all hours between sunrise and sunset, not "hawking" certainly, but busy in the pursuit of sweets. The insect divides its time between the flowers of the field and those of the garden; to some of the latter it is particularly devoted, as to the Jessamine and the Petunia. Specimens not infrequently enter houses, having been attracted to open windows by the plants placed thereat or growing up the walls. I do not think it often visits the sugary compound spread by insect-catchers on trunks of trees, though it has one odd taste, to which I called attention some years ago—viz., that it will visit and hover over the



Humming-bird Hawk Moth (*Macroglossa stellatarum*).

† We are indebted for the illustration to Hardwicke's "Science Gossip."
‡ This and the remaining engravings accompanying the present article are from Figuer's "Insect World," and have kindly been placed at our service by Messrs. Cassell, the publishers.



Macroglossa stellatarum—Pupa.

heaps of coals which are piled up in proximity to some railway stations. No doubt the moths are drawn to these by the organ of smell, but the fancied resemblance deceives them as they cannot get honey from coal, though we make it yield us sweet perfumes.

The Humming-bird Hawk moth is not an insect much given to vary in the perfect state, though we have two marked varieties of the caterpillar. The fore wings, of a deep brown, are crossed by wavy lines of a black shade, while the hind wings, much less in size, are orange, and darker in hue at the base and margins. The brown thorax harmonises with the fore wings, but the abdomen is curiously chequered with black and white. Both these are so well clad with hair that unless the insect is making its peculiar hum it may fleet past us, and we should not perceive it; by means of a tuft at the extremity of the body, aided by the vibration of the wings, the moth poises itself, and plies its long tongue very effectively. As late as November individuals have been seen at the autumn flowers yet surviving, but most have hibernated (or died off?) before that time. In Britain the species seems to be continued by the re-appearance in the spring of a part, if not all, of the

moths of the previous summer, which then deposit eggs on various species of Galium. By comparatively few persons, however, are they seen at the spring season, for which several reasons have been given, which need not be debated here. With the caterpillar one usually makes acquaintance in the month of August, or perhaps earlier, feeding on Galium mollugo more frequently than on any other of the Bedstraws. In the long-continued dry weather we occasionally have in the summer, it will be noticed that the Bedstraws die down very suddenly, except they may chance to grow in marshy places, and some of these caterpillars perish by the destruction of their food plant, for they are apparently unable to betake themselves to other species, except it be the Field Scabious. By a wise provision of Nature, however, they feed up with great rapidity when the weather is favourable, and I have had them at an early age, and in the course of a fortnight they have cast their skins two or three times, and increased rapidly to their full proportions. As in various others of the Sphinginae we find this caterpillar furnished with a pointed and straight horn at the tail, the use of which is not obvious; along the sides of the body we have not the seven oblique stripes seen in some familiar Hawk moth larva, but only two parallel lines, more plainly discernible in that type of the caterpillar where the ground colour is green. In another type the colour is brown tinged with pink. I have taken both of these off the same plant, feeding in such proximity as to leave one in no doubt as to their being descended from the same parent. This was in a lane near Chelsea, in Middlesex, where neither this caterpillar nor any choice insect is very likely to occur again, since the land is now a prey to the builder. The pupal state lasts only a few weeks at the most, and hence the cocoon is of a slight character, though sometimes large, being composed of leaves and stalks drawn together with silk in a careless way, and formed on the surface of the ground. It is made smooth at the base where the chrysalis reposes. This is rather singular in form, and so delicate that it will scarcely bear handling.



Anthrocera Filipendulae.



Anthrocera Filipendulae. Cocoon.

A smaller member of the Sphinx family (as constituted by Linnaeus) is an occasional visitant to our gardens in some counties. I have seen this species flying by dozens in some of the slopes of Kent, now and then resting on the wild Thyme, and afterwards with a rapid course, speeding about among the gardens on the edge of the road above, looking a charming object as the sun lit up its green and crimson wings, giving them a metallic lustre. The Six-spotted Burnet Moth, otherwise *Anthrocera Filipendulae*, has five relatives occurring in Britain, but this is the commonest of the genus. One writer on entomology remarks that the species flies heavily, and rarely during bright sunshine. This is scarcely correct in either particular, for though we notice them in little swarms clustering about the flowers like bees, they take quick though not lofty circuits on the wing, and very soon damage their plumage. These insects are as gregarious in the larval as in the imago condition, for we find the caterpillars feeding in companies, generally on the Dropwort (*Spiraea Filipendula*) through April and May, and the cocoons are clustered together, being attached to the stems of grasses, and rather closely woven, though the tenant only remains therein a short time. The larva feeds in the autumn, and then hibernates. Though, in the majority of the specimens of the moth which we see there are six distinct crimson spots on the deep green ground

colour, individuals turn up sometimes which have all the spots confluent, forming a sort of band across the wings.—
J. R. S. C.

FLOWERS FOR OUR BORDERS.—No. 13.

MARTYNIA FRAGRANS.—SWEET-SCENTED MARTYNI.

This handsome annual, though no longer a novelty, or, perhaps, it might be said, because no longer a novelty, is apparently less cultivated than it deserves to be. Though open to the charge of being somewhat coarse in foliage and habit, its showy crimson-purple flowers are so freely produced through the later summer months that this defect may very well be tolerated. When first introduced the *Martynia fragrans* was treated as a tender annual, but experience has long since proved that it succeeds well in the open ground, and may, if desired, even be sown in the border when a frame is not at hand.

When treated as a half-hardy plant it often happens that owing to the thickness of the integument, the seed remains some time dormant. To remedy this, the seed may be ad-



Martynia fragrans.

vantageously steeped in warm water for an hour or two, which will so soften the woody testa that a portion of it may be readily cut away with a sharp penknife, care being taken to avoid injuring the cotyledons. The seeds are best sown singly in small pots filled with the light compost usually employed for the seeds of half-hardy plants, and when above ground the plants should on no account be forced in a strong heat, but be allowed abundance of air in suitable weather that they may become robust and dwarf in habit, and if specimens of the maximum size are desired, the seedlings should be shifted into larger pots as these become filled with roots. If the seeds are not sown singly, the young plants should be separately potted as soon as large enough to handle without injury.

Before finally planting-out, the plants should be gradually inured to the temperature of the external atmosphere in a cold frame, or where this convenience is not at hand, the plants may be covered with a hand-light after being transferred to the borders, this protection being gradually withdrawn.

The *Martynia* delights in a light rich soil and a free supply of water. Being somewhat succulent in habit its stem requires support, and as, from the large size of its foliage, it is rather liable to injury from high winds, a partially sheltered situation should be afforded it.

Those amateurs who may be unable or indisposed to give attention to the foregoing details, may be glad to learn that almost equally satisfactory results may be attained by sowing the seed where the plants are intended to bloom about the end of April. The preliminary soaking may be tried, but the skin should not be pared off, the lower temperature of the soil rendering this peeling more hazardous than when the seed is

sown in a hotbed. The vegetation of the seed in the open ground may be somewhat slower than in a frame, but when once the seedlings have fairly struck root into the soil, their progress will be almost as rapid as in the case of those raised under more artificial conditions, whilst their habit will be sturdier and more robust.

The flowers of this plant are, as their name implies, remarkable for their vanilla-like fragrance, and well deserve a passing notice. Each is furnished with two bracts or leafy appendages, situated immediately beneath the true calyx, the latter being divided at its border into five nearly equal segments. Within the inflated throat of the corolla will be found four stamens in two pairs, of which one is longer than the other, and also the rudiment of a fifth stamen; the two cells of each anther are united by a connection, which is prolonged beyond the cells, and terminated by a gland-like body. The flower is followed by a singular woody fruit or seed-vessel, which is prolonged into a horn-like beak. This, as the fruit ripens, splits into two portions, which has, perhaps, given rise to the statement that the capsules of this genus are two-horned. These horns are said to cause great annoyance to travellers in Mexico by catching hold of their clothes. They have also given rise to the popular name of Cornet, Cornes du Diable, Triomphe d'Elephant, by which these plants are known in French gardens. The young seed-vessels gathered while quite soft and tender are employed in France and some other countries for pickling in vinegar.

Besides the *M. fragrans*, which it should be stated occurs in some catalogues under the name of *formosa*, *M. lutea* with dingy yellow flowers, and *M. proboscidea*, pale purple-spotted, are sometimes cultivated, but are less desirable. The plant formerly known as *M. cranioalaria* is now termed *Cranioalaria annua*.

The genus *Martynia* was so named by Willdenow, in honour of John Martyn, Professor of Botany at the University of Cambridge, and author of several botanical works, who died in 1768. The species now under consideration is a native of Mexico, whence it was sent in 1840 to Miss Harvey, of Hayle, in Cornwall, by whom it was first raised.—W. THOMSON, Ipswich.

IMPLEMENTS, STRUCTURES, AND APPLIANCES

AT THE ROYAL HORTICULTURAL SOCIETY'S BATH SHOW.

In the last issue of your Journal, page 77, you say, "the medal boiler of last year was not exhibited." This is incorrect. At Stand No. 7 we exhibited six gold-medal boilers, some very large sizes, and fine specimens of workmanship, and which were inspected by scores of the leading horticulturists, hundreds of gardeners, and others, who came again and again, bringing their friends to look at them, who acknowledged that ours was "the show of boilers upon the ground."

We beg to say that the boilers exhibited, with many others, are sold, that we have orders for more in hand, and no doubt you will find next year this boiler will again stand, as it did at Birmingham and Bath, pre-eminent.—THE THAMES BANK IRON COMPANY, Upper Ground Street, London, S.E.

[We insert the enclosed, and regret we had overlooked the boilers, not having been exhibited by the same firm as competed last year, but by the Thames Bank Company, successors to Lynch White. If our readers should take the trouble to refer to our notes of last year it will be found we reported very favourably of these boilers, and we regret that we inadvertently missed them.—EDS.]

A ROSE CURED OF MILDEW.—I have to thank you for saving a *Marcchal Niel* Rose tree which was dying apparently from mildew. I tried first soot and then soft soap as recommended in one of your back numbers, after utterly failing with sulphur, and it is now a beautiful, healthy-looking tree.—S. A. E.

NOTES AND GLEANINGS.

We have received from Mr. Culverwell, of Thorpe Parrow, some of his *PELOPIC MARROW PEA*. It is one of the largest Peas we have ever seen at table, and though not so sweet as the *Ne Plus Ultra*, is a fine-flavoured Pea, and will suit the taste of those to whom *Ne Plus Ultra* is objectionable.

— In a description of the vegetation of the bottom lands, Mr. Robert Ridgway gives numerous particulars respecting the DIMENSIONS AND HABIT OF THE PREVALENT FOREST TREES OF THE LOWER WABASH. These number nearly one hundred

species, of which about seventy exceed 40 feet in height, about fifty exceed 70 feet, and nearly thirty are known to reach or exceed the height of 100 feet. The ordinary height reached by the forest mass is about 130 feet; and above this general level occasional trees rise to an altitude of 200 feet, or perhaps more. The largest of these trees is the Sycamore (*Platanus occidentalis*), attaining sometimes a diameter of 20 feet, and a height of 200, with the lowest branches 90 or 100 feet above the ground. The Tulip Tree (*Liriodendron tulipiferum*) is the second in size, being found 180 feet high, and 37 feet in circumference. A stick from this tree is mentioned as measuring 74 feet in length, being straight and symmetrical, and tapering from 23 feet to 18 in circumference. The tallest Cottonwoods (*Populus monilifera*) are equally high. The Pecan (*Carya oliviformis*) reaches 175 feet in height, with a clean straight trunk of 60 to 90 feet. Among the Oaks the most stately and symmetrical is the Spanish Oak (*Quercus coccinea*, var.), frequently 150 feet high, and 15 to 20 feet around; while the most massive is the Burr Oak (*Q. macrocarpa*), of equal height and rather larger diameter. The White Ash follows, nearly 150 feet high; the Black Walnut, 125 feet high, and over 20 feet in circumference; and the White Oak, 140 feet high, over 17 in circuit. The tallest tree in proportion to its girth is the Sweet Gum, exceeding an altitude of 160 feet, with a clear shaft of over 100 feet, and a maximum circumference of 17 or 18 feet. The Honey Locust attains a height of 120 feet, the Red Maple exceeds 100, and even a *Sassafras* has been measured with a height of 95 feet.

— Mr. J. C. STEVENS has recently been very active in disposing of collections of *ORCHIDS* at his rooms in King Street, Covent Garden. On the 17th of last month upwards of 600 lots from Oceana and the surrounding districts came under his hammer, realising about £660. *Odontoglossum triumphans* in lots of a dozen brought from £2 to £2 10s., and the beautiful *Masdevallia Harryana* from £2 to £3 10s. a-piece. A further portion of Mr. Wilson Saunders' collection was sold on the 15th of July, comprising many scarce plants. *Hechtia argentea* brought £1, and *Geonomas*, *Euterpes*, *Dæmonorops* and other Palms from £2 to £3 5s. On the 23rd, again, there was another sale, in this case of the Orchids belonging to R. Barnett, Esq., of Blackheath Park, at which a fine plant of *Cattleya Trianai Alicia* was knocked down at £7 10s.

— The *Pull Mall Gazette* states that a curious practice has of late been adopted by fruiterers which cannot be called adulteration, but which is very near akin to it. Persons on buying West Indian Pine Apples at fruiterers' shops are asked whether they wish to purchase "heads" to the fruit. In other words, West Indian Pine Apples are dressed for dessert at a small cost as British hothouse Pines by the ingenious plan of inserting in the summit of the fruit a crown of leaves belonging to the latter, and thus guests are deceived into the notion that the Pine Apple which graces the table was grown in the hothouse of their host, who probably never had a hothouse, and knows nothing about the cultivation of Pines. A West Indian Pine Apple has no more right to wear a British crown than an Apple or a Peach has to employ rouge for the purpose of concealing its pallor or heightening its bloom. Although we never saw this toileting of fruit, yet we have seen the blue-bag employed to restore the bloom to Black Hamburg Grapes.

WORK FOR THE WEEK.

KITCHEN GARDEN.

THE occurrence of genial weather with showers will have brought the recently trenched ground to good condition for planting the latest crops of *Broccoli*, *Cauliflowers*, and *Winter Greens*, which should be prosecuted without delay; those of the same vegetables now advancing should have the earth frequently stirred with a fork. The too-common practice of drawing the earth up to the stems with a draw-hoe is so much time wasted; for what with the superficial work which such a hoe makes, and the trampling back and forwards, the centres between the ridges become as hard as gravel walks, forming ditches in wet weather and immense cracks and fissures in drought, and thus producing those very effects which surface-stirring is intended to obviate. When the crops are such as require the support of earth drawn up to them, the spaces between the ridges of earth should be well and deeply forked up. Make a sowing of *Chervil* for autumn use. The *Cucumbers* intended for house culture through the winter must be shifted into larger pots as those they are in become filled with roots. A portion of the ground where Potatoes have been lifted should be manured and dug, and planted with old English *Coleworts*, *Ragged Jack*, and *Siberian Kale*, all of which are very useful

late in the spring, just before the young Cabbages come in. Make a small sowing of East Ham *Cabbages* for early spring use, and see that a piece of ground is in readiness for the main crop, which must be got in early next week. Continue to transplant *Endive* as circumstances require; another sowing may also be made. Keep a succession of *Lettuces* sown and planted; they will now require a good supply of water to make them eat crisp and fresh. A good space may now be sown with *Flanders Spinach* for autumn and winter use. This is by far the best sort for winter use, although not in general cultivation. The seed is nearly round and smooth, very like the common Round Spinach.

FRUIT GARDEN.

Prepare the borders intended for new plantations of Strawberries by very deep trenching, and afterwards lay on a dressing of half-decomposed manure and fork it in. Old worn-out beds had better be trenched-up and the crop changed. Keep the runners well removed from the permanent beds. Applications of liquid manure and soot will be beneficial at this season. It seems very difficult to keep down the ravages of aphides on fruit trees this season, and stringent remedies will still be necessary or the hopes of another season will be frustrated. Thin-out the shoots of Figs, and keep them well nailed-in. Out-door Grapes are late, and will require every attention in stopping and training the shoots as often as possible, to give them all the benefit of the action of sun and air.

FLOWER GARDEN.

Proceed with the budding of Roses where the bark rises freely, but if it is dry defer the operation until we get more rain. I have lately been over my best Roses, and instead of cutting-out the dead flower-buds, have thinned-out all the weak shoots, only leaving such as will be required at the winter's pruning; the buds on those left will be much stronger in consequence, and I calculate on a fine bloom next season. The half-ripened wood of China, Tea, Bourbon, and Noisette Roses strikes freely at the present time and until the end of September if placed on a gentle bottom heat. Evergreens in the shrubbery which require pruning should now be attended to without delay. Proceed with the clipping of Box edgings; by attending to this at the present time neatness will be secured, and the edgings will maintain their uniformity for a greater number of years. Evergreen hedges which divide this department and encircle its outskirts should undergo the same operation. Advantage should be taken of moist weather to prick out the principal sowing of biennials into nursery beds; allow plenty of room between plant and plant if it is intended to let them remain in the beds till spring. Propagate *Antirrhinums*, *Pentstemons*, *Phloxes*, and other showy herbaceous plants by cuttings; they take root readily covered with hand-glasses under the shade of a north wall. Tulips may now be divested of their superfluous skins, and thoroughly cleaned whenever the florist can spare time. *Dahlia*s should be constantly watched and regularly tied as they advance, as the side shoots are extremely liable to be wrenched off by the wind. Pansy seed may still be sown, and the beds made of rooted cuttings. When the weather is showery plant out Pink pipings.

GREENHOUSE AND CONSERVATORY.

This is trying weather for hard-wooded pot plants, and those who do not pay strict attention to them now will probably not find it worth their while a few weeks hence. Above all things, see that they are not suffering from want of water, especially on that side of the pot which the sun's rays impinge upon, and keep a sharp look-out for insects. The red spider will soon play havoc among your *Chorozemas* if not closely watched, as will also the mildew on such plants as *C. Henchmanni* and *angustifolium*. To guard against both these pests and many others, it is a good plan to lay the plants on their sides, and, after giving them a thorough good washing with a syringe and clean water, to dust the under sides of the leaves with sulphur. This after remaining on a week or ten days may be washed-off again, and will generally clean the plants for the season. A good washing will also be beneficial to most pot plants at the present time. I do not mean a mere sprinkling, but a thorough washing by using several gallons of water to each plant, and washing each separately. On hot dry days give the plants in the evening a sprinkling, and also the ground on which they are standing. *Pin-lea spectabilis* and other kinds which have done blooming must have the branches liberally shortened-in and be set in a cool shady place to break, as must also the different kinds of *Polygalas*. *Aotus gracillima* must be cut down close to the pot, and *Leschenaultias* which are getting shabby must have all the flowers and flower-buds removed, and be placed in a cool place to start again. Take care they are clear of insects, and sprinkle them once or twice a-day in warm weather. Use no time in bringing the potting of specimens to a close, and be careful with the plants afterwards until they begin to show signs of growth. The young plants in pits must be exposed to the dews every evening, but beware of heavy rains. Stop over-luxuriant growth, recollecting that round, compact, sturdy growth is desirable at the present time, and that naked plants are at a discount.

STOVE.

Stove plants which flower late in the autumn, and especially those that may be taken to the conservatory to bloom, should now, or very soon, be in their flowering pots. The *Eranthemum pulchellum*, *Eschynanthus grandiflorus*, several *Justicias*, *Aphelandra cristata*, *Poinsettia pulcherrima*, and many more of that character belong to this class. Another very essential point to be observed with stove plants in general, which are removed to the conservatory when in flower, is to have the compost lighter for them and not give them more pot room than will just keep them healthy with the assistance of liquid manure, as plants of this nature suffer very much in a cool conservatory late in the season if they are growing in very rich composts and in large pots, whereas in a stove that would be the right way to make them flourish.

PITS AND FRAMES.

Gather and sow the seed of *Pelargoniums* as soon as ripe, as also of *Calceolarias* and other similar plants. Pot-off cuttings that are rooted, and continue to put in such as are wanted.—
W. KEANE.

DOINGS OF THE LAST WEEK.

The continued drought is telling upon our plants and flower beds, and upon the crops in the kitchen garden. We envy those gardeners who, when they come round and remark on the brown appearance of our parched lawn, tell us that they have only to turn on the water, and the hose and spreader throws it all over their garden. We have to draw some of ours in handcarts nearly 200 yards. The cost of labour is now becoming serious, and is likely to become more so in the future; therefore any appliance that will lessen labour and do the work as effectually as it can be done by human power ought to be carefully considered. Where water can be obtained at high pressure from waterworks, the cost of laying pipes all over the garden is as nothing compared to the labour in drawing water a distance and applying it by hand. If the above convenience does not exist, probably the next best scheme would be to pump the water up into a tank, raised as high as possible, and lay pipes from this. On the other hand, as we stated last week, much may be done by trenching the ground in winter and applying manure in a judicious manner. We are truly sorry to read that the Potato disease has appeared in Sussex. Large quantities of Potatoes are grown about here for the London market, but we have not seen any disease, nor have we heard of its appearance in our own immediate neighbourhood. Let us hope the present fine weather will keep it away.

FRUIT AND KITCHEN GARDEN.

We are preparing the ground for *Strawberry* planting according to our usual method. We like to have the trenching done a few weeks previous to putting out the plants, and it is also best to plant out after the ground has been moistened with rain. The plants are now all ready in small pots. As our ground is light we used to mix with it some clayey loam, but as that cannot readily be obtained we will only dig out a hole for each plant sufficiently large to hold a shovelful of loam in which to place the plant. As a precaution against red spider each plant is dipped in a pail of water in which half a pound of soft soap and 1 ozs. of tobacco have been dissolved. The pot in which the plant is growing is taken in the hand and inverted, all the leaves are plunged in the water, the pot is then laid on its side so that the water may drain off the leaves and not soak into the soil in the pot. In planting do not omit to leave a slight depression round each plant, so that if the weather continue dry abundant supplies of water may be given.

The latest crops of Peas are looking well; the ground had not been cropped, so that it was in good condition for the seeds to go in. The rows have been hoed, earthed-up, and the sticks placed to them. The earliest Onions have been harvested and are very fine. We sow in September and plant them out in rows about the end of February or beginning of March. Onions treated in this way are always free from the Onion grub. We sow James' Keeping in spring for keeping latest; these are also very fine. As much cannot be said of the Carrots, which are very much infested with the worm.

I ought also to say that the *Doyenné d'Été* Pear is now in, also Red Astrachan and Early Red Margaret Apple, while Rivers' Early Prolific Plum is loaded with its rich purple fruit, which can be gathered in handfuls.

FRUIT AND FORCING HOUSES.

The greater proportion of the *Pines* in the fruiting house have been cut, which necessitated a re-arrangement of plants in all the houses. The few plants showing fruit in different stages of development were placed tolerably thickly together in one end of the bed; this arrangement allowed the most forward of the succession plants to be placed not quite so thickly at the other end of the bed. The second house was re-arranged in the same way, the bed being turned over and some cocoa-nut fibre refuse added. We also potted all the suckers that we require, and plunged them in bottom heat several degrees higher than the

beds in the houses where the active roots were round the outside of the pots.

Vinerias.—In the early houses the few scorching hot days we have had have told upon the foliage, and are causing much of it to drop off. Abundant supplies of air are necessary night and day. The wood seems hard and well ripened, but one is often deceived in this. The season has not been very favourable for well maturing the wood in the earliest houses. As to the late houses note what was said about Lady Downe's last week in regard to scalding; we hear of some persons who have had their fruit of this sort much damaged by not giving air enough during the hot scorching weather of last week. Throw all ventilators and doors open during hot sunshine; after the berries begin to colour the danger is over. We are always more troubled with red spider in the late houses. As we do not fire much the pipes are not often heated, and during summer it is injurious to shut the houses quite close and to heat the pipes sufficiently to cause the sulphur fumes to take effect. The Grapes seem to colour well; the berries and bunches are also large. We leave the ventilators open both front and back at night.

ORCHARD HOUSE.

The Early York Peach is now in. Early Grosse Mignonne and Rivers' Early York are swelling rapidly and will come in soon after it. We have the house pretty free from red spider, so that syringing may be discontinued in a few days. If any trace of this pest should be on the trees it will spread with great rapidity, and in a fortnight the leaves will be destroyed. More caution is requisite as regards watering when the trees are ripening-off their fruit. Too much water will cause the fruit to be watery and wanting in flavour, while too little water will also cause the fruit to be inferior. Let each tree (I allude, of course, to pot trees), be moderately dry before it is watered, but not so much so as to cause the points of the young growing shoots to flag. The house must also have the ventilators both at front and back a little open all night.

CONSERVATORY AND PLANT HOUSES.

In the stove a general re-potting of the plants, Ferns, &c., has taken place; the plants have been re-arranged and allowed space to develop themselves. Nothing is so injurious to plants as overcrowding them, especially towards autumn, when air and light are necessary more than at any other time to perfect the growths. Once every week we look over the conservatory, remove all plants that have gone out of flower and have a seedy appearance, and replace with fresh specimens which have been growing either out of doors or have been brought forward in pits and frames. We find the ordinary Zonal Pelargoniums, both single and double, of great value at this time of the year for decorative purposes.—J. DOUGLAS.

TO CORRESPONDENTS.

N.B.—Many questions must remain unanswered until next week.

NOTICE TO QUIT (A Reader).—If you were paid your wages weekly you cannot demand more than a week's notice.

ROSE-BUDS DROPPING (J. S.).—Your question was answered at page 86.

LILIUMS (Mrs. H.).—If you advertise your wants you will probably find some one willing to exchange, but we cannot undertake to negotiate such matters.

PEA (J. B.).—The specimens were in such a state when they arrived that it was impossible to form any opinion.

SEEDLING PANSY (Mulligan and Kerr).—The Pansy, as far as we could judge, is a good variety, but not superior to others in the same style already in commerce.

USE OF CUCUMBER HOUSE (A Constant Reader).—We do not think you could do better than have Cucumbers on both sides of the house. Tomatoes would, however, succeed, but they would not pay nearly so well as the Cucumbers.

POT CULTURE OF CAZAR VIOLET (A Subscriber).—Your plants are probably old and have been some time in pots. We like them best in pots, from rooted runners or offsets planted singly in April in good rich soil in the garden on an east or west border, or other place shaded from powerful sun. Ours are on a north border a foot apart every way. The soil is kept stirred between the rows, and all runners as well as all weeds are removed. In September the plants are taken up with balls, potted in 6-inch pots, placed in a cold frame on ashes, shaded from bright sun until they are again established, then light and air are freely admitted. From the frame they may be drafted into the greenhouse as required. We should plunge your plants in the open ground, and keep off all runners. In September we would have them taken up and re-potted without disturbing the ball much, placing them in a cold frame until re-established. In October they may be placed on shelves in the greenhouse, where they will bloom well during the winter.

STORING SEED POTATOES—TRANSPLANTING ASPARAGUS (D. F. J. K.).—It is a good plan to place the tubers thinly on a floor or on shelves, but not in layers with straw between them, as those in the centre will be liable to sprout too soon. They are best stored on lattice-shelves with the useful protection from frost. The thinner they are laid on the shelves the better. The nearer the temperature is kept to 39° the less they will be liable to suffer from premature growth. The best time to transplant Asparagus plants into old beds is in spring, just before or when they are beginning to grow. The Carrots you have transplanted may form short stubby roots, they seldom form handsome roots. They need no particular treatment, except to be watered if the weather be dry. Consult a farmer in your locality as to the latest time of sowing Rape for spring feeding. The best remedy for the rabbits would

be to trap them, or place snares in their runs; poisoning would not be justifiable.

IVY ON A WALL (A. B.).—No doubt Ivy harbours insects, and no doubt also insects have the inconvenient habit of eating fruit, we should therefore advise you not to plant the back of your fruit wall with Ivy. Why not plant Currants or Morello Cherries against it? Collect all the liquid which drains from your hotbeds and manure heaps. It is the best dressing you can give to green crops.

VIOLETS IN A GREENHOUSE (—).—You may plant either the Neapolitan—the Czar, or the Victoria Regina Violet on the Peach border; a few of each would give you a variety.

DESTROYING GOOSEBERRY CATERPILLAR (G. H. B.).—We extract the following from the "Gardener's Year-Book," page 70:—"The most simple, least expensive, and most certain method of exterminating this pest is to cover the surface of the ground early in spring all round the Gooseberry bushes 2 or 3 inches thick with fresh tan from the tanyard, the same material as is used for bark beds. Let it remain till the autumn or winter following, and then dig it in. In November or December remove the earth from round the stem of each tree for about the space of 18 inches, and as deep as the roots will permit. Expose the roots to the weather for three or four weeks, then fill-in with manure or fresh earth."

TOMATOES NOT FRUITING (Idem).—The plants must need water. In no other way can we account for the fruit not swelling. We should discontinue the pinching, and keep them well watered in dry weather. It is likely you have by stopping caused the production of a multitude of shoots, and that they are consequently crowded. Thin them out so as to admit light and air. You may yet have a crop, which will ripen in autumn, or the plants may be cut before frost and hung up in ainery to ripen the fruit.

STOVE PLANTS FOR WINTER AND SPRING FLOWERING (S. L.).—*Centropogon Lycopodium*, *Anthurium Scherzerianum*, *Apheleandra nanantia* Roeblii, *Burchellia capensis*, *Clerodendron Balfourianum*, *Dalecampa Roeziana* rosea, *Eranthemum pulchellum*, *Euphorbia pucinissiflora*, *Inantophyllum miniatum*, *Monochatum cuscutifolium*, *Plumbago coccinea* superba, and *Thyrasactium rutifolium*. Fine subjects for winter-flowering are *Begonia fuchsoides*, *Ingramia*, *insignis*, *maucata*, *nitida*, and *hybrida multiflora*.

TRICOLOR PELARGONIUM LEAVES COLOURING (J. H. B.).—Keep the plants in a cold pit or frame, and near the glass, but not touching it, and shade from bright sun during the hottest part of the day, say from 9 A.M. to 3 or 4 P.M. Water moderately, and not overhead, admitting air freely. They will improve in colour in autumn.

TALL YELLOW AND WHITE-FLOWERING PERENNIALS (Mrs. C.).—*Ademone japonica* Honorine Jobert (white), 3 feet; *Lathyrus latifolius* albus, 6 feet; *Achillea moschata*, 2 feet; *Aconitum album*, 4 feet; *Aster multiflorus*, 3 feet; *Aster Tradescantii*, 3 feet; *Bocconia cordata*, 5 feet; *Leptandra virginica*, 5 feet; *Lupinus albus*, 3 feet; *Lychnis dioica alba-plena*, 3 feet; *Monarda alba*, 3 feet; *Polygonum cuspidatum*, 6 feet; *Pirrea Aruncus*, 4 feet; *S. barbata*, 4 feet; *S. Humboldtii*, 4 feet; all the above have white flowers. Yellow-flowered plants are—*Centrocraipa grandiflora* and *C. triloba*, 3 feet; *Cephalaria tatarica*, 5 feet; *Helianthus californicus*, *H. multiflorus* flore-pleno, 3 feet; *H. orgyalis*, 6 feet; *Lysimachia mexicana*, *Emothera grandiflora*, *Polygonum complexum*, 3 feet; *Rudbeckia columnaris*, *R. fulgida*, *K. Neumannii*, 4 feet; *Thalictrum discolor*, 4 feet; and *T. squarrosa*, 3 feet.

VARIOUS QUESTIONS (B. K. L.).—The old Gooseberries are not worth transplanting. Plant new ones in November, and they may be within 6 feet of the pyramid Apples. Plant the Raspberries 4 feet apart. You may move every alternate plant of Strawberries any time this month. It is quite possible your *Lagereria rosea* does not like twining on the cold iron rod. Substitute wood, or a cord, or wire. Sow the seed of *Sida vitifolia* in March in gentle heat. Thin Asparagus plants to 1 foot apart. Do this, and fill up blanks, in the end of March. Salt will benefit seedlings. *Chrysanthemums* would bloom better in 9-inch than 6-inch pots. It is not too late to re-pot.

UNHEALTHY VINE (Good Templar).—You have loaded your young Vines too much, and they are suffering from diminished vigour. You must crop them lighter, and encourage this season as much as you possibly can a development of the laterals. Do not pinch them too closely, and allow the leading shoot to grow as long as it will. See that your Vine border is well drained.

THE YEW POISONOUS (A. S. T.).—All the evidence on the subject of the Yew being poisonous to cattle, horses, and deer, leads to the conclusion that when eaten in its fresh state it is harmless, but when withered, or partially so, it is poisonous. The clippings of Yew hedges, for instance, if laid within the reach of these animals and eaten by them have invariably caused death; but it is known that when they browse upon the fresh shoots in parks no such result occurs.

CORDON-TRAINED TREES (E. J.).—You are not definite enough in your explanation. If your single cordons are on a wall they should be planted 18 inches apart, and trained at an angle of 45°. You should now cut all the young wood back to two or three leaves. If they are planted in the open garden let them grow upright. We would plant at least 3 feet apart, and allow the side shoots to grow out more. There is no advantage, but the contrary, in cutting-in too closely.

STRAWBERRY CULTURE (H.).—Strawberry beds last longest in perfection in medium loam, and the shortest time in light sandy soils. Our soil being very light we had it most advantageous to plant a new bed annually. In any soil we would not allow a bed to stand longer than three or four years. If the earliest are layered, as soon as they are ready, in small pots, and the plants put out early in August, they will bear a full crop the following year. The ground should be trenched 2 feet deep and highly manured.

HEATING LEAN-TO HOUSE (R. T. W.).—Seventy feet of 3-inch pipe would keep out the frost in ordinary winters, but to be sure we would put in four rows of 3-inch, or three rows of 4-inch pipes, which last would be preferable.

DESTROYING WOODLICE (A Weekly Reader).—We know of no better plan than to place some damp moss round the sides of the bed, and especially against the walls, and on this pour boiling water some time the following morning. The moss—or hay, which will answer almost as well—may be removed, and immersed in boiling water; this, repeated a few times, will clear the house. The hot water will destroy the Mushrooms with which it may come in contact, but as it need not be allowed to wet more than an inch or two from the wall, there can be no great loss of Mushrooms from the application.

QUICK-GROWING SHRUB FOR PROTECTION NEAR THE SEA (Northern).—The quickest-growing and best of all for affording shelter is the Elder (*Sambucus nigra*). It should be planted 2 feet apart, and as a double row 1 foot

from the other, quincunx fashion. The richer the soil the better they will grow. Subjects of taller growth are the Sycamore, which grows quickly, and stands the sun breezes well, also the Norway Maple, both being deciduous trees. The Austrian Pine and Corsican Pine are evergreen trees, and good for shelter. They are of rapid growth, and stand well.

BEDDING GERANIUMS WITH ORNAMENTAL FOLIAGE (F. L.).—*Golden Trocifers*: Louisa Smith and Victoria Regina. *Silver Trocifers*: Mabel Morris and Prince Silverwings. *Golden Bronze*: The Moor and Harold. Golden Banner is a self-golden-leaved kind without a green-disc or any trace of zone. When the flowers are removed it is probably the best golden-leaved bedding plant known. Yellow Boy is an excellent yellow-leaved variety.

POT POTTER (B. rthm).—If you refer to page 56 of our present volume you will find a receipt.

GLAZING A PEACH HOUSE (Subscriber).—We should prefer transparent glass.

REMOVING EVERGREENS (Sutton Coldfield). You can if you wish remove the Hollies from the hedge, and the best time to do it is in May or June. Cut round the roots now, and move them in the first week of next June.

WEEDS IN MANURE (F. Mason).—If the manure is well fermented there is every probability that the bulbs of the wild garlic and the seeds of Dock will be destroyed. We cannot suggest any other remedy.

INSECTS ON PEAR LEAVES (H. P. Stroud).—It is the Slimy Grab (*Scandria aphidis*). (L. J. K.).—If you will send us the insect we will name it, and a remedy, if such exists.

MEALY BUG ON STEPHANOTIS (H. W.).—Cutting the plant back may be deferred a month, or until you can have it and the roof thoroughly cleaned. In the meantime syringe forcibly with water. In cutting-back and thinning-out, leave as much of the young healthy growth as you can, and clean the plant twice or thrice before tying it up to the roof. It is the most difficult of all insects to get rid of when it obtains a hold.

GNAWED RHODODENDRON AND LAUREL LEAVES (H. D. Hawkhurst).—We cannot inform you what insect has gnawed the leaves of these plants, indeed we much question whether the mischief is caused by insects. It may be by snails, or even by the action of rain and sun. The trees should be carefully examined after dark.—I. O. W.

NAMES OF FRUITS (Hillman Thompson).—Both No. 1 and No. 2 are the Early Red Margaret or Red Jeannette. The White Jeannette is quite a distinct sort. We have never met with the name Katherine before, and are obliged to you for the information.

NAMES OF PLANTS (J. B.).—*Ampelopsis Vitellii*. (H. H.).—1, *Eutoca patuliflora*; 2, *Alkanna species*. (T. S.).—*Arrhenatherum avenaceum*. (T. W. Walford); 1, *Erythraea Centaureia*; 2, *Scabiosa succisa*. (*Major T. Mason*).—1, *Emothera Fraseri*; 2, *Potentilla*; 3, *Alyssum saxatile*; 5, *Gonista tinctoria*. (B. W.).—*Begonia boliviensis*.

POULTRY, BEE, AND PIGEON CHRONICLE.

BEDFORD POULTRY SHOW.

This was held on July 31st, in conjunction with the Bedfordshire Agricultural Society's Show. It proved a great success, although the morning was anything but promising. Just as the poultry Judge commenced his duties the rain came down in torrents, and poured through some parts of the large tent like a sieve, more especially so just over the Hamburgs, which misfortune, coupled with their inferiority, made them rather objects of pity than otherwise; but by the time the Exhibition opened to the public the sun shone forth in his full radiance, and by two o'clock a more beautiful day could not be desired. We could but observe that even with the great attractions of the Coldstream Guards' band, the flower show, the stock, and the horse ring, the poultry tent was the most crowded of all. It contained many good specimens in the various classes, which were shown in Mr. Billett's pens, and we noticed the zeal and energy of the poultry sub-committee, who, with the assistance of Mr. Billett, took every possible care of the specimens committed to their charge, and had the whole repacked and delivered to the Railway Company the same evening.

DORRINGS.—1 and 2, Rev. E. Bartram, Berkhamstead. *Cock*.—1, E. Southwood, Fakenham.

COCHINS.—1, R. S. Woodgate, Pembury. 2, Master Eivon, Fulham. *he*, T. Alberton, Leighton Buzzard; R. B. Stafford; J. Robinson, Wislhamstead. *c*, J. Watts, Bedford. *Cock*.—1, F. Fryor.

GAME.—*Black-breasted Red*.—1, A. C. Swain, Radcliffe. 2, R. B. Stafford. *he*, F. Simpkins, Luton; R. Hall, Cambridge. *Any other variety*.—1, R. Hall (Duckwing). 2, J. Mason, St. John's, Worcester (Duckwing). *Cock*.—1, H. Lotan, Oundle. *he*, R. Hall.

SPEARS.—1, W. R. Bull, Newport Pagnell. 2, Master Eivon. *Cock*.—1, W. R. Bull.

BRAMA POUTRA.—1, F. Fryor. 2, M. Leno, Markyate Street. *he*, Cross and Mansfield, Cambridge; J. Holmes, Whitecotes, Chest-rfield. *c*, A. S. Thornton, Kempston Grange. *Cock*.—1, H. Clarke, Bedford.

GAME BANTAMS.—*Black-breasted Red*.—1, T. W. Anns, Clapham. 2, E. Southwood. *Any variety*.—1, Withfield. 2, Master P. M. Payne (Buff).

BANTAMS, NOT GAME.—1 and 2, M. Leno. *Cock*.—1, M. Leno.

ANY OTHER VARIETY.—1, P. J. Madden, Bugthwaite. *he*, H. Feast, Swansea. French. *c*, Master P. M. Payne (Maple-eyed Silk Fowls).

FARMYARD.—1, T. Alberton, Heath and Beach, Leighton Buzzard (in County only). 2, R. B. Stafford. 3, M. Hebban, Bromham Grange.

DUCKS.—*Aylesbury*.—1, T. Sear, Tangwick. 2, G. Kirby, Ailsey Siding. *c*, A. Markwell, Bedford, Ely. *Rouen*. 1, E. Bartram. *Any variety*.—1 and *he*, M. Leno (Kasarka and Whistling). 2, J. J. Madden (Black East Indian).

GUINEA FOWLS.—1, O. E. Cresswell, Early Wood, Bagshot. 2, M. Leno.

GIFFER.—1, Miss Roe, Crescent, Bedford. 2, M. S. Thomas, Bletsoe. *he*, A. Markwell, Bedford, Ely.

FIGEONS.

CARRIERS.—1, T. Chambers, jun., Northampton. 2, S. Weatherhead, Luton. *he*, J. Atkins, Bedford. 1, H. Palmer, Bedford.

PUTTERS.—1, R. Kingston, jun., Chatteris. 2, L. Watkin, Northampton. *c*, J. Atkins.

JACOBINS.—1, H. Yardley. 2, T. W. Swallow, Northampton.

ANTWERPS.—1, W. E. Bull. 2, R. Hall. *he*, A. R. Burrell, Cambridge; J. Atkins; H.

FANTAILS.—1, J. F. Loversidge, Newark. 2, O. E. Cresswell. *c*, J. Atkins Miss Moller, Cardington.

TRUMPETERS.—1, C. Norman, Westfield, Ipswich. 2, H. Yardley. *Any Variety*.—1, C. Bryant, Bedford (Blue Owls). 2, C. G. Hitchcock, Oxford (Black Macpie). *he*, J. Atkins; C. Bryant (Archangel); L. Watkin, Northampton; H. Yardley. *c*, C. Norman (Barbs); Master J. P. Day, Bedford (Mottled Tamblers).

RABBITS.—*Long-ear*.—1, F. Banks. 2 and *c*, F. Purser and C. Bryant, Bedford. *he*, T. Smith, Bedford. *Angora*.—1, F. J. Smith. 2, S. Ball, Bradford. *he*, W. G. Hancock, Northampton; F. J. Smith. *c*, S. Youl, Northampton. *Himalayan*.—1, S. Ball, Bradford. 2, A. Hudson, Hill. *he*, F. Sibbage, Northampton. *Silver Grey*.—1, S. Ball. 2, H. W. Anns. *he*, S. Russell, Northampton. *c*, F. Purser and C. Bryant. *Selling Class*.—1, T. Garner, Kimschoupe. 2, F. Purser and C. Bryant (Sandy and White). *he*, T. Smith (Grey and White).

JUDGE.—Mr. W. B. Jeffries, Ipswich.

DEVON AND EXETER POULTRY SHOW.

This was held in the Victoria Hall, Exeter, on July 31st and August 1st. The following are the awards:—

POULTRY CUP.—Equal, H. Feast, Rev. G. S. Cruwys.

BRAHMS.—*Dark*.—1, T. H. Waterman, Anderton, Devonport. 2, E. Enzor, Bristol. 3, J. Watts, King's Heath, Birmingham. *c*, T. H. Williams, Brecon, South Wales; E. Enzor. *Light*.—1, T. A. Dean, Mardon, Hereford. 2, Rev. N. J. Ridley, Newbury. 3, J. Turner, Tiverton, Bath. *he*, N. Heath, Totnes. *c*, J. Bloodworth, Cheltenham; Mrs. H. Popham, Chichester; N. Heath; H. D. France, Bunk, Totnes; J. Turner.

COCHINS.—*Cuckoo or Buff*.—Cup and 1, J. Bloodworth. 2, S. R. Harris, Cusgrave, St. Dav. 3, C. Bloodworth, Rayshill, Cheltenham. *he*, T. A. Dean. *Any other variety*.—1, S. W. Probert, Lostwithiel. 2, J. Turner. 3, Rev. F. T. Hillyard, Oakford, Tiverton. *he*, R. W. Beachy, Fluher, Kimschoupe.

DORRINGS.—1, T. C. Burrell, Micheldever. 2, J. Robinson, Garstang. 3, H. Feast, Swansea.

GAME.—*Black Red*.—Cup and 2, Rev. G. S. Cruwys, Tiverton. 3, Coon and Bros, St. Austell. *he*, T. Coon, Barnstaple. *Any other variety*.—1, H. Browne, St. Austell. 2 and 3, Rev. G. S. Cruwys.

HAMBURGS.—*Golden pencilled*.—1, C. Bloodworth. 2, H. Moore, Weston-super-Mare. 3, G. Lias, Par Station. *c*, T. Edmunds, Totnes; H. Moore; H. Denham, Exeter. *silver-pencilled*.—1, J. Robinson. 2 and 3, Withfield.

HAMELAGUS.—*Gold-winged*.—1, H. Feast. 2, J. Robinson. 3, J. Davies, Harborne, Birmingham. *he*, Mrs. J. Pattison, Dorechester; J. Clark, St. Dav. *Silver-winged*.—1 and Cup, Mrs. J. Pattison. 2, J. Robinson. 3, H. Feast.

MORCARTS.—1, W. F. Eyles, Buckfastleigh. 2, J. Croote, Heavitree, Exeter. 3, T. P. Burton, St. Austell. *he*, Miss S. H. Northcott, Uper Nutwell. *c*, H. Feast; W. Blackmore; F. Hayman, St. Siuwell's, Exeter.

POLANDS.—1, S. W. Probert. 2, G. Lias. 3, C. Bloodworth.

FRENCH.—1, H. Feast. 2, M. H. Sturt, Pewsey. 3, Mrs. Troyte, Bampton. *c*, W. H. Coppleson, Bridgend, Lostwithiel.

ANY OTHER VARIETY.—1, S. W. Probert. 2, Rev. N. J. Ridley. 3, O. E. Cresswell, Early Wood, Bagshot. *he*, J. Robinson.

FANTAILS.—*Game*.—1, E. Seaman, H. Hiperton, Trowbridge. 2, E. Farrington, Barbourne. *Black or White Rosecomb*.—1 and *he*, Rev. G. S. Cruwys. 2, J. Watts. *Any other variety*.—1, Rev. G. S. Cruwys. 2, A. Pigott, Bramford Speke, Exeter.

DUCKS.—*Aylesbury*.—1, J. Robinson. 2, S. Vingo, Ponsanooth, Perranar-worthell. 3, H. Feast.

SELLING CLASS.—*Cock*.—1, W. Coombes, Exeter. 2, H. Feast. 3, J. Croote. *c*, Mrs. H. Popham; G. Packham, Whym, Exeter (4). *Hens*.—1, F. J. Echer, Crediton. 2, G. Packham. 3, E. W. Beachy Extra 3, S. W. Probert. *he*, Mrs. H. Popham; G. Packham (2); Viscountess Chetwynd, Exmouth.

PIGEONS.

PIGEON CUP.—H. Yardley.

CARRIERS.—*Cock*.—1, E. Burton. 2, H. Yardley, Birmingham. *he*, R. Fulton, London. *c*, F. Hayman (2). *Hens*.—1, R. Fulton. 2, E. Burton. *he*, E. Burton; R. Fulton; F. Hayman.

PUTTERS.—*Cock*.—1 and 2, R. Fulton. *he*, G. Holloway, jun., Stroud; G. Packham. *c*, H. Yardley. *Hens*.—1 and 2, R. Fulton. *he*, H. Yardley; G. Packham. *c*, G. Holloway, jun.

TRUMPETERS.—1, H. Yardley. 2, J. Croote. *he*, H. Denham; R. Fulton (2); G. Packham. *c*.—Burton, Exeter; J. Broad, Plymouth.

BAMBS.—1, R. Fulton. 2, H. Yardley. *he*, Bullen & Joce, Newport, Barnstaple (3); R. Fulton. *c*, E. Burton (2).

OWLS.—1, Braund & Geary, Bideford. 2, J. L. Smith, Newport, Barnstaple. *he*, R. Fulton. *c*, H. Yardley.

NUSS.—1, H. Yardley. 2, G. Packham.

DRAGONS.—1, G. H. Gregory, Taunton. 2, H. Yardley. *he*, H. Yardley; R. Fulton. *c*, G. Packham; H. Gregory; H. Denham.

TURKISH.—1, G. H. Gregory. 2, H. Yardley. *he*, Braund & Geary. *c*, J. Croote (2).

FANTAILS.—1 and *he*, J. L. Smith. 2, H. Yardley.

ANTWERPS.—1, H. Yardley. 2, A. Damarell. *he*, F. Beck, Exeter. *c*, J. Croote; H. Yardley.

TRUMPETERS.—1, Braund & Geary. 2, R. Fulton. *he*, G. Packham; Bullen and Joce. *c*, H. Denham.

JACOBINS.—1, H. Yardley. 2, R. Fulton. *he*, Braund & Geary.

ANY OTHER VARIETY.—1, H. Yardley. 2, G. Packham. *he*, H. Denham; G. Packham. *c*, H. Yardley; Bullen & Joce; R. Fulton; J. Croote.

SINGLE BIRD, EXCEPT CARRIERS AND PUTTERS.—1, H. Yardley. 2, Hockaday & Fern, St. Austell. *c*, G. H. Gregory; G. Packham; H. Denham; R. Fulton.

SELLING CLASS.—1, R. Douger, jun., Parkstone, Poole. 2 and *he*, G. Packham. *c*, H. Yardley.

JUDGE.—Mr. W. B. Tegetmeier, London.

HASLINGDEN POULTRY SHOW.

This Show was held on July 31st, and, in point of entries was a great success in all departments. It is long since this Society was favoured with so fine a day, the weather having been very wet at its meetings for many years. The pens for poultry were ranged in single tiers along one side of the field, and the birds were well attended to. We would, however, draw attention to the objectionable system of putting straw on the bottom of the pens, which in no way adds to the comfort of the birds, and in all cases serves as an impediment to the progress of those who have the awards to make.

With true agricultural taste the large varieties of poultry were placed at the head of the list, and the specimens in no way dishonoured the patronage, for finer or better-shown *Geese*, *Turkeys*, and *Ducks* it would be difficult to find at any show, the

Emden Geese and Raven Ducks being particularly noteworthy. Adult *Cochins* in the Buff class were in fair feather and condition for the time of year, and the chickens of that variety very promising, but the Partridge, both old and young, were scarcely of equal merit. Of adult *Brahms* there were but two good pens shown, but of young the entries were more numerous, and the pullets mostly forward and good in colour and marking. *Dorkings* were fair in the adult class; and the young, though not forward, were very good in feet, form, and colour. The *French* fowls were mostly *Creve-Coeurs*, and very good in feather and size. *Spanish* were shown singly, and both lots were very good, the size and quality of face in both sexes being a great improvement upon previous years. Mr. Brierley had the *Game* classes all to himself, and the birds that won the prizes were well worthy of their positions. There were two classes for Game, to be shown by exhibitors residing within two miles of Haslingden, and these also contained some good specimens, notably the single hens, which were Brown Red and Pile. Adult Golden-pencilled *Hamburghs* were of very good quality; the chickens, which were more numerous, had many good pens. In Silver-pencilled only the winners were noticeable, but these were really good, and the chickens also good in quality. Of Golden-spangled *Hamburghs* there were some good birds, mostly hens, but the chickens were not nearly so forward as the other varieties. The adult Silver-spangled were in fair bloom and of good quality, and the chickens really good, some of the pullets being grand in marking and colour. The two winning pens were near perfection, and among the chickens were some extremely neat pairs of birds, the colour and style of all being remarkably good. In the Variety class Golden *Polands* were first and Malays second. The local class for Game *Bantam* cocks was tolerably well supported, the first being Pile and the second Black Red. In the open class for cocks the first-prize bird was also an almost perfect Pile, and the second a very good Black Red. There were no good White Bantams, and Blacks won the prizes for those varieties, both birds being very good. The first prize in the Variety class was won by Silver *Sebrights* of perfect ground colour, and the second by very pretty *Pekins*. Both pairs of winners in the class for Game Bantams were Black Red pullets of this year, several other pairs being good, but not in nice feather.

The entries of *Pigeons* were very good, as also the *Rabbits*.

COCHIN-CHINA—*Buff or Cinnamon*.—1, W. A. Taylor, Manchester. 2, T. F. Ansdell, Cowley Mount, St. Helens. *he, W. A. Taylor, W. Harvey, Sheffield. Chickens*.—1, W. Mitchell, Leeds. 2, *he, C. Sidgwick, Kirkstall.*

COCHIN-CHINA—*Any other variety*.—1, A. Bamford, Middleton. 2, W. A. Taylor. *he, W. Hey, Littleborough; W. A. Taylor. Chickens*.—1 and *he, W. A. Taylor. 2, C. Sidgwick.*

BRAMMAS.—1 and 2, T. F. Ansdell, *Chickens*.—1 and 2, J. H. Pickles, Birkdale. *he, H. Beldon, Goffs-wook; W. Whiteley, Clonch, Sheffield. Dorkings*.—1, W. Harvey. 2, T. Stott, Hecley, Rochdale. *he, J. Robinson, Garstang. Chickens*.—1, T. Briden, Earby, Skipton. 2, T. Statter. *he, W. H. King, Rochdale. 3, T. Statter; J. Butterworth, Rochdale.*

FRENCH.—1, J. Robinson. 2, G. W. Hibbert, Gofley, Hyde. *he, J. H. Fielden. SPANISH*—*Black*.—*Cock*.—1, H. Beldon. 2, J. Powell, Bradford. *he, E. Suddall, Haslingden. c. J. F. Sillitoe, Wolverhampton. Hen*.—1, J. Powell. 2, E. Suddall. *he, H. Beldon, Bingley; J. F. Sillitoe (2); E. Suddall.*

GAME.—*Cock*.—1 and 2, C. W. Brierley.

GAME.—*Cock*.—*Within two miles of Haslingden*.—1, F. Walton, Rawten-stall. 2, N. Storey, Haslingden. *Hen*.—1 and 2, E. Suddall, c. J. R. Isherwood.

GAME.—1 and 2, C. W. Brierley.

HAMBURGHS.—*Golden-pencilled*.—1, H. Beldon. 2, J. Robinson. *Chickens*.—1, E. Clayton, Keighley. 2, W. Clayton, Keighley. *he, E. Clayton; G. & J. Duckworth, Church. c. J. Robinson.*

HAMBURGHS.—*Silver-pencilled*.—1, H. Beldon. 2, J. Robinson. *Chickens*.—1, J. Robinson. 2, H. Smith, Keighley. *he, H. Smith; H. Beldon.*

HAMBURGHS.—*Golden-spangled*.—1, G. & J. Duckworth. 2, J. Newton, Silsden. *he, J. Robinson. N. Marley, Denton. Chickens*.—1, N. Marley. 2, J. Hall, Stacksteads. *he, T. Maw, Wolverhampton; J. Newton. N. Marley. 2, J. Hall, Stacksteads.*

HAMBURGHS.—*Silver-spangled*.—1, J. Robinson. 2, H. Beldon. *he, J. Robinson. Chickens*.—1, J. Robinson. 2, J. Robinson. *he, J. Ashworth, Burnley; C. Parsons, Wolverhampton; H. Robinson, Leeds; J. Robinson; T. Smith, Keighley.*

HAMBURGHS.—*Black*.—1, H. Beldon. 2, J. Moore, Bingley. *he, N. Marley; W. A. Taylor. Chickens*.—1, J. Moore. 2, T. Walker. *he, C. Sidgwick; T. W. Hobbes, Rutherford, Leeds; J. Moore; W. A. Taylor.*

ANY OTHER VARIETY.—1, H. Beldon. 2, Rev. A. G. Brooke, Strawfieldine.

SELLING CLASS.—1, Birch & Boulter. 2, A. Bamford, Middleton. *he, H. Beldon; E. Suddall.*

GAME BANTAMS.—*Cock*.—*Within two miles of Haslingden*.—1, Miss A. Walton, Rawtenstall. 2, G. Haworth, Haslingden. *he, T. Green, Sunnyside, Crawshawbooth; A. Burton, Haslingden; J. R. Isherwood.*

GAME BANTAMS.—1, W. B. Entwistle, Westfield, Bradford. 2, G. Hall, Kendal. 3, T. Barker, Burnley; W. F. Entwistle; E. Pickun, Lumb, Newchurch. *Hens*.—1 and 2, W. F. Entwistle. *he, T. Barker; G. Hall, Kendal (2); G. Booth, Haslingden.*

BANTAMS.—*Black or White*.—*Cock*.—1, W. H. Shackleton, Bradford. 2, Miss A. Walton. *he, H. Beldon, Bingley; W. A. Taylor; T. Cropper, Bacup. Any other variety*.—1 and *he, Miss A. Walton. Chickens*.—1, H. B. Smith.

TURKEYS.—1, J. Walker. 2, C. W. Brierley.

GELSE.—1 and 2, J. Walker.

DUCKS.—*Aylesbury*.—1 and 2, J. Walker. *he, H. Feast, Swansea. Rouens*.—1, P. Unsworth. 2, J. Walker. *he, J. Walker. Any other variety*.—1, H. B. Smith. 2 and *he, W. Bicus.*

PIGEONS.

CARRIERS.—*Cock*.—1 and 2, E. Horner, Harewood, Leeds. *he, J. Stanley, Blackburn. Hen*.—1 and 2, E. Horner.

TUMBLERS.—1, T. Rule, Gillesgate, Durham. 2 and *he, E. Horner. Hen*.—1 and 2, W. Harvey.

TUMBLERS.—1, E. Horner. 2, J. Fielding, jun., Rochdale. *he, W. Lamb; W. Harvey (2).*

FAVRES.—1, J. Fielding. 2, A. Justice, Salford. *he, E. Horner.*

OWLS.—*English*.—1 and *he, J. Chadwick, Bolton. 2, W. Harvey. Foreign*.—1 and 2, T. W. Townson, Bowdon.

FASTIDS.—1, J. Kemp, Haslingden. 2, E. Horner. *he, J. F. Loversidge. TURKISH*.—1, J. Fielding, jun. 2, W. Kitchen, Farnsworth. *he, J. Fielding, jun.; W. Kitchen.*

BRAVOS.—*Blue or Silver*.—1, G. Booth. 2, W. Gamon, Chester. *Any other*

variety.—1, J. Holland. 2, A. Jackson, Chatterbox, Bolton. *he, W. H. Thompson. Hen*.—1, E. Rule. 2 and *he, W. Harvey. ANCELS*.—1, T. Rule. 2, W. Dargdale, jun., Bradford. *he, E. Horner. ANGEBERS*.—1, E. Horner. 2, A. Justice, Leeds. 2, J. Stanley. *he, W. Gamon; J. Stanley; T. Chantley, Blackburn; T. Woodhouse, Blackburn. MAJORS*.—1 and 2, J. E. Bowler, Blackburn. NEXUS. —1, Rev. A. J. Brooke, Strawfieldine. 2, J. Harvey, Bradford. ANY OTHER VARIETY. —1, W. Lamb. 2, W. Kitchen. *he, P. E. Furness, Rawtenstall (2 selling).*

LOCAL CLASS.—1, G. Booth. 2, J. E. Ryan, Farnsworth, Huddersford.

SELLING CLASS.—1, W. Kitchen. 2, R. White, Manchester. 3, H. Beldon; W. M. Kirkland, Deane.

RABBITS.

LOBBERS.—*Blue*.—1, F. Banks, Linton. 2 and *Cup, A. H. Easton, Hull. (2)*.—1 and *Cup, A. H. Easton. 2, F. Banks.*

ANGERS.—1, S. C. Hurton, Bradford. 2, J. W. Harding, Baraley. *he, W. Whitworth, jun., Manchester; J. W. Hutton.*

ITALYANS.—1, S. Ball, Bradford. 2, W. Whitworth, jun. *he, S. Ball; T. Whitaker, Haslingden.*

SILVER-GRAY.—1, S. Ball. 2, A. Hailson, Hull. *he, A. H. Easton, Hull. ANY OTHER VARIETY*.—1, W. Whitworth, jun., Leeds (2nd Dutch). 2, J. Irving, Blackburn. *he, A. Hailson, Hull (Dutch); W. Whitworth, jun. (Belgian 4 ears); H. E. Gilbert, Risby (Black and White).*

SELLING CLASS.—1, J. Irving. 2, C. K. K. Linton (2nd Blue and White.)

JUDGES.—*Poultry*: Mr. S. Fielding, Trougham Park; Mr. Hutton, Pudsey. *Pigeons*: Capt. H. H. O. Roberts; Mr. James Boyle, jun., Blackburn.

SEDGEFIELD POULTRY SHOW.

This took place on the 5th inst.; we append the awards, but must defer details till next week.

COCHINS.—1 and *Cup, P. A. Denham, Darlington. 2, H. Procter, Durham. he, A. M. Balmer, Bishop Auckland. 3, F. W. Hutton, Bishop Auckland.*

SPANISH.—1, A. Baglas, Carville, Durham. 2 and *he, R. Moore, East Rainton. he, R. W. Hutton.*

BRAMMAS.—1 and 2, R. Moore. *he, J. W. White, Bradford. 3, J. G. Milner. 1, T. & J. Robinson, Bishop Auckland. 2, R. Moore. he, A. Baglas; T. & J. Robinson.*

HAMBURGHS.—*Gold or Silver pencilled*.—1 and *he, R. Moore. 2, A. Baglas. (Gold or Silver pencilled)*.—1, R. Moore. 2, A. M. Balmer. *he, F. Wallington; T. & J. Robinson, Norley, Thrusk.*

BRANDPOND.—1, R. Moore.

ANY OTHER VARIETY.—1, A. Baglas. 2, Rev. J. G. Milner, Bishop Auckland. *he, T. & J. Robinson; T. W. Wilkinson.*

BANTAMS.—*Game*.—1, T. & J. Robinson. 2 and *he, A. M. Balmer. he, Rev. J. G. Milner; F. Wallington; T. Ayre. Any other variety*.—1, T. & J. Robinson. 2, A. M. Balmer. *he, R. Moore.*

SELLING CLASS.—1 and 2, A. Baglas.

PIGEONS.

CARRIERS.—*Cock*.—1, Cup and 3, R. Cant, Linton. 2, A. Brown, Durham. *he, J. E. Croft. he, S. D. Biddleley, Hereford; A. Brown. Hen*.—1, A. Brown. 2, S. D. Biddleley. 3, H. A. Ayton.

SPANISH.—*Cock*.—1, R. Robinson, Sunderland. 2, J. Bell, jun., Newcastle-on-Tyne. 3, E. Croft (2). *he, J. Kilpatrick, H. n. 1, J. E. Croft. 2, J. Dye, H. n. 3, R. H. Blacklock. Chickens*.—1, R. Robinson, Sunderland. 2, J. Dye, H. n. 3, R. H. Blacklock. 4, W. R. & H. O. Blenkinsop, Newcastle-on-Tyne. 5, H. Yardley, Braamcote. 6, R. Cant. *Any other variety, Short-faced*.—1, 2, and 3, W. R. & H. O. Blenkinsop. *he, R. H. Blacklock; J. Watta. c. J. E. Croft (2); H. Yardley. Long-faced*.—1, R. H. Blacklock. 2, J. W. Edge. 3, Shield & Mitcheon. *he, J. Watta; M. Green; J. Dye.*

BANTAMS.—1, J. P. Raworth, Whitby. 2, R. H. Blacklock. 3, W. R. & H. O. Blenkinsop. *he, T. Gallon, W. Saffron.*

OWLS.—*Foreign*.—1 and 3, W. R. & H. O. Blenkinsop. 2, C. Denison, Halifax. *English*.—1, M. Green. 2, G. F. & A. F. Umpleby. 3, R. & J. Anderson. *he, J. Young; J. Thresh. c. J. W. Edge.*

TRUMPETERS.—1, S. D. Biddleley. 2, P. A. Denham. 3, Rev. J. G. Milner.

FANFALES.—1 and *Cup, O. E. Crosswell. 2, J. Walker, Newark. 3, J. F. Loversidge, Newark. he, W. H. Edgington (3); J. F. Loversidge. TURKISH*.—1, W. Croft. 2, R. G. Sanders. 3, J. W. Edge. *he, A. M. Balmer; J. Young; R. G. Sanders.*

TURKISH.—1 and Extra 3, W. Croft. 2, J. Young. Extra 2, J. E. Crofts. 3, O. E. Crosswell. *he, T. Gallon; W. Croft; O. E. Crosswell; J. Dye. c. J. Young.*

DUCKS.—*Cup and 1, J. Watta. 2, H. Yardley. 3, W. Gamon, Chester. he, W. R. & H. O. Blenkinsop; J. Guthrie, Hexham; T. W. Wilkinson. c. J. E. Croft.*

ANY OTHER VARIETY.—1, H. Yardley. 2, W. Gamon. 3, J. W. Collinson, Halifax. *he, W. R. & H. O. Blenkinsop; J. Watta. c. J. E. Crofts.*

MAGPIES.—1, J. E. Crofts. 2 and 3, M. Ord, Sands, Sedgefield. Extra 3, J. T. Cater. *he, J. E. Crofts; M. Ord. c. H. Yardley.*

NEXUS.—1, E. Hackworth, Newcastle. 2, W. Croft. 3, J. Watta.

ICE.—1, J. E. Croft. 2 and 3, M. Ord. Whole class highly commended.

ANY OTHER VARIETY.—*Cup, 1, and Extra 2, J. & W. Townson (Whiskered Owl) 2 and 3, M. Ord (Laec and Blannetted). he, J. E. Croft; G. Robinson (Red Skallow).*

SELLING CLASS.—1, J. E. Crofts. 2, J. W. Edge. 3, A. Baglas (Trumpeters).

RABBITS.

LOBBERS.—1 and *Metal, J. Hunt, York. Extra 1 and 3, W. B. Bolen, West Hartlepool. 2, J. A. Weaver, Leamington. Extra 2, R. J. Sergeant, Barton-on-the-Humber. Extra 3, W. Donkin, Donild. he, R. Addison, West Hartlepool. he, R. Addison; C. Anton, York.*

ITALYANS.—1, S. Ball, Bradford. 2, G. C. Hutton, Bradford. *he, W. Donkin. C. Stott, West Hartlepool; Dr. R. Smith.*

SILVER-GRAY.—1, A. H. Easton. 2, S. Ball. *he, W. Donkin. ANGERS*.—1, W. Bowes. 2, S. Ball. *he, G. C. Hutton; C. Anton. ITALYANS*.—1, J. Bowman. 2, W. B. Bolen. *he, Dr. R. Smith.*

ANY OTHER VARIETY.—1, W. Bowes (Siberian). 2, Dr. R. Smith (Belgian). *he, Masters, Lowes and Johnson.*

JUDGES.—*Poultry and Rabbits*: Mr. L. Hutton, Pudsey. *Pigeons*: Mr. T. Rule, Durham.

LEICESTER POULTRY SHOW.

This Show took place on July 29th, and the following day. It was held under a very spacious tent on the Leicester Race-course, Messrs. Turner, of Sheffield, supplied the pens. Great attention was paid to the birds, and the Committee, we were glad to find, had numerous entries from the best poultry yards in the country. Following the rule of late, *Dorkings* were not nearly so good classes as might have been fairly expected; and more remarkable still, there were only two entries of *Spanish*

in the adult class, and not a single entry in that for pairs of Spanish pullets, nor, again, in the class for a single cockerel. Having passed the two breeds just named the entries changed, so as to include a large competition of such chickens as have not been seen for a number of years in almost every other variety throughout the Show. In the *Brahma* pullet class the severity of competition was such that the Committee permitted an extra premium; the Light *Brahma* pullets of Mrs. Williamson, of Leicester, than which even her highly-reputed yard never turned out a better pair, taking the precedence. A lovely pencilled pen of Dark-feathered ones, shown by Mr. Edward Kenrick, of Lichfield, ran an unpleasantly close second. Many grand pens of both cockerels and pullets were also entered, the exceptionally good quality of the winners causing great interest, and the general conviction that, with care, for months to come few can beat them. Mr. Woodgate's White *Cochins*, and the Partridge-feathered ones exhibited by the Honorary Secretary, Mr. Sheppard, were equally faultless. Six pens of this year's chickens were shown by the latter gentleman, all so wonderfully well matured that most of them were laying. Being both well marked and well selected, besides being entered at very low prices, the whole were quickly announced as sold, and well they must have paid the lucky purchasers, the six pens having previously had awarded them three first prizes, a second prize, and the remainder high commendations. *Rouen Ducklings* showed well, but the Aylesbury ducklings with the exception of one pen were deficient in purity of bill. Whistling Ducks were the winners in the Variety Duck class, a whole host of capital Muscovy Ducks being also shown.

Turkeys and Geese, though so few, were excellent show birds. There was a very good entry of *Pigeons*, many of decidedly first-class character; the Pouters, Fantails, Barbos, and Variety class being more particularly praiseworthy throughout.

As beautiful harvest weather marked the proceedings as a success, it is probable that an extended prize schedule will be issued for next season's exhibition.

Mr. Edward Hewitt, of Birmingham, was the Judge, and his awards were given in our pages last week.

A CLASS FOR BELGIAN HARE RABBITS.

I THINK, now that Belgian Hare Rabbits have become more known and are in general favour, it would be advisable for committees of shows to give them a separate class. Boston has set the example, and I believe the entry was a very fair one for a first attempt. There are, to my knowledge, many breeders of this handsome variety of Rabbit who would be inclined to exhibit were there classes for them, but who do not care to show in the variety assortment, which is generally the conclusion of a Rabbit as well as a poultry and Pigeon schedule, and so run the risk as to which kind may take the fancy of the judge.

It would be a matter of surprise to find a class for Dorkings omitted on a prize list; equally so should be the omission of Belgian Hares from one for Rabbits, as in a commercial point of view as meat-producers they are the best to keep. Hardy, prolific, of rapid growth, and excellent for table purposes—these are qualities, in the present time of a high-priced meat supply, of no mean value.

It is, I believe, generally known that this variety is a foreign introduction, and though in character they very much resemble the Hare, their properties are in no way indebted to a cross with it. Though frequent attempts have been made, no such cross, owing to the entire difference in disposition and habits of the breed, has been accomplished. A simple microscopic examination of the hairs will show the difference of the species. Belgian Hare Rabbits of a good breed with liberal feeding will easily attain 8 lbs. or 10 lbs. weight when the same number of months old. Should there be a Rabbit show, as last year, at the Crystal Palace, and this variety be allotted a class, I shall be happy to subscribe towards a cup to meet its claims.—W. MASSEY.

FIRST-FEATHER CANARY SHOWS.

THESE interesting exhibitions seem to be gaining ground in the northern circuit. They are prevalent enough in some districts, and perhaps more so among Lizard breeders than any other branch of the fancy. One would think that a good show once in the season would satisfy the most ardent fancier, but it seems not so. No sooner is the breeding season closed or closing than breeders are anxious to compare notes, and the natural outcome is a nest-feather show. Such shows must to a very great extent be local, as very young birds would not bear much travelling, nor would it be desirable they should be exposed to unnecessary risks if their owners have any regard for their future. On this account—that is, on account of their local character, any detailed review of such shows can hardly be expected to possess such interest as to be deemed worthy a place in the columns of the Journal. Still, it may interest breeders generally to know that both in South Stockton and Darlington, where I was judging last week, there has been a tolerably successful

season. Each of these places has held its nest-feather show, and, judging from the quality of the stuff, each will be able to hold its own in the forthcoming exhibition year. The young Yorkshire birds are remarkably fine, and the Lizards promise to sustain the fame of the district.

At North Stockton a splendid open Show was held in connection with the brass band contest under the patronage of the Licensed Victuallers' Association, the chief features of which were the beautiful specimens of Norwich birds exhibited by Mr. Simpson, the Whitby veteran, and the grand Yorkshire birds of Mr. Rowland and others. Mr. Simpson has bred a very superior evenly-marked Jonque Norwich which will take some beating. It is a bird full of colour and quality, has two well-pencilled eyes, and wings "made to order." The marking on the right wing runs up a little too high, though the defect is as frequently hidden as exposed, but it is there. In some hands no doubt it would soon vanish; but as Mr. Simpson said, "I have been among them for fifty years, and I'm not going to begin now." I may add that this was one of a nest hatched early in January this year. On the whole the prospects in the north are cheering.—W. A. BLAKSTON.

CRUELTY TO PIGEONS.—John Mursh, a lad living in Union Street, Swindon, was charged with cruelty to two Pigeons, on the 22nd June. Mr. Tombs appeared for the Society for the Prevention of Cruelty to Animals in Cirencester and district, and stated that the case would not be pressed if it had not appeared to be an usual pastime on Sunday afternoons. He said that two birds were tied tail to tail and thrown up in the air, then falling helplessly to the ground. Police Constable Piper substantiated Mr. Tombs' statement, proving that the birds were treated as described three times, and each time falling helpless to the ground. Fined 30s. including costs.—(*North Wilts Herald*, July 12th.)

THE HONEY HARVEST OF 1873.

IT is time that our friends should send in their reports of the honey harvest of this year. I much fear they will prove generally discouraging. In my own case I must say that I have never known a worse year in all my English experience of bee-keeping. Last year was bad enough, and the year before not much better, but what has become of the honey I cannot imagine. What is Mr. Fox's experience in the rich pasturage about Exeter, and what that of our Scotch bee-keepers? My hives were generally very late. Out of twelve stocks which survived the winter, but which had to be fed quite up to May, some of them far into the month, only one swarmed to my knowledge on the 7th of June. This gave me a cast on the 16th or 17th. I left home for a fortnight on the 8th of July, and it is possible I may have lost some swarms since then. Honey being my object this year, I gave them abundant room in supers, which they took to very kindly, building many combs, but filling them with brood and not with honey. The white clover has been very abundant, and our orchards and gardens were filled with blossoms that have produced vast quantities of fruit; but for all that honey is nowhere. Rarely have I had such splendid stocks of bees all through June and July, cramming up super upon super, but with the most miserable result as regards honey. I doubt if some of my hives will not starve in September, nor is there a single super I dare plunder for fear of ruining my bees; so that I may write down nil, nay, rather a minus quantity, as the result of this year's bee-keeping. Will any of your readers account for it on any other theory than that the ground was chilled past recovery by the long-continued rains of winter, while the sun has had little power to cure the sourness of the soil?—B. & W.

SILKWORM-CULTURE IN ENGLAND.

IT has always appeared to me that one of the great hindrances to the successful production of silk in this country is the difficulty of so winding the thread from the cocoons as to give the article a commercial value. A correspondent of this Journal speaks of it as a comparatively easy matter to connect the thread of ten cocoons (it is more usually, I believe, the product of from five to eight that is brought together), but this has not been the experience of others, who have found that the manipulation is most troublesome; and in those countries where silk forms an article of commerce it is acknowledged that to wind the silk requires special training. There may have been some machine invented which would facilitate the process of uniting the threads; if so, it has not been made generally known. The common silk-winders sold in the shops are not of much utility. To produce silk to advantage, it is evident that we must not have to expend much time and labour on the preparation of it for the loom.

Another drawback to silkworm-culture has been this: that the emergence of the worms from the eggs only takes place annually, so that the rearer of silkworms has an over-busy six

or seven weeks during the season, and then his work is done for another year: hence some have been disposed to look favourably upon such foreigners as Cynthia and Perney, which seemed to promise more than one brood in a year. But would it not be possible to bring about a retardation of the hatching of the eggs of Bombyx Mori, so as to have a succession of broods? Supposing that a part of the eggs were exposed to the sun in April, we might have a spring rearing; then from the remainder of the eggs, which had been kept back by a low temperature, we could, perhaps, get other "hatches" in May and June. There is no difficulty in obtaining food, as we know, for Mulberry leaves in eatable condition may be obtained even in September.—J. R. S. C.

A CORRESPONDENT has sent us the following remarks on the subject:—"I never found any difficulty in rearing the worms and obtaining the silk, provided I could obtain a sufficient supply of fresh food, nor did I find much trouble in reeling-off the silk owing to breaking the threads; but then it had little commercial value, because, being a single thread, it was unfitted for the purposes of the manufacturer, who had to treat it simply as "floss." A certain number of threads must be united in one strand, and it is for want of the knowledge of the proper number and the proper mode that amateur silk-growers in this country fail to make sericulture yield tangible results. I may add, that if the worms are hatched forth early there is a considerable difficulty in finding them in food. If sufficient Mulberry leaves cannot be had they will live on Lettuce, and on those of the Osage Orange (*Maelura aurantiaca*) they thrive well. I have noticed that the silk from the Lettuce-fed worms is paler than from those living on the Mulberry, while that from the *Maelura* is orange and coarser.—C."

HOW TO KEEP BUTTER COOL.—Get a large flower-pot (say No. 12), plug up the hole with a sound cork, seal it. Now put a quarter-brick or other square heavy body in the bottom, to serve as support for a second, but smaller pot (say No. 16), which must also be plugged in the same manner. Place a dish under the outer pot, and a small plate in the inner one. Put your butter in the inner pot, and cover with any cover you please, provided it be not metallic. Now fill the space between the inner and outer pot with water. The butter will keep as firm as a rock, as cool as a cucumber, and as fresh, aye, as fresh as the trip across the Atlantic in a balloon.—ACHERONTIA.—(*English Mechanic*).

OUR LETTER BOX.

HARDINESS AND FEATHERING OF CREVE-COEURS (*Staly*).—We do not consider the Creve-Coeurs as hard as the Bracons, but have no doubt but his bred in Scotland would bear the climate very well. They are, in fact, acclimatised, and are not in consequence subject to the change from France to the far north. They do very well in the cold damp climate of Lancashire. The chief thing to insure success is to have the stock on their run before the cold weather sets in. The Creve-Coeur is not only a layer but a table fowl, and in all such sizes a very important matter. Most of the old cocks have white in their topknots, and the hens the same. It is not a disqualification, but every other point being perfect the scale would go against the white feathers. If they were in any other part than the topknots they would disqualify.

POULTRY-KEEPING ON SMALL FARMS (*L. M. N. R.*).—You will gain the information you require in any of the practical poultry books. They will help you more than the expensive ones, because they confine themselves to poultry at the present time. There is no doubt it may be kept profitably. The chief point is personal superintendence. The second is feeding at day-break. The third, to turn your attention to that which will find the readiest local market, eggs or meat. The fourth is not to begin on too large a scale, but to gain experience that will justify outlay. Poultry must come to play its part in feeding the country. Half the disappointments we hear of arise from people going to considerable expense before they understand the subject.

POWL DYING WITHOUT APPARENT CAUSE (*M. A. S.*).—We are sorry we cannot tell the cause of death, but should attribute it to something the bird picked up. With chickens, as with human beings, some will die, and no cause can be discovered. Discontinue the sharps and buckwheat. Give barleymeal or ground oats in the morning, some whole corn, maize, or kitchen scraps at mid-day, barleymeal or ground oats at night. For young chickens, give at intervals of three hours bread and milk, curd, and chopped egg. Give to all as much lettuce and endive as you can.

SPANISH COCK'S FACE (*A. Fairley*).—If your cock has been running with the hens again, it is probable they have picked his face. If he has not, it is a troublesome disorder to which they are subject from the increase of the white face. You have only one thing to do—wipe the moist places as dry as possible, and put on a little powdered alum. You must use but a small quantity, and you must watch carefully, for if the evil become chronic the cock will be worthless.

COCHIN COCK AILING (*E. L.*).—We are disposed to think the Cochin cock a bad case. We killed one to-day for the same ailment. We have always thought it is partly caused by excessive crowing, and the state of the brain of the bird we killed confirms us in the belief. Cochins-Chinas are not long-lived. We have known many instances of it, and have seen cases where the birds led in the act of crowing. The Hamburgh hen will do to breed from, but will never do to show again. The defect will not be hereditary.

DISTINGUISHING SEX OF FOWLS (*Subscriber*).—Ducks sit longer than fowls. You can distinguish cocks from pullets at a month old, the comb and plumage differ; but there is more difficulty with Ducks, and, to be sure, you must wait longer.

SPANISH HEN HATCHING AND REARING CHICKENS (*J. A. T.*).—We are much obliged by your communication. We fancy few people have had so much poultry experience as ourselves. We have kept all breeds and hundreds of Spanish, but we never before had a well-authenticated case of one hatching and rearing chicks.

BRAHMA COCK WITH DORKING HENS *versus* DORKING COCK WITH BRAHMA HENS (*J. S.*).—We prefer the Brahma cock with Dorking hens.

REELING SILK.—"J. S." desires to say that the diameter of the reel should be 2 feet, not 3 feet, as stated on page 55.

GEESE WITH TWISTED FLIGHT (*J. D. L. T.*).—The Geese in question are suffering from twisted flights. There is no cure for it. It is common to fowls as well as Geese, and is incurable. There is no difficulty in distinguishing the sexes of Geese, but a certain result can only be arrived at by a close examination and careful handling.

HARVEST BUGS (*Picked Angle*).—Camphor and various odoriferous compounds have a partial effect in warding off the attacks of the Harvest Bug, and persons have also been advised to rub themselves over with tar, a remedy, doubtless, worse than the disease. These insects have, however, a strong objection to anything oily, and the merest film of oil has been usually found to keep them off; or any places particularly exposed to their attack may be damped, and then rubbed with soap, and this coating suffered to dry on the skin.

METEOROLOGICAL OBSERVATIONS,

CAMDEN SQUARE, LONDON.

Lat. 51° 32' 40" N.; Long. 0° 8' 0" W.; Altitude 111 feet.

DATE.	9 A.M.					IN THE DAY.					Rain.
	1873. July and Aug.	Baromet. at 32° at Sea level.	Hygrometer.		Direction of Wind.	Temp. of Soil at 1 ft.	Shade Temperature.		Radiation Temperature.		
			Dry.	Wet.			Max.	Min.	In sun.	On grass.	
We. 30	30.00	60.9	61.7	S.W.	63.1	deg. deg.	deg. deg.	deg. deg.	deg. deg.	In.	
Tb. 31	30.015	68.7	67.7	S.	64.6	78.5	69.2	122.5	57.0	—	
Fri. 1	30.089	64.1	58.7	W.	64.3	76.1	54.3	117.0	50.4	0.152	
Sat. 2	30.201	65.3	59.1	W.	62.4	74.8	49.9	128.2	48.0	—	
Sun. 3	30.121	67.2	61.0	W.	62.9	76.8	51.4	127.3	48.1	—	
Mo. 4	30.054	62.2	58.4	W.	63.3	75.2	54.6	127.2	51.1	—	
Tu. 5	29.942	64.6	62.2	W.	63.7	75.3	59.9	110.8	58.0	0.248	
Means	30.062	66.0	61.7		63.5	75.8	54.1	122.7	52.7	0.409	

REMARKS.

- 30th.—Very fine bright day, with cool breeze.
- 31st.—Cloudy early; fine about noon; rain at 1 P.M. for a short time, but fine afterwards.
- August 1st.—Fine early; rain at 10.30, thunder and lightning soon after; fine afternoon, evening, and night.
- 2nd.—Fine all day, but rather cool breeze.
- 3rd.—Fine during the whole day, but not very bright, except occasionally.
- 4th.—Rather dull morning; fine noon and afternoon, but cloudy in the evening.
- 5th.—Dull morning; heavy rain about noon, fine soon after; but heavy rain at 3 P.M., at 5, and occasionally during the remainder of the day. A fine summer week. Although there have been no extremely hot days, the temperature has averaged nearly the same as last week.—G. J. SYMONS.

COVENT GARDEN MARKET—AUGUST 6.

The markets generally continue well supplied, and prices remain nearly stationary. The last of the West Indian Pines are just to hand, and Continental consignments are large, comprising Green Gage and other Plums, Apricots, Peaches, Nectarines, and Grapes.

FRUIT.

	s. d.	s. d.		s. d.	s. d.				
Apples, 1 sieve	1	6	0	0	Mulberries, 1 lb.	0	0	0	0
Apricots, 1 doz.	2	0	0	0	Nectarines, 1 doz.	8	0	15	0
Cherries, 1 lb.	0	6	1	0	Oranges, 100	6	0	16	0
Chestnuts, 1 bushel	0	0	0	0	Peaches, 1 doz.	15	0	30	0
Currants, 1 sieve	2	0	0	0	Pears, kitchen, 1 doz.	0	0	0	0
Black, 1 doz.	2	0	3	0	dessert, 1 doz.	2	0	3	0
Figs, 1 doz.	6	0	10	0	Pine Apples, 1 lb.	3	0	6	0
Filberts, 1 lb.	1	0	0	0	Plums, 1 sieve	0	0	0	0
Colts, 1 lb.	0	0	0	0	Quinces, 1 doz.	0	0	0	0
Gooseberries, 1 quart	0	3	0	6	Raspberries, 1 lb.	0	4	1	6
Grapes, hothouse, 1 lb.	2	6	6	0	Strawberries, 1 lb.	0	4	1	0
Lemons, 100	8	0	14	0	Walnuts, 1 bushel	8	0	12	0
Melons, 1 each	2	0	8	0	ditto, 100	2	0	2	6

VEGETABLES.

	s. d.	s. d.		s. d.	s. d.				
Artichokes, 1 doz.	3	0	0	0	Mushrooms, 1 pottle	2	0	4	0
Asparagus, 100	0	6	0	0	Mustard & Cress, 1 punnet	0	2	0	0
French, 100	0	3	0	0	Onions, 1 bushel	3	0	6	0
Beans, Kidney, 1 sieve	1	0	0	0	pickling, 1 quart	0	6	0	0
Beet, Red, 1 doz.	1	0	3	0	Parsley per doz. bunches	0	9	4	0
Broccoli, 1 bundle	0	3	1	6	Parsnips, 1 doz.	0	9	1	0
Cabbage, 1 doz.	1	1	6	0	Peas, 1 quart	0	8	1	0
Capsicums, 100	0	0	0	0	Potatoes, 1 bushel	5	0	0	0
Carrots, 1 bunch	0	6	0	0	Kidney, 1 doz.	0	0	0	0
Carduifer, 1 doz.	3	0	6	0	Round, 1 doz.	0	0	0	0
Celery, 1 bundle	1	6	2	0	Radishes, 1 doz. bunches	1	0	1	6
Colworts, 1 doz. bunches	2	6	4	0	Rhubarb, 1 bundle	0	6	1	0
Cucumbers, 1 each	0	3	0	0	Salsify, 1 bundle	1	0	1	6
pickling, 1 doz.	0	0	0	0	Savoy, 1 doz.	0	0	0	0
Endive, 1 doz.	2	0	0	0	Scorzoneria, 1 bundle	1	0	0	0
Fennel, 1 bunch	0	3	0	0	Seakale, 1 basket	0	0	0	0
Garlic, 1 lb.	0	6	0	0	Shallots, 1 lb.	0	3	0	0
Herbs, 1 bunch	0	3	0	0	Spinach, 1 bushel	2	0	3	0
Horse-radish, 1 bundle	3	0	4	0	Tomatoes, 1 doz.	2	0	3	0
Leeks, 1 bunch	0	6	0	0	Tramps, 1 bunch	0	3	0	0
Lettuce, 1 doz.	1	9	2	0	Vegetable Marrows, 10	0	1	0	3

POULTRY MARKET—AUGUST 6.

The supply in cases, and the demand diminishes.

WEEKLY CALENDAR.

Day of Month	Day of Week	AUGUST 14—20, 1873.	Average Temperature near London.			Rain in 49 years		Sun Rises		Sun Sets.		Moon Rises		Moon Sets.		Moon's Age.		Clock before Sun.	Day of Year.
			Day.	Night.	Mean.	Days.	m.	b.	m.	h.	m.	b.	m.	a.	Days.	m.	s.		
14	TH	Taunton Deane Horticultural Show.	72.9	59.8	61.8	18	46	4	23	af	7	2	10	51	1	21	m.	8	216
15	F	Length of Day 14h. 31m.	73.1	59.0	61.6	17	47	4	21	7	25	10	51	1	20	m.	8	217	
16	S		73.0	51.5	62.2	21	49	4	19	7	55	10	10	3	19	m.	8	218	
17	SUN	10 SUNDAY AFTER TRINITY.	72.7	50.1	61.4	23	51	4	17	7	35	11	21	4	21	m.	8	219	
18	M		73.2	50.7	62.0	16	52	4	15	7	morn.	21	5	25	m.	8	220		
19	TU	Twilight ends 9 35 P.M.	73.1	49.2	61.2	21	51	4	13	7	25	0	8	6	26	m.	8	221	
20	W	Royal Horticultural Society's Gladiolus Show and Committee Meetings.	72.8	50.6	61.7	20	55	4	11	7	27	1	42	6	27	m.	8	222	

From observations taken near London during forty-three years, the average day temperature of the week is 73.0; and its night temperature 59.4. The greatest heat was 92, on the 18th, 1842; and the lowest cold 13.6, on the 18th, 1846. The greatest fall of rain was 1.12 inch.

ORNAMENTAL PLANTING.—No. 7.

ROADSIDE SCREENS, SELECT SHRUBS, ROSES, CLIMBING AND FLOWERING PLANTS, FOR A SMALL GARDEN.



N the immediate vicinity of all large towns there are numerous houses of a superior order—houses of taste, where attempts at gardening may invariably be seen, affording stronger evidence than anything else with which I am acquainted of the universal fondness for the pure fresh beauty of Nature. Many of the inhabitants of such houses are enthusiastic and very successful horticulturists, subscribing to the Journal, often, per-

haps, seeking for the information in its pages which they do not find, or finding, are unable to apply, because it does not plainly appear to adapt itself to their particular case; and so I purpose devoting this paper to a consideration of the formation of screens and hedges for roadside houses, with a selection of shrubs suitable for very small gardens.

It is not often that roadside screens are at all ornamental; they are, as a rule, just a confused thicket, a "rough-and-ready" and most unsightly assemblage of unhealthy shrubs, bare-limbed and dust-laden, forming a miserable disfigurement, and seriously affecting the general appearance of the often pretty garden, which, if rightly managed, they ought materially to embellish. Now, there are two ways of forming such screens so as to render them ornamental as well as useful. The first and most desirable consists of a belt of two or three rows of mixed shrubs; and the second, which is best adapted to very confined spaces, is in the form of a hedge, which form the unsightly mixed screens that are so common usually take. In making such hedges it should be taken as a fundamental rule which may not be broken with impunity, that only one kind of shrub is to be used in the same hedge, and that whatever shrub is chosen it must be of a dense habit of growth, and either of an evergreen or sub-evergreen character. Perhaps the best shrub of all which might be named for such a purpose is the common Holly; its many excellent qualities have been fully explained in former papers, and to its hardiness, density of growth, and ornamental appearance, its immunity from the baneful effects of smoke and dust may here be added as an important qualification for such a purpose. Rhododendron ponticum and its varieties are also good, and may be introduced with confidence; for I do not purpose keeping the hedge clipped to a formal outline, but would much rather plant it a few feet inside the fence, so as to let the branches have as much freedom as possible, preferring to keep them in form by judicious pruning with the knife when requisite. Then there are Yews, Portugal Laurel, double Furze, Box, Aucuba, Berberis, the beautiful Japanese and Chinese Privets, and to these may be added the Irish Ivy (*Hedera canariensis*), and the beautiful and very robust *Hederaibernica*, with its stout, glossy, heart-shaped leaves, either of which may be so trained upon woodwork or wire as to form an elegant screen.

All shrubs will not thrive equally well in the same neighbourhood, and very often it is not altogether the soil that causes failures so much as the constant assaults of foul dust and smoke, which clog the pores of foliage and branch, and the poor shrubs, uncared for till they are dying or dead, and unwashed save by any chance shower, soon become unhealthy, and if sufficiently sturdy to retain life, the puny growth and dull-hued foliage are anything but ornamental. Health may be maintained, freshness, and therefore beauty, may be imparted to shrubs that are thus exposed to adverse influences, by a free and regular daily washing of clean water by means of a syringe. Ample demonstration of the great value of this plan may be found at Battersea Park, where the portable hose appears constantly at work, the vigorous health of the shrubs showing plainly how beneficial its miniature showers are.

Mixed belts may be formed of the shrubs selected for hedges, and if more are required for variety, there might be some *Laurustinus*, *Mahonia*, *Arbutus*, *Bay*, and *Phillyrea*. Conifers do not thrive well under the influence of smoke; it may, however, be useful to note here that *Thuja Warreana* and *Thujopsis borealis* form excellent and most compact screens or hedges.

The gardens to which these notes are applicable are usually so small that the shrubs introduced into the interior should be few and select. In the following lists the shrubs named are of moderate growth, and the whole of the varieties are choice and distinct.

Twelve mixed shrubs:—

- | | |
|---------------------------------|----------------------------|
| 1. Berberis Darwinii. | 7. Spiraea arifolia. |
| 2. Arthrotaxus selaginoides. | 8. Syringa persica. |
| 3. Deutzia crenata flore pleno. | 9. Syringa alba. |
| 4. Ribes sanguineum. | 10. Tamarix germanica. |
| 5. Santolina Chamaecyparissus. | 11. Berberis japonica. |
| 6. Skimmia japonica. | 12. Retinospora cricoides. |

Twelve select Roses:—

- | | |
|---------------------------|------------------------|
| 1. Baroness Rothschild. | 7. Paul Verdier. |
| 2. John Hopper. | 8. Alfred Colomb. |
| 3. Louisa Wood. | 9. Duchesse de Caylus. |
| 4. Madame Victor Verdier. | 10. Baron Hanssman. |
| 5. La France. | 11. Mdlle. Bonnaire. |
| 6. Dr. Andry. | 12. Duke of Edinburgh. |

Six select climbing plants:—

- | | |
|----------------------------|-------------------------|
| 1. Escallonia Ingramii. | 4. Ampelopsis Veitchii. |
| 2. Escallonia pterocladon. | 5. Lonicera flexuosa. |
| 3. Ceanothus azureus. | 6. Clematis Jackmanni. |

Twelve other desirable hardy shrubs and flowering plants:—

- | | |
|-------------------------|-----------------------------|
| 1. Yucca recurva. | 7. Præmia lactea. |
| 2. Yucca gloriosa. | 8. Colonel Malcolm. |
| 3. Gynurium argenteum. | 9. Hippolyte. |
| 4. Erica carnea. | 10. Comte de Flandres. |
| 5. Hydrangea Olaksa. | 11. Pernettya angustifolia. |
| 6. Hydrangea hortensis. | 12. Deutzia gracilis. |

—EDWARD LUCKHURST.

PHLOX CULTURE.

THE varieties of Phlox pyramidalis and P. decussata are the most useful of herbaceous plants for a small

garden. They require very little attention, but what they do require must be given at the right time. We owe Mr. John Laing, of the Stanstead Park Nurseries, Forest Hill, our best thanks for raising many new and improved varieties, and also for exhibiting them in such fine condition as he did at the Royal Horticultural Society's Show on August 6th.

As a plant for the herbaceous border this has few rivals; it has also a fine effect planted in beds; but to have it in the best condition the plants must not be allowed to remain in the same place year after year without being disturbed. After the second year they begin to decline, a larger number of spikes are doubtless thrown up, but they are much weaker, and the individual flowers are smaller and wanting in shape. This is caused by the plants forming an immense number of roots near the surface of the ground, which, matted together as they are, soon exhaust the surrounding soil of all nutriment. A dressing of fresh soil does not help them much, so that the best and only way to obtain good results is to propagate a fresh batch of plants every year.

The best time to propagate the Phlox is in spring. As soon as the young shoots have grown about $1\frac{1}{2}$ inch slip as many off as required, and pot each singly in the centre of a small pot. They will root sooner if the pots are placed in a gentle hobel, but this is not necessary. They will root readily under hand-lights, or even plunged in the open air in a shady sheltered position; or a small bed of fine soil may be made in a shady place, and the cuttings inserted in it 3 inches apart.

After the cuttings are rooted, plant them out in the beds in which they are intended to flower, for each cutting will produce a nice spike of flowers the first year. If they are planted in beds they should be from 15 to 18 inches apart, and there should be about four rows in a bed, with a wider space, say 30 inches, between each bed to allow of a person getting up between them with a water-pot.

The plants will require a considerable quantity of water during the summer months, and dressing the beds with some short decomposed manure will also be very beneficial. The ground should previously be deeply trenched, and a good dressing of manure ought to be applied to it. The plants may also be planted out in herbaceous borders, where they have an excellent effect; but if it is desirable to do this, a hole should be dug out about a foot square and as much in depth, to be filled with some rich compost, in which the Phlox is planted.

It is in the second year that the best plants are obtained, but those in the beds must be lifted and replanted, and instead of the plants being from 15 to 18 inches apart, they should now be from 22 to 24 inches, and each plant will have from three to five spikes of flowers. Sticks should be placed to the spikes at an early stage of their growth, as if this is not done the strongest will probably be broken over by the wind, which snaps them at the base. Each spike should be attached to a moderately stout stick, and be tied-out in such a way that it may not be crowded by others. Some persons place one stick in the centre of the plant and tie all the spikes together in a bundle; but this, to say the least of it, is a very clumsy way of treating them. The same plants may be grown a third season, but the spikes will not be so strong though more numerous than they were in the second year. They will, however, furnish a goodly supply of cuttings, and whether the shoots are required for this purpose or not, they must be thinned-out to five or six on each plant.

The Phlox is also well adapted for pot culture. When the plants are intended for this purpose it is best to insert the cuttings in small pots at once, and as soon as they are well established to shift them, the weak plants into 5-inch, and the strongest into 6-inch pots. The following compost suits them well—viz., four parts good turfy loam, one part leaf mould, and one of rotted manure, with the addition, if necessary, of a little sharp sand. During the period of growth, and up to the time of the first flowers opening, the plants should be out of doors, and in a position where they get all the sun possible; at the same time the Phlox is much injured if exposed to driving winds. The more dwarf and compact the plants can be grown the better; thick stems and sturdy growth will be the result of good culture. The pots should be plunged in some cocoa-nut fibre refuse, or any other material—ashes, leaf-mould, &c. When the pots are well filled with roots give a supply of weak manure at every alternate watering. The plants, if removed to the greenhouse as soon as the first flowers appear on the spikes, will continue in beauty a very long time. The flowers are delicately scented, and form a very distinct and pleasing feature either in the greenhouse or conservatory. When the

flowering period is over the pots may be removed to a cold frame for the winter, where they must be plunged to prevent the roots from being injured by frost. The second year these will form noble flowering plants, throwing-up stout flower-spikes from 2 to 5 feet high. They should be repotted in February in 10-inch pots, using the same compost I have previously recommended, and the same treatment throughout. If it is necessary to retard them for some particular purpose, instead of removing the pots to the greenhouse, place them under a north wall, providing some shelter, in the shape of old lights, to prevent the rain from dashing the flowers off.

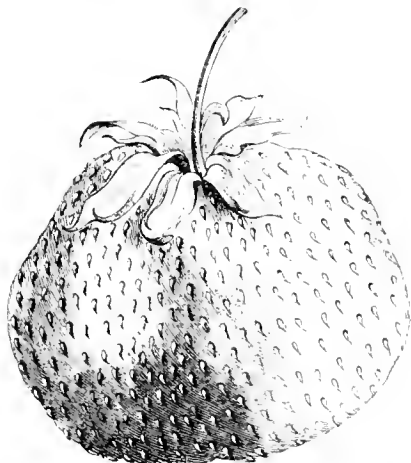
In a future number I will give an estimate of sorts. Many of the best varieties of the *P. decussata* section used to be raised in France, but our English raisers have now equalled, if not surpassed them. The *P. pyramidalis* section is very beautiful, and the varieties belonging to it succeed best in the more cool and moist climate of Scotland, where the best varieties have been raised.—J. DOUGLAS.

NEW STRAWBERRIES.

The season now rapidly passing by has been so favourable to the general Strawberry crop, that it has enabled me to pronounce a definite judgment on some of the numerous seedlings I have had under my notice for the last four or five years, and which I have been reluctant to name until I was perfectly sure of their value. It will be recollected by some of the readers of the Journal that I commenced this favourite pursuit some few years ago by endeavouring to improve the race of early and late Strawberries. Of midseason varieties we have abundance, unless some new quality should be developed, such as better and more certain cropping, better packers and carriers, &c., which qualities are so desirable as even to justify new main-crop sorts. I think it will be acknowledged by all who have grown Early Prolific well, that the class of early Strawberries was improved by the introduction of that handsome early sort. It is true it was not quite so early as Black Prince, but it is quite early enough to withstand the spring frosts we are invariably favoured with throughout Great Britain, and perhaps in the midland counties more particularly: whilst the quality of the fruit is in every way so superior to Black Prince that it scarcely needs mention. I have still the seedlings of Marguerite under observation, and these I have reduced to three, one of which I have named Alpha. This is earlier than Early Prolific, and as early as any good-sized fruit with high flavour can be ripened out of doors in this country; but it will take another season to get up a good stock of plants.

The following new kinds will not disappoint the most fastidious grower either in growth, bearing, or quality. First in order of succession comes

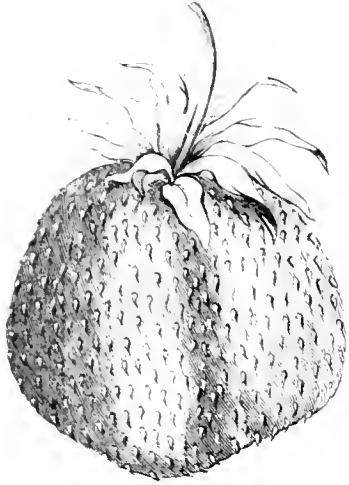
Early Crimson Pine.—This is a fine, large, handsome fruit,



Early Crimson Pine.

coming in with or closely succeeding Early Prolific. The prevailing shape of the fruit is indicated by the accompanying woodcut. Colour bright crimson; calyx generally reflected; seeds rather prominent; flesh dullish white and sometimes pink, juicy, with a rich piquant pine flavour. The plant is of stout upright growth, and crops heavily.

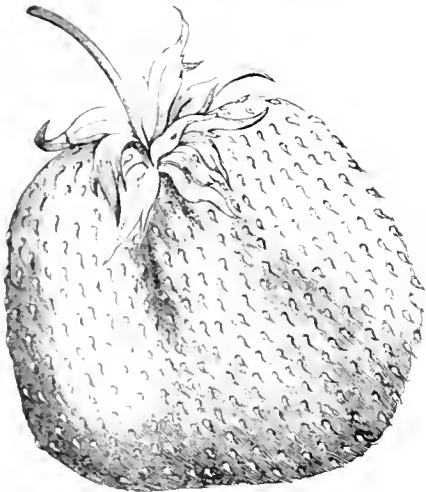
The Countess comes next. This kind will prove the best packer and carrier ever raised. The fruit is extremely fine in colour, being of a beautiful glossy crimson, and becoming darker when very ripe. It is not quite so regular in shape as the other varieties under consideration; but the fruit is so



The Countess.

good, its colour so handsome, and, above all, its carrying property so remarkable, that its occasional irregularity in shape is quite condoned. Calyx partially reflected; seeds thickly disseminated and decidedly prominent; plant healthy and a good grower; foliage bright glossy green, erect, and compact. This and the above variety, I regret to say, cannot be offered to the public till next season.

Sir John Falstaff is next in order. This is a midseason and main-crop variety. The predominant characteristics of this, a different strain altogether from the foregoing, are its hardihood and enormous cropping qualities. It has never disappointed me in a heavy crop from the first seedling plant, which

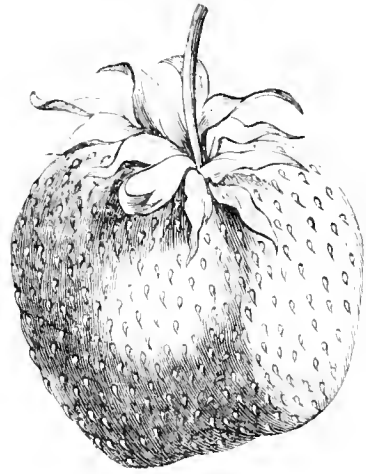


Sir John Falstaff.

struck me with astonishment. The fruit is mostly very large and handsome, frequently conical, and when very large slightly flattened in shape, as in the woodcut, but never cockscomb'd. Colour bright red with a tinge of vermilion; seeds thickly dispersed and slightly depressed; flesh white, solid, and juicy, with a fine vinous flavour; calyx small for so large a fruit, and seldom reflected. On account of its beauty and immense cropping qualities this will be a splendid sort for exhibition and market purposes, but it would not carry a great distance so well as the Early Crimson Pine, or Countess more especially, nor, indeed, would any other known sort.

Enchantress comes next. It is a late variety, coming in with and lasting out British Queen, but higher-flavoured and a

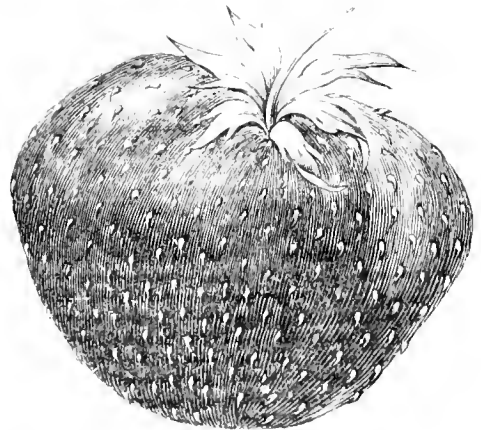
better cropper than that esteemed good old kind. This is the variety I originally named Lord Napier, but I was advised by several of my horticultural friends to substitute another name, fearing it might be confounded with Sir Charles Napier; and every year it has so won upon my good opinion and that of



Enchantress.

everyone who has seen it and tasted its fruit, that I have adopted the above name. I think it will be admitted by all who like a highly piquant fruit with a rich pine flavour, to be the finest flavoured Strawberry ever raised. I have tested this variety in every possible way. Though naturally a late sort, under a south wall it makes a grand second early, whilst under a north and east wall it comes in with Cockscomb and Frogmore Late Pine. It requires a little sugar to bring out its fine pine and Hautbois flavour, and then it is perfection. Fruit large and of the prevailing shape of the annexed woodcut, but frequently conical, and then it has a glossy neck and reflected calyx; colour scarlet, becoming a rich crimson when fully ripe; seeds small and prominent, bright yellow, and very thickly disseminated; flesh reddish, solid and very juicy, with an exquisite pine flavour. A first-rate cropper, bearing its fruit in clusters on shortish footstalks, so that its blossoms and fruit are considerably hidden under and amongst its handsome, slightly wrinkled, light green foliage. This and the above I think it is possible my gardener may try to bring out in the present autumn; but if so the stock will not be very large, and the plants must be issued in small numbers.

I have many other valuable deviations from the ordinary run of Strawberries under observation, but I must content



Gipsy Queen.

myself for the present with one more illustration—viz., *Gipsy Queen*. This I may introduce one of these days on account of its beautiful dark colour, thus forming an excellent contrast in the dessert. The fruit is chiefly globular, or nearly so, but sometimes a blunt cone-shape, almost black when quite

ripe, extremely juicy, rich, and vineous. Flesh dark red throughout; ends depressed. Plant of low growth and compact, healthy, and a great bearer. Season, main crop and late.

Out of the same strain I have also another which I call *Fair Lady*, in which the fruit, however ripe, never colours deeper than a salmon pink. This forms a direct contrast to the above, though reared from the same Strawberry, and is a nice sharp-flavoured fruit, which some would have called Pink Elton instead of the above name.

I have another seedling which I must just mention and then say good-bye to the Strawberry world for the present—viz., *Excelsior*. There are several *Excelsiors* I find, so probably I may have to change the name of this variety. Besides being a very handsome late fruit, and, perhaps, the best-behaved sort under glass, with very high flavour and excellent colour, its runners have the property after the parent plants have ripened-off their fruit, of blossoming all over the beds till the beds are one mass of bloom. I am aware that several kinds, *La Constante* among the rest, have this property to a limited extent; but in the above variety, which is a second remove from Cockscomb (by which I have quite got rid of the cockscomb shape), and which has nothing to do with the *La Constante* race, the beds become laden with fruit till frost sets in. *Fragaria tardissima* is just now beginning to colour its fruit. This kind throws-off a moderate quantity of fruit during August, and sometimes to the beginning of September, and by this time the *Excelsior* runners are setting their fruit, and continue bearing till the first severe frost. I have no doubt, therefore, that if these runners were potted-off before the autumnal frosts set in, and duly cared for under glass, say in a moderately warm frame, Strawberries of excellent quality might be had till the approach of winter, thus making it possible to produce this charming fruit eight months out of the year.—W. RODEN, M.P., *Morningside, Kidderminster.*

MESSRS. BACKHOUSE & SON'S, YORK.

To be a florist, and at the same time a lover of Nature's flowers, is considered to be well nigh an impossible conjunction; and therefore those who have been in the habit of regarding me simply as a bigoted old florist, will be perhaps surprised to see me put my hand to the statement that I have never enjoyed a ramble through a nursery so much as I did a morning's visit to my valued friend James Backhouse, of York; and I am sure of this, that no botanist that ever lived could have felt more intense pleasure at the discovery of some new or rare plant than I did last year when I came upon those glorious masses of *Gentiana alpina* and *Silene acaulis* on the top of the Col de Bane last year. They are common flowers enough, but to see them thus in all their native vigour and beauty, and in the midst of such surroundings, was a thing worth experiencing. I have ever believed that my love for flowers was not measured by their exhibition value, and one proof of this, which I cherish, is my love for wild flowers, and especially Alpine flowers, and that, as I say, without being a bit of a botanist.

Everyone who owns a garden, and is acquainted with what is going on in the horticultural world, has heard of the York nurseries; and it was, therefore, with no ordinary expectations that I wended my way thither on the day before the Great Yorkshire Gala, and would gladly record my impressions of its wonders; but I have ever felt when writing of any place that really merits praise, how difficult it is to give any adequate idea of it, and in reading descriptions of scenery it is ever the same. Who has ever enabled one to realise the grandeur of Alpine scenery? or would Byron's description of the storm at sea bring it home to one who has never seen the wild waves tossing to and fro? I must, therefore, crave indulgence if what I write seems to those who have never seen what I attempt to describe poor and tame, and if it fails to convey any adequate impression to those who have not been there. I am not going to attempt a general description of Messrs. Backhouse's nursery of seventy-two acres, with its ranges of glass, Orchid houses, &c. It will surprise no one to hear that these are admirably kept, and that many a treasure is to be found in their recesses. Nor shall I venture to write of their fernery, with its noble tree Ferns and rare and valuable species, for I have seen others, at least one other, which, if my memory serves me right, exceeds it—viz., Mr. Bewley's, of Black Rock, in Dublin, which I endeavoured to describe a few years ago in the columns of this Journal; but there were two special objects of interest which to me were utterly new—I

mean the Alpine garden and the underground fernery. I have seen Alpines growing in other places; I have seen, for instance, the Rev. Mr. Ellacombe's, of Bitton; but nothing I have ever seen can for a moment bear comparison with that of Messrs. Backhouse's, while their underground fernery is, I believe, unique; and it is of these I now write.

Everyone who knows York is aware of the very level nature of the surrounding country; but when standing on the lawn in front of Mr. Backhouse's house you might imagine yourself in the neighbourhood of Tunbridge Wells or some such rock-abounding place, for at immense cost and with a great deal of trouble a large quantity of rock has been brought together, and so judiciously and naturally have the rocks been placed that you seem rather to be looking on a place whence stones have been quarried, and where, as in the Buttes Chaumont at Paris, the ground has been afterwards utilised for a rock garden.

In the construction of the Alpine Valley some hundreds of tons of stone have been used, and with such effect as only could have been gained by a skilful and tasteful eye; and in this valley have been arranged without doubt the most varied, extensive, and valuable collection of Alpine plants ever brought together. At the period of my visit the *Gentians*, of which there is here a fine collection, were over, but *Dianthus*, *Aquilegia*, *Cistus*, *Iberis*, &c., were in full beauty. What can be more lovely than the clumps to be seen here of the lovely *Dianthus neglectus* with its bright cherry carmine flowers, or alpines with deep rose or flesh-coloured flowers spotted with crimson, and not rising above 3 inches from the ground? Then there was *Dianthus cruentus* with deep red flowers in clusters, but not so compact as the two previously mentioned. *Aquilegias* were deeply interesting. Foremost amongst them was the comparatively rare *A. leptocera lutea*; it has large golden-yellow, long-spurred flowers, which are produced in great abundance. It is apparently entirely different from *aurea* which has been lately seen in London, as its flowers are more like *cerulea*, while *lutea* is more like the common *Columbine* in form. Then there were fine clumps of the beautiful *Aquilegia cerulea*, which has proved to be a most lovely and easily-managed species; it seeds freely, and is easily raised from seed.

Some of the Forget-me-nots were in great beauty. Nestling down at the foot of a large rock was a lovely mass of *Myosotis piccola*, the most lovely of all the genus; very dwarf, and with flowers of a deep violet blue. It is a native plant, is never found at a lower elevation than 2400 feet, and delights in a shady spot or in a northern aspect. *M. montana* was nearly over, and is the same as *M. dissitiflora*, of which so much has been said lately. Another blue flower of singular beauty was *Lithospermum petraeum*, a shrubby species profusely covered with heads of porcelain blue flowers; while the older *L. prostratum*, or, as it is often erroneously called, *fruticosum*, with its deep brilliant blue flowers, was growing in great luxuriance. Of the *Gentians* still remaining in flower was the lovely *Gentiana bavarica*, difficult to manage, but charming when caught in its beauty. Of the *Lychnis* tribe there was *Lychnis Lagasææ*, a beautiful species from the Pyrenees, of a bright rosy carmine colour; and *alpina*, not rising more than 4 inches, with dense heads of rose-coloured flowers. Those somewhat difficult flowers to manage, the *Andromedas*, were represented by fine clumps of *Andromeda fastigiata* and *tetragona* with their beautiful, waxy, Heath-like bells. Ah! I wish I could convey to the minds of those who read this barren story an idea of the Alpine summit to which we gradually wound our way, where, placed on various aspects and under varying conditions, were to be found some of the greater rarities of the collection. Here, planted out in various places, was the rare and curious *Lewisia rediviva*. It forms rosettes of leaves 2 or 3 inches long, and after they have attained their full growth the plant is covered with a profusion of the most lovely flowers, shaded pink with a white centre. It is recorded of the first specimen introduced into this country that it had been dipped in boiling water and then pressed for an herbarium specimen for nearly two years; it then showed signs of life, and eventually grew and flowered. It can hardly be difficult to grow after that. Here, too, was the beautiful *Pinguicula vallisneriaefolia* from the mountains of Spain, with beautiful lilac-purple flowers. *Eritrichium nanum* is another lovely Alpine with dense dwarf foliage, with blue Forget-me-not-like flowers. It is a *bonne bouche* for snails, who will not leave it alone, and it therefore requires to be very carefully watched. And what a lovely thing is *Iberis juemunda*, with its bright purplish-pink flowers on tufts of foliage not more than 4 to 6 inches high! and how at once it catches the

eye! But I must stop for the present, and on another occasion note a few more of these beauties, and also attempt to describe the unique underground fernery.—D., Deal.

SHADES AND SHELTERS.—No. 4.

NOTWITHSTANDING the utility of the well-known bast mat for the winter protection of plants in minor glass and other structures, mats made of straw will be found equally effectual in keeping out frost; and although the former may be preferred for more than one reason, a store of straw mats is a necessity where much temporary covering is required. Where straw is plentiful they can be made easily and cheaply, and afford suitable employment for the men in wet weather; I will therefore give a few instructions on making them.

Instead of the very common way of making these protectors by simply lacing the straw between several poles, it would be much better to make them as shown in *fig. 12*, upon a wooden

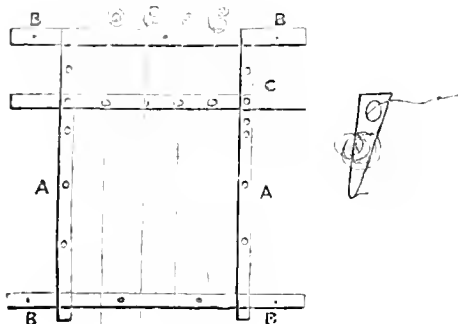


Fig. 12.

framework, the construction of which I will endeavour to describe. The frame may be made of any convenient length; A, A, are the side bars, which should be cut to the length of the longest mat that is likely to be made; these are supported at each end by cross bars B, B, which are also made long enough to allow of the side bars being shifted for the making of a wider mat. After deciding upon the size of the mat to be made, get some stout string or rope yarn, and fasten several pieces at regular distances apart as shown in the figure, to one of the cross bars at either end. Pass each of these through the holes in cross-bar C, which can be shifted up or down the longitudinal ones, as the maker requires either a short or long mat. Its principal use, however, is to keep the cords in their proper positions so that the tying may be both neat and strongly done. For a mat 3 feet wide four cords will be sufficient, but for one from 4 to 5 feet wide six cords will be required; each of these cords will need to be three times the length of the mat to allow for tying and binding. This done, select the straightest and best rye or wheat straw that can be had; then, beginning at one end, lay it on crosswise in very small quantities, and bind it as you go on. Always take care to put the cut or lower ends of the straw to the outside, leaving the top or corn ends to meet in the middle. Press the straw tightly, and keep it to a uniform thickness of about an inch. Lace it tightly to the longitudinal cords making every stitch fast by itself, so that if one should by chance be undone or broken it will not loosen all the rest. When the desired length is worked up fasten each string off securely, and with a pair of clipping shears take off all loose straws and clip the sides square, then release the mat from the frame, and you will have one of the neatest and most useful of protectors. It will be a saving of time, and the work will be much better done, if two men be employed to each mat, and the framework placed upon a bench instead of on the ground, which would oblige the men to stoop.—Tues. Record.

BURN STEMS.—Mr. Wright (page 94) observes that no stems are blue. He has forgotten *Eryngium amethystinum*.—G. S.

TREE STRUCK BY LIGHTNING.—During the thunder-storm which passed over this neighbourhood on the 22nd of July, the lightning struck a large Oak tree. It commenced at the top of a small branch, following it to the centre or body of the tree.

The body of the tree is very crooked, and the course the lightning took was exactly down the centre or body. In its course downwards it came in contact with a small branch, which it cut off, passing down to the roots. Do you think the centre of the tree attracted the lightning in any way, as the course was very crooked? This tree is causing a great deal of talk, and has been seen by thousands of people. It stands close behind the hotel at Eastham Ferry, on the Mersey, Chesbute side.—JAMES R. POCCOCK, *Brombrough Hall Garden, Cheshire*.

NEW PEAS.

JUST a word about some of the new Peas. The following have been proved by me to be truly excellent, and anyone who produces a really good thing, be it a new vegetable, flower, or fruit, deserves his meed of praise as a public benefactor.

James's Prolific is everything described by Messrs. Carter and Co., a very handsome white wrinkled variety, about 3 feet high, with fine large pods of a light green colour, containing from six to nine large peas of the finest flavour. This is a grand Pea, and ripens off its crop pretty much at one time, so that the ground can be at once cleared for some other occupant. I am so much pleased with this Pea that I intend to adopt it for my principal mid-season crop, sowing it at proper intervals for rapid succession.

Blue Peter is another first-rate variety, and as a dwarf Pea, attaining only about 18 inches in height, is, to my mind, a great improvement on Beck's Gem, Little Gem, &c. The pods are dark green, larger than the above varieties, and contain from five to eight, and sometimes nine, large peas of excellent quality; a capital bearer, and early. I intend also to plant this extensively next season, to come in before the previous sort. A large quantity of good peas may thus be grown on a small piece of ground without the expense of stakes.

G. F. Wilson is another new Pea already favourably noticed. This is an excellent variety, similar in character to Veitch's Perfection, but growing, perhaps, a little higher and a better bearer. The pods are large and handsome, containing from seven to nine tender deliciously-flavoured peas, and, being a little earlier than Veitch's Perfection, this will be sure to become a general favourite; indeed, all three of the foregoing sorts have worthily merited the approval of the Royal Horticultural Society.

A worthy successor to the above to finish the season is Williams's Emperor of the Marrows. This has been thought by some persons to be only a good stock of British Queen. I cannot help thinking, however, after two years' experience, that it is more branching in its habit, and certainly pods lower down on the haulm, than that variety. I believe it to be as good as British Queen (no mean praise), and its crop is something wonderful, the plant continuing to bloom and pod till frost sets in. This sort should not be planted too early in the season, otherwise it attains a height almost unmanageable. If planted about the 1st of May, it commences to ripen off its first pods about the present time, and is then a reasonable height, and keeps bearing till the end of the Pea season.

For early work, Laxton's William I. will become a favourite, and Alpha is liked by most judges of a good Pea. Its only drawback is that it chiefly bears its pods singly; but it is so tender and good in quality that it must be grown among the first earlies in every good establishment.—WILLIAM ROBERT, M.D.

DISEASED POTATOES.

MR. BRÉHAUT's is the first instance that I know on record of the disease presenting itself so early as April in this country or in Europe, when (as the Editors say in noting the breaking-out of the disease in Sussex, page 84), "it cannot be said in this instance that electricity and electric storms have contributed towards the development of the disease." Mr. Bréhaut alludes to the manure employed being too fresh, which would have the effect of inducing a grosser growth than if older and less stimulating manure had been applied; and are not the Potatoes with gross haulms, made gross by the application of manures, the most violently attacked by the disease? Why should the planting in old garden soil which had last season borne good and bad Potatoes, give to the succeeding crop the disease? Are the germs of the Potato disease in the soil? I believe not, for on ground that last year produced more than 100 bushels of good Potatoes they are found, and the seed was of the same

diseased stock grown on the same ground last year, also the year before. The soil might, from being rich, added to the fresh dung, have caused that development of the Potato haulm suited to the growth of the Potato fungus. In no other way do I think the soil would have influence on or contribute to the appearance of the disease, for I do not find there is any difference as to the susceptibility of Potatoes on fresh ground well manured, and those having a change of ground, or grown year after year on the same land. This year, I am glad to say, we have not found a diseased tuber in heated houses and frames, in cold frames, or in the open ground. Mr. Bréhaut may plant in the same borders next season without fear of the disease—even plant diseased tubers, and of the latter I can answer that he will have sound tubers. Neither planting sound Potatoes in ground which has produced diseased Potatoes, nor planting diseased ones, will produce the disease. This attacks the haulm first, then the tuber. Stay its progress in the haulm ere it descends to the tuber, and the latter will be safe.—G. ABBEY.

P.S.—Now that we have the disease appearing in great virulence in Sussex, it may not be amiss to direct attention to that never-failing remedy—the pulling-up of the haulms when they are first noticed to be spotted and blackened by the fungus. Do this, placing the feet alongside of the haulms, so as to keep the Potatoes from being drawn from the soil along with the haulm, and we may at least have a fair crop—often as heavy as if it were left to mature. The tubers may be waxy, but they improve immensely after being taken up and stored dry.—G. A.

GOLDEN CHAMPION GRAPE.

On paying a visit some two years back to an amateur friend of mine in this locality, I was surprised and very pleased to find this glorious Grape in its Sunday dress, and with no appearance of spot. On inquiry I learned it set well without any artificial means having to be resorted to. I could see it swelled evenly, and was of a fine amber colour, with berries of a prodigious size. On inquiring about its history I learned it had been grafted on a strong-growing white variety which my friend did not know, but supposed it to be Royal Vineyard.

Profiting by the hint I went home fully determined to go and do likewise. Therefore on the 1st of March I cut down a Royal Vineyard Vine, which by the way is none of the best, and then grafted on it, on the bottle system, one of the Champion. It made a splendid cane, and I am this season rewarded with seven bunches of Grapes that set freely, swelled their berries regularly, and are now approaching ripeness with scarcely any spot, but I can afford a little spot on such a grand Grape as this. I ought to mention that the bunches are not large, but compact and beautiful.—R. GILBERT.

NATIONAL GOOSEBERRY SHOW,

Held at the Peel Arms Inn, Mason Street, Manchester, August 2nd.

			dwt	grs.
William Ridgway..	Premier prize	London	31	10
Francis Oldfield ..	do.	Ringer	28	14
S. Birchenall	do.	Shiner	27	0
John Wynne	do.	Antagonist	27	5
Thomas Burrows ..	Stewards' prize	Dan's Mistake	27	8
Faithful Jameson ..	do.	Garibaldi	27	2
James Salisbury	do.	Plunder	25	12
Thomas Shaw	do.	Overseer	24	5
James Birchenall ..	do.	Beauty	27	7
Daniel Bower	do.	Levellor	25	22
John Torkington ..	do.	Stockwell	23	10
Henry Garside	do.	Hero of the Nile ..	21	7
George Beckett	do.	Clayton	27	2
Thomas Bradley	do.	Australia	21	17
James Threlfall	do.	Hospool	23	2
William Heath	do.	Careless	23	0

RED.

William Ridgway	London	31	0
William Ridgway	Dan's Mistake	28	4
Bradley Bradley	Ploughboy	26	14
John Wynne	Beauty	26	1
William Jones	Beauty	24	1
William Jones	Maccaroni	24	15
Thomas Bradley	Lord Derby	24	2
Alfred Tomkinson ..	Conquering Hero ..	23	12
James Salisbury	Essex Derby	23	11
John Wynne	Red Jacket	23	8

YELLOW.

		dwt	grs.
James Salisbury	Ringer	28	8
Daniel Bower	Levellor	26	20
William Ridgway	Catherina	26	15
John Torkington	Garibaldi	26	8
Thomas Bradley	Mount Pleasant ..	25	15
John Wynne	High Sheriff	24	12
William Ridgway	Lady Haughton	23	21
Charles Leicester	Kitty	22	22
Charles Leicester	Gem	22	6
James Salisbury	Hit or Miss	22	2

GREEN.

William Ridgway	Shiner	26	12
William Ridgway	Surprise	26	8
Francis Oldfield	Turnout	25	6
Francis Oldfield	London City	25	4
James Birchenall	Stockwell	21	5
James Birchenall	Hospool	23	12
James Salisbury	Harriet	23	4
Daniel Bower	Rough Green	23	2
Samuel Birchenall	Telegraph	22	18
James Salisbury	Lizzard	22	11

WHITE.

William Ridgway	Antagonist	27	8
Samuel Birchenall	King of Tramps ..	25	11
James Salisbury	Careless	25	7
William Ridgway	Peto	25	0
John Wynne	Hero of the Nile ..	24	21
Faithful Jameson	Postman	24	17
Samuel Birchenall	Victory	22	10
Thomas Bradley	Overseer	23	2
Daniel Bower	Queen of Tramps ..	22	1
Alfred Tomkinson	Transparent	20	11

SEEDLING SHOW.

Mr. Blackhurst	(Red)	Tieborne	21	3
Alfred Tomkinson ..	"	Vauxhall	20	9
William Jones	"	Taylor	20	6
George Wilkinson ..	"	Dreadnought	20	1
Charles Leicester ..	"	Valiant	20	0
Samuel Alcock	(Yellow)	Ploughman	22	6
Bradley Bradley	"	Conservative	22	2
Joseph Walton	"	Floyer	21	22
John Barlow	"	Favonius	18	6
John Wynne	(Green)	Sir Roger	22	6
George Ridley	"	Cremorne	21	0
Joseph Walton	"	Wilmslow	19	15
William Broad	"	Edensor Hero	19	13
Charles Leicester ..	"	Cheerful	18	21
Samuel Birchenall ..	(White)	Chester's Daughter	20	22
William Hodge	"	Mary Hodge	19	15
William Ridgway	"	Wily	19	14
Charles Leicester ..	"	Succeed	19	0

FLOWERS FOR OUR BORDERS.—No. 14.

CEANOTHUS DENTATUS.—TOOTHED CEANOTHUS.

With a few exceptions the plants of the Buckthorn family are not remarkable for the beauty of their flowers; the *Ceanothus*, introduced to this country from California, will, however, do much to increase the interest attached to this tribe. The flowers are, individually, very small, but this minuteness is fully compensated for by the profusion with which they are produced. The foliage, too, is extremely neat, especially in the species selected for our illustration, and which is, perhaps, the most interesting of the genus. Some fears were entertained that the *Ceanothus dentatus* would prove only half-hardy; the specimen from which our figure was drawn was, however, taken from a plant which had been fully exposed on a south wall throughout the winter without any protection whatever, and as its capability of resisting our winters will doubtless increase with the age of the plant, we trust that this charming species may be considered acclimatised. Like many other shrubs cultivated in the open air, it would probably suffer considerably from severe frost; but as the peculiar habit of growth, both of *dentatus* and most of the other species, renders it desirable that they should be planted against a wall, the protection of matting can be afforded them without entailing much trouble or expense.

The *Ceanothus dentatus* is a branched evergreen shrub, growing to the height of 7 or 8 feet, perhaps more. The whole of it is covered with down, that on the branches being of a rusty colour. The leaves are very small, the largest scarcely exceeding three-quarters of an inch in length, with coarse teeth, a revolute margin, and a pair of small scale-like stipules at their base. The foliage has a peculiar, but to us not unpleasant

odour, due to the numerous minute glands on the edge of the leaves, which are, however, hardly perceptible without the aid of a lens. These glands are said to be found only on this species, and they afford therefore a ready means of discrimination. The flowers are produced in stalked heads, sometimes roundish, but in the wild plants much longer. Although small, the number in each head is considerable, and their bright bluish-violet tint gives the plant when in bloom an exceedingly attractive appearance. A detached blossom is represented on an enlarged scale in the corner of our engraving, chiefly for the purpose of showing the peculiar form of the petals of the plants of this order. These, it will be seen, are much longer than the sepals; narrow and hooded (cecellate) at the tips in a curious manner, the stamens being inserted opposite the petals.

With regard to the culture of the different species of *Ceanothus* from California, they all appear to thrive in peat,



Ceanothus dentatus.

either alone or mixed with a little loam. Their growth is somewhat straggling, and the shoots, therefore, require frequent stopping during the summer; but as the flowers are borne upon the shoots of the previous year, this shortening process must not be performed late in the season. In the Osborne gardens *C. dentatus* is trained on the horizontal system, and after flowering the secondary branches are shortened back to within an inch or two of the main laterals.

The species are readily propagated by seeds, which are sometimes matured, and which should be sown soon after gathering, or they will not readily vegetate; they may also be increased by cuttings of the half-ripened wood under a hand-glass.

We have selected *dentatus* as being, on the whole, the most desirable species; but it forms but one of a group introduced, we believe nearly about the same time, by the Horticultural Society's collector, Mr. Hartweg, and which are all well deserving attention. The *C. papillosus* and *C. rigidus* are scarcely less interesting than that we have figured, and are a shade more hardy; indeed, we believe they may be said to be perfectly so. The foliage of *C. papillosus* is much larger than that of *dentatus*, and has its surface covered with pimple-like elevations, to which it owes its specific name. It is of more vigorous growth than the Toothed *Ceanothus*, and may be treated in a similar manner. *C. rigidus* fully equals in interest *papillosus*, but is less branching in its habit. It is, probably, hardy enough for cultivation as a bush or standard in this

country. Two species of more recent introduction, *C. floribundus* and *C. Lobbianus*, deserve especial mention as highly ornamental subjects. Both have blue flowers copiously produced.

One species, the *C. americanus*, is known as the New Jersey Tea, from the circumstance of its having been used in the American War of Independence as a substitute for the Chinese plant. Numerous varieties of this deciduous species have been raised in European gardens, some of which are well deserving of cultivation. As we may not soon have occasion to notice this order again, it may be worth while to remark that to the Buckthorn tribe belongs the Lotus of the ancients and the Jujube tree, both of them species of *Zizyphus*, though the articles sold as jujubes probably contain as much of the genuine fruit as the perfumer's bears' grease does of the real Bruin.—W. THOMPSON, Ipswich. — (*English Flower Garden*, Revised by the Author).

STRAWBERRY CULTURE.

I do not like to differ from your correspondent, Mr. Luckhurst, and I seldom have occasion to do so, but in his last communication on Strawberries he says, "No Strawberry plant will continue in full bearing longer than two seasons. It is true that fruit may be taken for several years from the same plants, but such fruit is invariably of a paltry description, quite unfit for dessert." Now, this is much too wide and sweeping an assertion, especially where he goes as far as to use the word "invariably." I have for some time been convinced of the fallacy of supposing that Strawberries under proper treatment cannot be made to succeed, not for two or three years only, but for many seasons, and the experience of the last two years has fully convinced me that this perpetual renovation of Strawberry beds is unnecessary. When removing some old beds five years ago I kept a portion on for trial. These plants have continued to go on bearing, not merely, as Mr. Luckhurst would have it, fruit of a paltry description, but a superabundant crop of fine fruit, and they were as fine and as full of fruit this year as ever. I use the word plants, not beds, advisedly, because the plants have always been kept distinct, and the runners cut off every year, and according to the best of my belief they have now been in bearing ten years. I have had in bearing this year beds fruiting for the third, fourth, and fifth seasons, and I cannot perceive any deterioration, and this not with one sort only, but with many, as President, Rivers's Eliza, Sir Joseph Paxton, Carolina Superba Myatt's Eleanor. Some sorts that fruited last year for the second season have, undoubtedly, borne finer fruit this the third year; and in parallel beds of the sorts I have named above I could see no difference between the fourth and fifth-season plants, and that not a scanty crop or small fruit, but fruit fit for the exhibition table and in enormous quantities.

I gave my method of treatment last year, and I need not repeat it in detail. It is merely to keep the plants separate and distinct by cutting-off the runners as soon as possible after the fruiting season is over. Mulch with good manure during the winter, put on either in October or November. (I do not think it a good plan to put it on too soon, as it induces the plants to grow instead of ripening the crowns.) I remove any mulch there is left, but which is generally very little, as it is usually washed in to the roots during the winter; but if any is left I remove it in April, so as to admit full sun to the roots till the flowering season. The beds are then copiously watered, and covered with a mulching of chopped straw laid on thickly, so as to be a clean bed for the fruit, and to keep the moisture from evaporating. I never allow a hoe, fork, or spade, no pricking-up the soil or loosening the ground, but it is kept as firm as possible. I know many, if not most, Strawberry-growers on light soils pursue a plan, if not identical, yet very similar to this; but I have briefly repeated this in order to ask other Strawberry-growers to try with me how long Strawberry beds may be continued in full bearing with fine fruit under this treatment. I have determined to destroy no beds of the sorts which I have selected as the best with me till I find they have deteriorated from the previous year.

And now a word as to sorts. I cannot endorse the encomiums passed on Vicomtesse Héricart de Thury, nor did I ever find any of my numerous friends who have tried the different kinds of Strawberries in my garden this year, who ever eat more than one or two on trial; and having had several Strawberry parties this year, when five, or six, or more dishes

of Strawberries were put on the table, I never in one single case knew the Vicomtesse preferred. It is a good, useful, hardy sort, a free bearer and early, but only fit for the cook. La Constante is another sort very highly praised which does not do well with me, and I do not think it suitable for light lands. I do not pass sentence on it, as I do on the Vicomtesse, because in the case of the latter it does not fail from want of growth or crop, but La Constante, though bearing freely, does not yield any fine fruit, at least not to compare with others. I have not suffered from damp as Mr. Luckhurst has, but Lucas has still been as good with me as last year, when we had too much wet. Filbert Pine, though a fine-flavoured Strawberry, has not liked the dry season as well as the wet. Bonne Bouche, Triomphe de Paris, and Princess Dagmar have been remarkably good; but for all general good qualities Sir Joseph Paxton is still my favourite. I forgot to mention Dr. Hogg, which is an undoubtedly fine fruit; and here I can fully endorse Mr. Luckhurst's opinion, though Frogmore Late Pine proved a failure.

I do not, by the way, like crinoline wires and other supports for Strawberries; the stem on which the Strawberry grows is easily injured, and the bend it often gets over a wire support checks the growth of the fruit. If plenty of chopped straw is used Strawberries will not suffer either from dirt or damp. Nothing to my mind injures Strawberries more than the direct action of the sun. We had thousands of berries injured here during the extreme heat of the 19th and 20th of July, when the heat in the shade was 87° and 92°, and wherever the fruit was not shaded by the leaves, it was burnt by the sun or turned a dull colour, all the freshness and brightness taken from it. We had, however, so much fruit that we could easily spare some. I think, however, the season might be prolonged and the quality of the fruit improved, if either tiffany shading or thin calico were used during very sunny weather.

I am, I fear, rather an unbeliever in recognised theories, and I do not believe that firm well-trodden soil evaporates quicker than loose and porous soil that has been forked-up and dug deeply. My experience has been, in light land especially, that if you dig into a piece of firm land, or land that has been trodden, it will be found more moist 2 or 3 inches from the surface than land that has been hoed and stirred. I know that it is the general custom to state otherwise, and to say that surface-stirring checks radiation. If air were always charged with moisture, then pulverised soil would be more capable of absorbing the moisture than a trodden surface, but then air is not always charged with moisture. On the contrary, the air that permeates the ground will generally oftener extract moisture than give it; and if this theory were true, why toss hay about and leave it as light as possible, instead of leaving it flat and pressed? Many a Turnip crop is permanently injured from the soil being worked and pulverised, and left too loose when sown. If wet weather follows no harm is done, but as a general rule Turnip land should be ready three weeks before sowing, and should be allowed to settle, when it will retain the moisture longer, and will be a better seed bed for the young plants than one which is worked and harrowed up to the time of sowing. I do not pretend this is an invariable rule on all lands, but I do mean to question, and that seriously, the statement so often made that surface-stirred land retains its moisture longer than that which is wheeled.

I am led to these remarks partly from thinking Mr. Luckhurst's plan of very deep digging for Strawberries unnecessary, and also from the extract in the last Journal from the *New England Farmer*. If, as Mr. Luckhurst says, he put 6 to 8 inches of manure on the top of his light soil, he thereby added more surface soil than many of our poorer soils above the chalk rock contain; this alone, without digging 18 inches deep, would insure a prolific crop of Strawberries.—C. P. PEACH.

THE HABIT OF THE RATA (METROSIDEROS ROBUSTA).

It will be as well, perhaps, and I hope not out of place, to record the opinions of others besides those of Dr. Kirk, which appeared in the "Transactions of the New Zealand Institute," and were given by you on pages 66 and 67 of the present volume of the Journal.

About the Rata tree in New Zealand Mr. Edward Jerningham, Wakefield, writes in his "Adventures in New Zealand" at page 336, vol. ii., as follows:—"Our method of assignation had been one peculiar to the natives—we were to start when the Rata should be in bloom. This is a curious but very common plant, which is at first a parasite, winding round large

trees of the forest till it encircles and destroys them, when its numerous coils join together in one hollow trunk, leaving the victim to rot inside. The Rata thus full grown is certainly the monarch of the New Zealand forest. In the gnarled form and tough contortions of its limbs it much resembles the Oak, and is therefore highly valued by ship-builders for knees and timbers. The foliage has also the noble appearance at a distance of the English forest king; but the plant is of the Myrtle kind, and bears a bright crimson blossom in such abundance that, at its time of flowering, the forests look as though some playful giant had dipped every other tree in crimson dye and stuck them up again. This tree is somewhat irregular in its flowering, and earlier in some parts of the country than in others; but this fairy hue is generally thrown over the wooded steep about the middle of summer, near harvest time."

In respect to what Mr. Wakefield says above about the natives, they are just the same up to the present day. On the subject of winds the natives are practically even more observant than Europeans; their notice of physical phenomena is also acute and discerning, and I find them in this part of New Zealand, contrary to the hastily-formed opinion of a few writers about New Zealand, a very industrious class. One word about Mr. Wakefield: he is one of our colonial M.P.'s, now representing the east portion of the city of Christchurch.

Mr. J. C. Bidwell, in his "Rambles in New Zealand," says about the Rata—"The Rata (*Metrosideros robusta*), in my opinion the monarch of the New Zealand forest, is occasionally found very large in the woods, but prefers a more clayey and hilly soil. It is often 60 feet high without a branch, and from 4 to 5 feet in diameter. The wood is a fine pale brown, equal to mahogany in beauty and African Oak in hardness and durability. It is a first-rate ship-building wood, but on the east coast is rare; as you approach the west coast it becomes common. It belongs to the Myrtle family, and is very closely leaved, with small brilliantly green oval leaves growing by threes around the stem; the flowers are very numerous, small, and scarlet (I am told). I have climbed many trees, but never succeeded in finding any seed nor seed-vessels in any state of decay, but once found three young plants; they were growing in a rotten branch high from the ground, and had roots very much like potatoes, and as large in one instance as a walnut. This accounts for the natives saying there are never any young Ratas. I have no doubt that, like many trees of tropical climates, they never grow from the ground, but to it—that is, they strike root in the branches of another tree, and afterwards send roots down to the soil through the trunk of their supporter as it decays. It would be a magnificent ornamental tree in England if it would grow (which I think possible), as it would be utterly unlike any tree at present known in Europe. The foliage being very dense at the extremities of the branches, but nowhere else, it looks like a number of small trees, such as Box, growing out of one another, or out of the gigantic stem of an Oak."

"*Metrosideros lucida*, a beautiful tree of this order, occurs as far to the south as Lord Auckland's Island, in lat. 50½° south."—*J. Haaker*.—(*Lindley, Vegetable Kingdom*.)

"The Ake-Ake, a New Zealand plant of this order, the *Metrosideros buxifolia* of Allan Cunningham, is described by that botanist as being a rambling shrub, adhering to trees, and by its lateral roots climbing to the summit of the loftiest timber in the forests of Wangaroa, Bay of Islands, &c."—(*Ibid*.)

"The wood of Myrtleblooms is said by De Candolle to be generally white and compact; but the heavy, hard, dark brown timber which furnishes the South Sea Islanders with their clubs and other weapons is said to come from *Metrosideros polymorpha* or some allied species. The Ake-Ake or *Lignum Vitæ* of New Zealand, the Rata, and *Palmukawa* of the same country, are all hardwooded trees belonging to the genus *Metrosideros*."—(*Ibid*.)

Hursthonse, in his "Britain of the South," says about the Rata (*Metrosideros robusta*)—"There are several varieties of this tree. One grows as fast as a parasite, creeping in numerous stems like ropes up the trunks of the other forest trees, gradually enclosing them till they perish, and then uniting to form a noble tree taller than that which it has destroyed, with an enormous trunk, but hollow within. The leaf and the flower resemble those of the Myrtle, but the flower is of a deep crimson colour with golden stamina. In December and January these giants of the forest give the hillsides a fairy-like appearance from the profusion of this beautiful blossom. The branches are gnarled like those of the Oak; and the trunk also, from its formation, is a series of strange contortions; so that

the wood, being also heavy, close-grained, and very durable, is most valuable to the ship-builder for knees and timbers of all shapes and sizes."

I have just come to a passage in his work which I can hardly reconcile with what I have just quoted above about the flowers of the Rata, in his description of it. He says—"Flora and Pomona have dealt most niggardly with New Zealand. There is no indigenous flower equal to England's Dog Rose—not in combined beauty and fragrance; no indigenous fruit equal to Scotland's Cranberry." I presume we must pardon him. We have now growing in the vicinity of Christchurch thirty-seven varieties of New Zealand Veronicas out of the forty described by Hooker in his "New Zealand Flora." A more beautiful genus than this cannot well belong to any country, both for its diversity in colour of flowers and perpetual evergreen foliage, and I may add to this, almost in flower all the year round.

Ward, in his "Information relative to New Zealand," 1839, writes about the Rata—viz., "This is a fine and useful tree, producing a heavy, close-grained, durable red wood, capable of being turned to almost any purpose of household work, and valuable to the ship-builder, who may find its branches curved to his hand, and requiring but little of the labour of the axe to form it to his purpose. It is found in perfection of all sizes and heights, from 20 to 70 feet high, and from 18 inches to 7 feet in diameter. It prefers a dry stony soil, and varies the pleasantness of its appearance according to the regular or irregular shape of its trunk. Its branches generally shoot from the top of the main stem, and put forth to some height before a leaf appears. The leaves are small, in the shape of the Box, tufted at the top of the tree, forming a crown, and in the distance appear like a cluster of Palms growing out of one large stem, rising far above the parent stock by which they are supported."

Your readers and myself may now form our own conclusions on the various opinions expressed by writers about the Rata of New Zealand.

The Myrtle tribe, most gardeners are well aware, abounds in beautiful plants; and the New Zealand *Metrosideros robusta* is one of these, with its tassels of silken crimson stamens, so remarkable for having no petals, and for the calyx falling off like a lid or extinguisher. This curious calyx is pushed off, not being capable of separating in the usual way; it having all its parts soldered together, as it were, into a hard fleshy lid. When it is time for the stamens to unfold, they push the calyx so forcibly that it breaks away by its base and drops off, leaving the stamens at liberty to expand as fully as may be necessary. The volatile oil contained in the little reservoirs of the bark, the leaves, and the floral envelopes, gives these plants the fragrance which has caused them to be celebrated by poets of all ages.

Enclosed I send you a wild sprig of Rata, I think it is *M. lucida*. Branches of it (in flower) generally arrive in Christchurch about midsummer from the west coast of Canterbury. Passengers by mail coach bring branches with them on account of its beauty when in flower.—WILLIAM SWALE, *Avon-side Botanic Garden, Canterbury, New Zealand.*

EARLY KIDNEY POTATOES.

Lee's Hammersmith Early Kidney.—This new valuable Potato is a great improvement on the old Ashleaf variety, producing more than double the number of tubers at a root, and very large, floury, and white when cooked, and fine in flavour. It has a much better constitution than its parent, as it withstands the disease.

Sandringham Early Kidney is also a very productive variety, coming in about the same time as the above, and yielding about the same quantity at a root, excellent in flavour and floury. It also grows well, being stout in the haulm, and well adapted for that purpose.

I grow the old Ashleaf, Mon's Pride, Lemon Kidney, Albion Kidney, and Bedford Kidney, but none of them comes up to the above two new varieties either in quantity or quality; the latter is valuable for forcing. I have just discovered one tuber diseased (August 5th) among some Albion Kidneys, but I have seen none of the other sorts affected as yet. I grow a border planted late of what remains over of the smallest tubers of each variety for seed, as I find it is a good plan to get them up before they are quite ripe. I mean taking them up immediately, and intend to store them away on shelves lathed and boarded upright so that the air may get under them. There is nothing more done to them until planting-time comes round, merely

looking them over to see if any of them are diseased.—W. MCP., *The Gardens, Snelston Hall, near Ashbourne, Derbyshire.*

ENTOMOLOGICAL SOCIETY'S MEETING.

The last meeting of this Society for the season was held at Burlington House in July, the chair being occupied by H. T. Stainton, Esq., F.R.S., Vice-President. Mr. McLachlan exhibited a remarkable monstrous individual of a species of bee-like flies (Syrphidae), possessing portions of the characters of both sexes, taken at Black Park. Mr. Weir exhibited specimens of the rare moth *Agrotera nemoralis*, taken at Abbot's Wood, near Lewes. Mr. T. Blackmore exhibited an interesting instance of insect-instinct, being specimens of a gall found on Oaks, near Taunton, which had been taken possession of for habitations by a species of ant, *Crematogaster scutellaris*, *Olivier*.

Sir Sidney Saunders communicated a memoir on the habits and economy of certain Hymenopterous insects which nidificate in Briars in Corfu, with notices of the parasitic insects by which they are attacked. The insects themselves were exhibited at the last meeting, and belonged to numerous genera and species of burrowing aculeate Hymenoptera. He also exhibited a specimen of a curious Wasp forming the genus *Raphiglossa*, which he had suffocated with cyanide of potassium whilst asleep, showing the remarkable position of the insect during repose, as described in the paper, the insect affixing itself by its paws to a twig, and extending its body, back downwards, in a horizontal direction. Mr. Butler read a list of the species of Galeodidae, insects allied to the Scorpions, with descriptions of new species in the British Museum.

STONE FRUITS AND HARD SOIL.

It has often occurred to me, while observing the fruit trees growing on the walls of houses in many of the villages throughout England, especially in the southern districts, that the firmness of the soil has much to do with the longevity, hardiness, and fruitfulness of these trees, which are generally loaded with fruit of very fair quality. There is little attention given in the way of cultivation; all the training they get is a cut here and there to prevent the young branches from pulling the old ones from their fastening. They must have grown apæe at some period, as large breadths of mason-work are covered with single trees, such as are not met with in many gardens. In this locality (Oxford), Apricots have been famous for many years, and great crops have been gathered; and the industrious villagers have often been able to pay their rents from the old trees on the ends of their houses. It has appeared to me in most cases that these veterans have been planted with very little care—probably a hole has been made, enough to twist the roots into, and the soil replaced over them, and rammed down as if to form part of a floor. The hard-trodden gravel (in many cases easeway and pavement), would lead one to suppose that moisture could never reach the fibres, but I suppose the fibres must travel to the moisture; a wide street is generally the space where the border should be. Other trees have the usual outhouses standing over the space where the roots are supposed to find their food. It is evident there must be food, or where is such fine foliage and luscious fruit manufactured? Vines are met with often growing under the same circumstances: one on a tradesman's house in a town not far from here is something wonderful in its way—the kind is the black Esperione. I am told that it has produced heavy crops for many years past, and this year the bunches almost touch one another. There are only a few inches of open space between the pavement and base of the house front wall. The pavement and causeway together, between the Vine and the street, may be 12 feet wide, yet this Vine luxuriates, and supplies its owner with plenty of fruit, which is used generally for wine-making. Without discussing the matter further, is there anything we can learn from these trees, which are more productive, of stronger constitution, and less liable to disease than the finest-trained trees under the care of some of our most distinguished gardeners? From experience, I believe that the firmness of the soil prevents over-luxuriant growth, inducing the roots to become a mass of healthy fibre, instead of their sending out large soft feeders, drawing up large quantities of water, which remains in the branches till the short dark days of winter. No fruit-buds are matured; the buds start early into growth long before they are safe from frost; the sap, which has been flowing freely, receives a check; nothing is seen at the time, but before summer has advanced very far, a large limb (perhaps the headliest-looking in the tree), dies-off suddenly; it is cut out, other branches die-off in the same

way, and the poor tree is sadly deformed. Cases similar to this are met with all over the country, and yet we have found no preventive.

One thing I would suggest to young planters is,—never accept a tree which has been often cut back in the nursery, or one which has not been properly cut. When pieces have been left, the branches are always liable to die-back where these pieces have been attached. When the cut is clean and properly done, the bark will grow over, and the wound will heal-up nicely. When planting is done, never use manure (except for mulching, to keep out frost or drought); let all the soil, after it has been prepared, be made as firm as a rammer can make it,—if stones are plentiful, so much the better; the soil may be placed over the roots, and made only moderately firm. Endeavour to get the tree to start freely, and use the knife only where it cannot be avoided. When the roots have run a little, they will come in contact with the hard-rammed soil, and will throw out fibre in all directions, which will cause the tree to grow sturdy, and the young wood will become very hard. When any shoot takes the lead, and is likely to monopolise the whole growth, take off a joint or two at top, and a number of small shoots will spring up; train them over the empty space, and the foundation of a sound tree will be formed. Avoid the use of the knife in winter if possible, and if root-pruning should become necessary, let it be done early in the autumn,—but examine the roots first at one side, taking off none except they may be going downwards, or away from heat and air,—replace the soil, or fresh loam instead, and ram it as hard as possible under the roots, and lay every fibre carefully in its place, and cover them over as before. A very small portion of the tree thus treated will be enough to check unnecessary growth, and large firm leaves, plenty of natural fruit-spurs, and a hardy tree, will be the reward. The cutting round the whole tree with a spade, as some have done, is reckless and mischievous in the extreme.

If too rich soil should be the cause of watery growth, lift the tree and mix some lime rubbish in the earth; ram it down, and lay-out the roots over it, and place 6 inches of loam over them. This should be done as the leaves are about to fall in autumn.

Speaking of the Vine, how often do we see promising young rods bear well for a few years, their roots filling the porous border. They begin to fall off: extra top-dressing is given, shanking goes on, red spider destroys the foliage; yet all seems right at the roots. But careful examination will show that the feeders have found their way into a poor unhealthy subsoil, and as fast as fresh rootlets are made they die. The fine rich border is left behind, and all the manuring, watering, &c., is so much labour thrown away. The points of the roots are beyond help, so the vine by degrees becomes a wreck. But if Asparagus beds, or a free sound loam, is in the way of the roots, instead of unhealthy stuff, the Vines will not only remain healthy and vigorous, but be rejuvenated. The same applies to all trees, even to the Oak of the forest: a tree may grow luxuriantly for years, and at last begin to fail—hundreds around me are striking examples. If the cause was searched after, the active roots would be found far from the trunk, out of the reach of the famous loam which had made the gigantic tree, and struggling for an existence among material foreign to their nature. We should never despise the lessons which old trees in cottagers' gardens teach us, but search out the cause of their success, and it will be found that the roots are in their natural element; and the roots of our own trees, which are growing at railway speed, are in unusually rich quarters, where they will luxuriate till they bring about their own destruction.—M. TEMPLE (in *The Gardener*).

A GRUMBLE ABOUT ROSES.

At a time when so much has been said and done about Roses it may appear something like heresy to put in a plea of discontent at the limited area which the Rose-growers of the present day seem to move in. I confess making this charge with considerable diffidence, especially as I do not pretend to be well-up in this queen of flowers, and am therefore liable to run into error, perhaps, in some of the views I take on the matter. These may be summed-up into a single complaint against Rose-growers, as a whole, of running too much in a groove—so much so that, although great improvements doubtless have been made in many varieties, there were as many really distinct forms in cultivation fifty years ago as now, and the colours then to be had have not been multiplied since.

For instance, the old Tusean Rose presented as dark a tint of a rich plum colour as the best kinds to be seen in ordinary stands at flower shows. The old white Rose was quite as sweet as more recent ones; and if the old Moss has been improved in some of its properties, it is not all other varieties that can beat the old one. The Yellow Banksian and Macartney seem to be ignored altogether by the leading Rose-growers of the present day, and assuredly something more might have been done with the latter two. The very praiseworthy efforts of those who provide us with new varieties have been mostly directed towards improving the size or shape of individual flowers of the kinds that bloom in greatest abundance in June. This is all very well, and great credit is due to them for this; but there is no reason why other kinds should be neglected, and also why improvement should not take another form. The old York-and-Lancaster Rose, which now and then occurs in old places, carries a charm with it which the new-fashioned varieties with their unpronounceable French names fail to do; for although it may not compete with the latter in point of form, the fact of its being striped gives it an importance which a mere multiplicity of petals all of one hue would fail to do. And who can blame the admirer of a striped Rose, when in all probability it is a greater rarity than many that first made their appearance in 1872? But why should not the old York-and-Lancaster have its place amongst others of its family? Why has it not been improved, and why are Roses equalling it in the regularity of its markings not forthcoming at our Rose shows, with all the improvements which a greater number of petals and a better form can give?

Florists assume to accomplish, or rather to approach very near to, any standard of excellence that may be laid down. Why, then, do they not furnish us with a good striped Rose having less tendency to run into self colours than the York-and-Lancaster Rose? There are many persons not yet educated to discern at a glance the small difference there is in colour between many of the excellent stands of Roses that are exhibited for competition, but who would be delighted were a good striped Rose to make its appearance amongst them; and I am not sure that a meritorious single variety might not be acceptable now and then—not in an exhibition stand, perhaps, but in a Rose bed or border. Single flowers of many kinds are not always to be despised. I remember many years ago having a very pretty single Dahlia for some time, but I lost it. I certainly do not remember any single Rose of dwarf growth possessed of much merit, but that is no reason why there should not be one. Moreover, might I ask hybridisers if nothing more can be made of the Yellow Banksian? Can its beautiful flowers not be had later in the season than they now are? and if some of their qualities cannot be transferred to another variety? also if the Macartney Rose cannot be made to conform to the wants of the present day? and lastly, if hybridising the Persian Yellow with the so-called Hybrid Perpetual class cannot be accomplished, so as to give us that inimitable colour which even Maréchal Niel in all his glory cannot supply?

Other complaints I have, but I fear I have said enough to call down the indignation of the queen of flowers, and in a greater degree that of many of her votaries; but if what I have said be the means of directing attention to improvements hitherto neglected, I can willingly submit to any amount of chastisement to which a grumbler at existing things may be exposed. Certainly, in the matter of Roses it would be better, instead of quibbling over the respective merits of new varieties that may or may not differ from older ones, that some one should start on new ground altogether. Enough has been said to show to Rose-growers that, although they are entitled to our best thanks for what they have done, they have pursued one course long enough now to satisfy those outside the fold, and that hereafter it would be better if they took other ground.—J. ROBSON.

GARDENING IN THE WEST.—No. 6.

BECKETT PARK, THE SEAT OF VISCOUNT BARRINGTON, M.P.

It is a quaint old town that of Shrivvenham, in which thatched cottages appear to outnumber those covered with slates and tiles, and rather picturesque; and at no great distance from it and the station on the Great-Western main line is Beckett Park, which forms the subject of our present notice. Leading to it from the village of Shrivvenham—for it is nothing more—we pursue a pleasant country road till the park gates are reached, respecting which we have nothing special to re-

mark, save that for years they have been freely thrown open on the occasion of what is well known in the district as the Great-Western Fête, when the hundreds of workmen engaged at the Swindon Railway Works, with their families, and many more of the *employés* besides, have, through the liberality of the proprietor, been enabled to make it their trysting-place.

The mansion, of which we give a view from a photograph by Mr. Wilkinson, of Trowbridge, is stone-built and of modern construction, with an ample carriage square in front of the principal entrance, which faces the east. It is surrounded with seventeen acres of lawn dotted with choice trees and shrubs, and close to it is a lake crossed by several bridges, one of which is represented in our engraving. The lake has no great breadth in any part, except where it divides into two branches, forming a large island; but along its shores are picturesque walks more

than a mile in length. Indeed the walks about the place are its great charm. There are some four miles of walks, much of them confined between Box hedges 3 feet high, and which had been much higher but are now clipped down, and which, it is stated, were planted by Bishop Beckett. These walks are always shady and cool, and are kept in admirable order. On the west side of the house is a terrace wall covered with Roses and Magnolias, having standard Roses surrounded with Mignonette, and flower beds in front. This is a veritable garden of sweet odours in the evening; and behind it again we have *Félicité* Perpetuée Rose hanging in loose but profuse clusters of white blossoms, accompanied with brilliant Gladioluses and Geraniums. The flower garden is on the same side of the mansion; it is neatly laid out and effectively planted, especially the oblong centre, which has at the outside two rows of Eche-



BECKETT HOUSE.

veria secunda glauca, one on a ramp and the other on the flat, and the space within is filled up with *Alternanthera spathulata* and Golden Feather *Pyrethrum*, while the raised centre consists of *Echeverias* and *Alternanthera magnifica*. The outer beds are edged with *Cerastium tomentosum*, within which are planted in succession, according to the side, Blue Bonnet or Purple King *Verbena*, Flower of Spring or Bijou *Geranium*, the old Tom Thumb scarlet, and *Aurea-Floribunda Calceolaria*. Altogether from 20,000 to 30,000 plants, we are informed, are yearly required for this garden. There is also a conservatory on the same side of the house, kept in good order, and containing scarlet *Geraniums* and *Heliotropes* extending from floor to roof on the pillars and back wall, together with *Tacsonia mollissima*, *Canellias*, *Dicksonias* and other Ferns.

We have before alluded to the walks as being one of the

most agreeable features of the place; in particular we would notice an avenue with Beech and Oak on each side, along with Yews, Box, and mixed shrubs; a walk from the terrace to the church with a Yew hedge on each side; and in front of where the old mansion stood we have clumps of Oaks and Elms, forming an avenue through which Uffington church is seen in the distance. From the same side of the park White Horse Hill is plainly seen, though the figure of the horse, whatever its origin, is now by no means clear; still, the scenery is pretty in all directions, and the park is well studded with trees. We noticed an Oak 15 feet in circumference of stem, Beeches with 50 feet of clean stem, several fine Scotch Firs, and of other Conifers handsome trees of the Deciduous Cypress, *Pinus Cembra*, *Picea Picea*, and Silver Fir.

The fruit and kitchen garden is about four acres in extent,

of an irregular form, which will be most readily described as a triangle, with its base to the north and its apex to the south cut off; there is consequently a good length of wall having a south aspect. A length of 140 feet is covered with a Peach case 7 feet wide, 10 feet high at back, and well provided with the means of ventilation by sashes opening outwards in front and upwards at back. In front of this are frames and pits filled with Balsams, Pelargoniums for late bloom, Chinese Primulas, Cinerarias, &c., and which are also used for bedding plants and general purposes. In front of the pits again is a range of houses used for growing Fuchsias, forcing Roses, Strawberries, &c.; and there is besides a range of span-roofed houses 87 feet long in three divisions, in which are grown Orchids, Pelargoniums of all sections largely, various other plants, and Cucumbers. The vinerias are only two in number, 28 feet long by 16 feet wide. The earlier contained a splendid crop of Black Hamburgh and excellent Muscats. The bunches colouring in the later house also promised to be fine.

On the walls Apricots were scanty, Morello Cherries abundant, Passe Colmar Pear on the west wall an excellent crop, but other kinds not so productive. Dwarf Apple trees were also bearing freely, though the soil is by no means favourable to fruit trees, as at 18 inches from the surface there is a ferruginous sand, which soon kills the trees when the roots reach it.

In the open quarters of the kitchen garden, which slopes rapidly to the south, Globe Artichokes are grown in unusual plenty, and it is worthy of remark that the Asparagus beds are double the distance apart that we commonly find. This has arisen from Mr. Smith, the gardener, having used the roots in each alternate bed for forcing, and the result was that he has had more and finer produce from those left than from double the number of beds placed closer together. All the other crops were in excellent condition, and the neatness and order throughout were highly creditable to Mr. Smith's management.

ON THE URARI,

THE DEADLY ARROW-POISON OF THE INDIAN TRIBES IN BRITISH GUIANA.

[Read by Dr. R. Schomburgk before the Adelaide Philosophical Society, on April 10th, 1866.]

(Continued from page 63.)

During my brother's stay among these tribes he convinced himself that, as main ingredients for the preparation of the poison, they used either the bark of *Rouhamon guianensis* or *Strychnos cogens*. Though their poison is similar to that of the urari of the Macusis, as far as colour and consistency is concerned, yet, as I mentioned before, it is a great deal inferior in respect to strength. When my brother showed the Guianans and Maiongkongs some dried specimens of *Strychnos toxifera*, which he had in his herbarium, it seemed to be quite unknown to them; but when he showed them the specimens of *Rouhamon* and *Strychnos cogens* they immediately recognised in it the plants used by them for the preparation of their arrow-poison. In British Guiana the preparation of the urari is known only to a few tribes. Von Martins, who says the same of the tribes of Brazil, states as a cause that those plants which contribute mostly to the preparation of the deadly extract certainly appear sporadical, which is the cause that the preparation of the urari is only known to certain tribes where the plants grow. As far as the inhabitants of Guiana are concerned, this statement would not prove correct, as I have found not only the *Strychnos toxifera* on the river Pomeroon, but also another kind of *Strychnos* on the Barama and Waini, a territory which is inhabited by the tribes of Warraus, Caribees, and Arawaks, which tribes do not use the arrow-poison, nor do they know anything of the properties of the plant. In British Guiana only those tribes which carry the blow-pipe for a weapon know the use of the urari. During my brother's stay in Pirara, in 1837, he was as little successful in being present at the preparation of the poison. Leaving the village he asked Mr. Youd, the missionary, to try to persuade the preparer of poison in the Canuku Mountains to boil the urari in his presence, and communicate to him the process. Mr. Youd was successful in persuading the poison-preparer to boil the poison in Pirara, in a hut erected for the purpose in front of the missionary's house, which enabled Mr. Youd to watch the process. My brother was again successful in witnessing the preparation of the urari on his third visit to Pirara. The experience gathered by these witnesses agrees in every respect with that obtained by myself, which may have its cause by our seeing the preparation made by the same individual.

I now make my own observations. I found at the Canuku Mountains the same renowned urari preparer who served my brother as a guide to the regions of the Urari plants, whom I engaged also as my guide, and under the same difficulties we reached the plants, which to my great disappointment showed neither flower nor fruit. We collected a great quantity of bark of the plants, as the Indian had promised to prepare, after our return to the village, the urari in my presence. To my great consternation the old poison-boiler tried to evade his given promise, when I reminded him of it the next morning, with all kinds of excuses—pretending to be sick, complaining of headache, and wishing to put off the boiling for some days. The cunning Indian knew too well from experience that such pretended refusal would secure him the greater reward, and to gain my purpose I had to add to the reward already promised some more powder and knives. At last my long-cherished wish to witness the preparation of the urari, of which so many fables have been told (as there always will be about anything enveloped in a certain mystery), was to be fulfilled, and I found the process, except a few unimportant ceremonies, as simple as possible. The small hut, which on my arrival in the village I supposed to be the laboratory of the chemist, was really the Urari house. The Indian began first to take the bark from the *Strychnos* which we had brought from the Flamikipang, then produced the other ingredients which it seemed he had in store, and separated the required quantities. I am sorry to say that from the barks to be used besides the *Strychnos*, I could not ascertain the botanical names of these plants, which he called Tarireng, Wakarimo, and Tararemu; but to all appearances they also belonged to a species of *Strychnos*. When I asked him where they grew, he answered, far, far away in the mountains; it would take him five days to go there. The preparation of the several ingredients would be according to the weight, as follows:—Bark of *Strychnos toxifera*, 2 lbs.; from Yakki (*Strychnos Schomburgkii*), $\frac{1}{4}$ lb.; Arimaru (*Strychnos cogens*), $\frac{1}{4}$ lb.; Wakarimo, $\frac{1}{4}$ lb.; the root of Tarireng, $\frac{1}{2}$ oz.; the root of Tararemu, $\frac{1}{2}$ ounce; the fleshy root of Muramu (*Cissus spec.*); four small pieces of wood of a tree of the species of *Xanthoxylea** called Manuca.

Having finished the preparations, he went to his hut and returned with a new earthen pot holding about four quarts, and two smaller ones, also quite new, formed like a flat pan. He went into the Urari house and put down the vessels. In the first the poison was to be boiled, in the others it was to be exposed to the sun for condensation. The great strainer or funnel, made out of Palm leaves, was cleaned, and fresh silk-grass put into it to strain the fluid; the great block of wood dug into the ground to serve as a mortar, was cleaned, and in it the several ingredients were crushed. The urari preparer, after having arranged everything, built a hearth with three stones and laid the wood ready to light the fire, and went away to fetch (as I was informed afterwards, for I had not exchanged a single word with the preparer of the poison, and got all the information from my companions) the utensils to light the fire, though there was a large fire burning close by us, but which was of no use, being lighted by profane hands. Neither dare he use any water except it be brought in the pot to be used for the operation, as in fact no other implement must be used but such as has been made by the cook; neither must he have any assistance from any of the inhabitants. Any transgression of the sacred rules would nullify the operation of the poison. In addition to the fleshy root of the Muramu, he crushed the several different kinds of bark, but every one singly, in the mortar, lighted the carefully piled-up wood, and then threw first into the pot—which holds about seven quarts, and which was filled with water—the bark of the *Strychnos toxifera*. As soon as the water began to boil the Indian added at certain intervals a handful of the other ingredients except the Muramu root. In doing so he bent his head over the pot, strongly blowing into the mixture, which he said afterwards was adding considerably to the strength of the poison. During the process he only kept so much fire as was necessary for a slow boiling, carefully skimming the foam collecting on the extract. Within the next twenty-four hours the old man left the fire only for one moment—keeping up the fire at an equal heat. After the lapse of twenty-four hours the extract became thick, and was lessened by the boiling to about a quart, and had assumed the colour of a strong decoction of coffee. The old cook then took the extract from the fire, and poured it in

* Manuca is the strong bitter wood of a tree of the *Xanthoxylea*. The bark and the root are used as an effective remedy against syphilitic sickness on the Rio Negro, Amazon, and Rio Branco.

to the strainer above mentioned; the extract trickling slowly into another flat vessel, left the remainder in the silk grass. After exposing the strained extract to the sun for about three hours, he added the slimy juice pressed out of the root of Muramu which had previously been soaked for a short time in the boiling poison, and then had been pressed out. The poison presented immediately a remarkable alteration, curdling to a jelly-like substance. After this peculiar process, he poured the poison into earthen vessels, blatter than the ones before mentioned, for the purpose of changing the poison to a consistence equal to that of thick treacle by exposing it to the sun. Afterwards the poison was poured into the peculiar small calabashes or small half-round earthen vessels, manufactured only for that purpose, where it will ultimately change to a hard substance.

The third day the poison was ready; when the cook, satisfied with the produce, tried the strength of the poison in my presence, for which purpose he caught some lizards. He dipped the point of a pin which I gave him into the black treacle-like substance, let the poison get dry, and wounded one of the lizards in one of the toes of the hind foot, and then let it run. After the lapse of nine minutes the peculiar symptoms of the poison made their appearance, and one minute after that the slightly wounded animal was dead. A second and third were wounded on the tails, when the poison operated in the same time. He had chosen the lizards for the trial, maintaining that the operation of the urari with a warm-blooded animal takes only half the time which is required for a cold-blooded animal. A rat caught by a boy confirmed that assertion, and died in the fourth minute; a fox, which I had bought for my dinner, died the third minute. Each of these animals was but slightly wounded. The Indians maintain that the poison, even if kept well, and especially dry, will retain its life-destroying power only two years. Should the poison lose its power, they restore it by adding a little juice of the poisonous Manihot root (Manihot utilisima). After pouring some of the Manihot juice into a calabash containing the urari, they dig it into the ground, covering it with earth, and let it remain there for a day and a half. The Manihot juice is then mixed with the poison, and it then regains its former strength. The truth that after a certain lapse of time the poison would need a longer time to take effect, I have seen confirmed by my own experience with the urari manufactured in my presence. I brought some of the urari with me to Berlin, and made several experiments with it, when I found that it frequently took from fifteen to twenty minutes, according to the tenacity of life, before death took place. I am sorry to say that as yet a really correct analysis of the poison has not been made, though the renowned chemist, Professor Heintz, of Berlin, has spent a long time to ascertain it.

A LUNAR RAINBOW.—At 9.20 P.M. on August 4th the moon was nearly due south, and appeared unusually large and bright, and the clouds in the north looked wild and black, when to my great delight I saw a portion of a rainbow, and in a few minutes it became quite perfect, forming a semicircle. The colours were not so bright as if caused by the sun. This is the first time that I ever saw a lunar rainbow.—JAMES R. POCOCK, *Brombrough Hall Garden, Che. hire.*

WORK FOR THE WEEK.

KITCHEN GARDEN.

As the rains are very partial, it is still necessary in many localities to continue watering seed beds and recently-transplanted crops. Keep the soil loose where practicable; give timely thinnings to those crops that require it, and water afterwards if the soil is dry. The latest crops of *Brussels* should now be planted out if not yet done. Another sowing of *Cabbage* may be made about the end of the week to stand in the seed-bed through the winter. A late sowing sometimes comes in very useful; also make a sowing of Red Dutch for summer use. Make a sowing of *Campanulas* in the end of the week for plants to stand the winter. The *A. italic* is a large and excellent sort for this purpose. Previous to earthing-up *Cherry* for the first time, give the trenches a thorough watering, as the plants will not receive much benefit by the application afterwards. The earthing-up should be carefully done, the whole of the leaves being kept close together at the time. The lights may be drawn off these *Cucumbers* that are in frames during gentle showers of rain, but not when it is sufficiently heavy to injure the leaves. Gather *Gherkins* for pickling. Keep the crop of *Downy Kidney Beans* closely gathered, for if allowed to remain

until they are too old for use they do not bear as they otherwise would. Sow largely of *Lettuce* for standing through the winter. The Brown Cos, Black-seeded Bath Cos, Green Cos, and Hardy Hammersmith or Brown Cos are the best sorts for sowing at this season. Plant-out from the late sowings for autumn use. Pull-up the *Onions*, and those that have done growing. If the main crops have long necks the tops may be broken down; if not, there is no advantage in doing so. Make another sowing of Black and White Spanish *Radishes*, and also of the Turnip-rooted sorts. Let the forwardest of the *Tomatoes* be fully exposed to the sun, remove some of the leaves which shade the fruit. Keep all the shoots stopped as soon as there is sufficient young fruit on the plants.

FRUIT GARDEN.

Vines will now require much attention where there is a prospect of ripening the fruit. The bunches should receive the final thinning, and unless in the case of small sorts, no more than one bunch should be left on a shoot. Remove all superfluous wood in order to throw as much strength as possible into the fruit. If the spur-system of pruning is adopted leave as many shoots besides those in fruit as will be wanted next season; shorten bearing shoots one joint beyond the bunch, or to the joint of the fruit provided the leader is preserved and one joint of the lateral allowed to remain. Pick-out a few of the buds at the axils of the leaves towards the points of these shoots, that the buds at their base may be rendered more plump for next season. If the long or succession-rod system is followed, no short shoots should be left that do not carry fruit, and these must be kept well shortened, so that by removing all useless growth and plucking-out the young buds in the axils of the leaves of such shoots, more strength and free exposure may be given to the long shoots you intend for bearing next year. Leaving a lateral with a leaf or two attached has a tendency to strengthen the bud at the base, and prevents the bud bursting if the shoot should be rather prematurely shortened; but some successful gardeners object altogether to the leaving of such laterals, considering that they render the buds three-cornered instead of plump and round. Grafts should now have their bandages loosened and their shoots properly secured from wind. See that mildew does not make its appearance on your wall trees. As a temporary remedy nothing is preferable to flowers of sulphur; if merely the points of the shoots become affected cut them off at once. Some trees from their tender nature are very liable to its attacks, but in their case its ravages may be much modified if not altogether removed by paying attention to keeping the roots and top of the tree in an equal state as respects temperature and moisture.

FLOWER GARDEN.

In addition to the proper preparation of the soil of flower-beds it will also in another season be advisable to place more reliance upon annuals for an early spring display, and, consequently, a proper preparation must be made by sowing a general collection of the best kinds towards the middle of September. In the spring the planting of the beds is recommended to be thicker than usual, and accordingly, instead of allowing one plant to every square foot, as was the rule in former years, two are planted. Flower gardens will now be in their greatest beauty, and every means must be taken to keep turf, gravel, and edgings of all kinds in the neatest possible order, that no drawbacks to the complete keeping of the whole may occur. Dead flowers should be picked off daily, and stray growths reduced within proper limits. Trailing and climbing plants should be frequently gone over to keep them neatly trained and secure from rough winds. For the same purpose examine *Hollyhocks*, *Dahlia*s, and other tall-growing plants. Remove dead flowers from *Roses*, and encourage the production of autumn blooms in the *Perpetuals* by watering with liquid manure; and mulching the surface of the ground where practicable. Commence the propagation of plants for next season, in which dispatch with the more delicate *Pelargoniums* should be urged to get them established before winter. Fork ground among *Dahlia*s slightly, and mulch the surface with very rotten manure; water plentifully every evening. When the weather is dry take care that the laterals are well staked out, and use every means to entrap earwigs and other vermin which injure the flowers. Look over faded blooms of *Pinks*, extracting the petals from the pods. Should wet set in the decayed petals will act prejudicially by retaining moisture round the lower part, which will cause rotteness, and consequent destruction. Rooted cuttings of *Pansies* for making up autumnal beds should now be ready, or nearly so. It will, therefore, be necessary to make beds for their reception. In doing so it is absolutely necessary that wireworms should be caught, therefore the compost should have repeated turnings, for those pests are as destructive to young *Pansies* as they are to *Carnation* layers. Throw out the soil from the *Tulip* bed on to the paths, so that it may sweeten previously to being returned. Some florists adopt with considerable success the plan of sowing on it *Mustard* seed, which after having vegetated is mixed with the soil; this is believed to be the means of banishing wireworms from the bed.

GREENHOUSE AND CONSERVATORY.

In order to maintain a certain amount of gaiety in the conservatory a stock of succession plants must necessarily be kept up; any plants, therefore, in pots which it is desirable should be grown quickly may now have a shift. It will not, however, be advisable to give them a large shift at this season, as what ever wood the plant makes up to the present shift must be ripened, with perhaps the exception of such free-flowering plants as bloom on the growing wood. As this shift will have to carry the plant through the winter months the drainage of the pots should be ample: when established, a free open situation should be selected for the newly-potted plants, in order that any fresh growth made may be ripened. Where valuable tender plants are out of doors care must be taken to keep heavy rains off them, and if the weather should become dull and wet no time should be lost in removing them under cover of glass.

PITS AND FRAMES.

Proceed with the propagation of all bedding-out plants as expeditiously as possible, making choice of the more difficult ones first, such as Nierembergias, Lotuses, and the like. Leschenaultias for turning out next season should now be strong plants; give them another shift if they require it. Propagate scarlet, variegated, and common Pelargoniums as fast as you can get cuttings.—W. KEANE.

DOINGS OF THE LAST WEEK.

We have been favoured with a good shower of rain, which will greatly assist our drooping flowers. It was entirely local in its extent, as our next neighbour had scarcely a drop, and kept his men at work watering all day, and yet when our rainfall was gauged there was 0.68 inch. The rain was from passing thunder showers, and these are generally local.

FRUIT AND KITCHEN GARDEN.

We took advantage of the rainfall to get out all green crops. We have tried in all manner of ways, and in different parts of the garden to grow Broccoli, and have now given it up. We planted out Sprouting Broccoli after the Early Potatoes; our ground is generally in good condition, and we do not care to dig it in any way for this crop. We filled up any odd corners with Coleworts, which come in very useful during the autumn months.

We have a plentiful supply of Peas, Dwarf Kidney Beans, and Scarlet Runners. In passing we would again invite attention to the new Peas which have been recently introduced to the public. That standard variety Veitch's Perfection is fully equalled, if not surpassed, by Carter's G. F. Wilson. It is earlier than Perfection, the pods are, perhaps, larger, it bears abundantly, and the flavour is all that can be desired in a Marrow Pea. Laxton's Omega is truly named; it is the latest Pea, and very distinct in character. It is also a Marrow Pea of about the same height as G. F. Wilson, 2½ feet, and an abundant bearer; the pods and peas are of the deepest green. Our latest crop is looking remarkably well, and has been much benefited by the rains. We recommend the ground intended for the latest crop of Peas not to be cropped previously, and the best preparation is to hoe the ground over just before drawing the drills; the seed should also be trodden in quite finely.

Celery has not succeeded well with us this year; much of the earliest bolted, and the later sowing, although carefully attended to, does not seem to grow freely.

We have planted out nearly all our *Strawberry plants*. If a full crop is desired next year no time should be lost in getting the plants out, and if the ground is not ready for them, as is the case with some of our own, the plants should be shifted into 5-inch pots in some rich compost, where they will grow immensely in three or four weeks. Should any trace of red spider be found on the leaves, do not fail to dip the plants as recommended last week.

Early Apples and Pears.—The best are now abundant, and make a useful auxiliary for the dessert. Doyenné d'Été Pear is over, but Jargonelle is now in, and Devonshire Quarrenden Apple has a fine appearance on the table when dished up neatly.

We have no ground in the kitchen garden long unoccupied at this time; all spare ground is either hoed over and planted with green crops, or manured and dug to be planted. Even if the ground is not required, it should be dug over, or at least cleared of weeds, and left in a tidy condition.

FRUIT AND FORCING HOUSES.

Pine Apples.—This is just the weather for maturing the Pine plants required for fruiting in the spring. The pots are now well filled with roots, and the plants have made sturdy growth. The house is aired freely in the day and a little air is left on all night; while the weather continues so warm no artificial heat is applied. We are also careful in regard to watering. The Pine Apple does not require much water, and when we used to fruit the plants in 13 and 15-inch pots, once a week was sufficient, but since we have learned to fruit the Queens in 9 and 10 inch pots, and such strong-growing sorts as Charlotte Rothschild in 12-inch, as a matter of course they require more water.

We keep the succession houses shut-up closely at night, nor do we give air so freely in the daytime, and water is kept continually in the evaporating-troughs.

Vineries.—In the early houses, especially the Early Muscat house, the leaves have suffered much from the recent hot sunshine—it seemed quite to crumple them up. We like to see the foliage remain on the Vines later than this, but the wood is well ripened, and the buds are very prominent. The borders have had a good soaking of water, which will keep the roots in a healthy state. In the late houses all the varieties are approaching to ripeness, and promise to colour better than usual. We cannot say why, but in the earliest houses our Grapes are seldom surpassed for flavour and colour, and in the late houses the flavour is as good, but the Grapes seldom colour well. We looked over the houses, pinched-back the few lateral shoots that were growing, and secured all heavy bunches to the wires with a strong strand of bast. Through want of attention to properly securing the shoots to the wires, we have seen bunches break the fastening which attached the branch to the wire, and its falling weight snapped the branch quite off. We do not keep a too dry atmosphere in the vineries when the Grapes are ripening. Many, even professional gardeners, will not allow a drop of water to be sprinkled on borders or paths, and watering a few plants in the house is even considered objectionable. Bear in mind that a moderately moist atmosphere even when the Grapes are coloring is beneficial to the Vines, and it also improves the quality of the Grapes. Another matter worth noticing is this: Many persons have a notion that it is necessary to expose the bunches to the sun in order to finish them off well. In the case of white Grapes, when they are nearly ripe, exposing the bunches to the sun causes them to finish-off a golden colour, especially Muscat of Alexandria and allied varieties; Black Hamburgh, on the other hand, does best if the bunches are shaded by the leaves. Only this morning we looked into a smallinery belonging to an amateur; the house is planted with Black Hamburgh; and what was our surprise to see that a number of leaves had been broken off and were lying on the ground. On inquiring the reason we were told it was to allow the sun to get at the bunches. Now, we can freely say our friend has very much injured his Vines, as they are carrying a very heavy crop, and every leaf was necessary to the health of the Vines, besides which, exposing the bunches to the sun at the time when the berries had just finished stoning, was a very rash proceeding, to say the least of it.

ORCHARD HOUSE.

The fruit is now ripening, and we shall have a continuous supply of fruit until the end of October from the Peach and Nectarine trees; these are making a very vigorous growth. We have just looked over the trees for the last time, and have pinched all gross shoots well back; but in doing this care was observed to cut back to a leaf that had two small leaves at its base. If the weak wood is stopped back in August, probably all the buds will be flower buds, and there will be no leader, so that the shoot will die back during the ensuing summer. On many of the trees the wood was so much crowded that it was necessary to thin-out much of it in order to expose what remained to the air and light. We finished picking the Early York Peach on Saturday. The same day Lord Napier Nectarine came in; this is one of the seedlings raised by Mr. T. Rivers, and will doubtless be an acquisition; it ripened this year with Hunt's Tawny, and is far superior to that variety in flavour, and is not so much subject to mildew. The true variety of Early Grosse Mignonne is a noble fruit, and nearly as early as Early York. Some of the Plums are also giving good fruit. Angelina Burdett is ripe, and is a well-flavoured purple Plum. A variety of Green Gage, which we call Early Gage, has also supplied us with very fine fruit.—J. DOUGLAS.

TRADE CATALOGUES RECEIVED.

Louis Van Houtte, Royal Nurseries, Ghent.—*Catalogue of Bulbs and other Flowers, Roots, &c.*
Joseph Vervaene & Co., Boulevard Lonsbergs, 42, Ghent.—*Prix Courant pour 1873-74.*

TO CORRESPONDENTS.

* * We request that no one will write privately to any of the correspondents of the "Journal of Horticulture, Cottage Gardener, and Contry Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed *solely* to *The Editors of the Journal of Horticulture, &c., 171, Fleet Street, London, E.C.*

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

BOOKS (*J. S. T.*).—"British Ferns" by G. W. Johnson, which may be had for 3s. 6d., or post free from our office for 3s. 9d.

PEARS DISEASED (*L. J. K.*).—The state in which your Pears are caused by the rot-pruning of last year. The roots have not yet got into sufficient soil to nourish the tree, and this, coupled with the recent dry weather, has produced the result. We cannot make out the insect.

ADDRESS (*Billinghugh*).—"English Mechanic," Tavistock Street, Covent Garden, London, W.C.

PANSIES (*Millyan & Kerr*).—Unfortunately they were too withered to pass an opinion upon them.

LIQUID TO DESTROY WEEDS (*J. Lock*).—It was boiling brine.

APRICOT TREES SHEDDING THEIR LEAVES (*C. B. Livingston*).—We cannot account for this in any way, except that the trees are suffering from want of water at the roots. Will you ascertain it is the cause, and let us know?

AGRICULTURE OF KENT.—We have received a letter from Mr. Witherspoon in defence of his own remarks on this subject, the justice of which has since been contested by "D. Deal." Without ranking ourselves as supporters of the opinions of the one or the other, we have suddenly been involved in a war of north and south; and as peacemakers are ever blessed, we hope here to put an end to the distant sounds of war. Mr. Witherspoon criticised rather sharply, but honestly, the agriculture of that portion of the county through which he passed on his *Glabolus* hunt; and "D. Deal," as a "man of Kent," stood forth boldly and on the moment, as the men of his county are wont to do, in defence. We shall merely insert the concluding words of Mr. Witherspoon's letter, for their spirit is so good—"I am glad my impressions of Kent were formed from its poorer districts; and after all, your readers may possibly credit me with doing justice as far as possible from observation. On the whole I read with interest 'D. Deal's' contributions; and let me assure him my strictures were written with an eye to good, and not to unnecessarily do injustice to the county of Kent, which I still think—as seen—as regards success is foolishly attempting the impossible, by competing with inferior against immeasurably superior machinery.—JOSEPH WITHERSPOON."

TWIN CUCUMBERS (*B. Williams*).—Such eccentricities are not uncommon.

BRANCHES OF PLUM DYING (*W. G. D.*).—The cause of the branches of your Plum dying off is from some injury they have received, and this most probably is due to frost. This injury may have happened long ago, and perhaps in some previous autumn when the tree was full of sap, and a sudden and severe frost has come and lacerated the sap vessels. It is long sometimes before the injury is apparent, as in your case, and at others it is immediate. There is no remedy.

PEACH TREE PRESERVING (*A Subscriber*).—The best way is to advertise his cure, and as he agrees not to be paid unless a cure is effected there will be no reason to complain. If it is successful, that result will be his best recommendation.

HOLLIES (*Aberdonensis*).—We cannot imagine what is the matter with your green Hollies, seeing that all the others in the same soil are doing well. The cause of the Apple trees which bloom so well producing no fruit, must be attributable to spring frosts destroying the bloom. If you protect them at that season, no doubt you will have fruit.

MANETTI STOCK FOR ROSES (*J. E. Boyd*).—No doubt other stocks may prove as good as the Manetti, but it has proved so free-rooting, hardy, and so easily managed that we do not think it will be easily surpassed. The sorts you mention—*Gloire de Dijon* and *Souvenir de Malmaison*—would neither of them succeed so well, especially the latter, which in the north of England is easily injured by frost; and neither of them would strike in nursery rows in the open ground as the Manetti does. The Rose you sent was most probably *General Jacqueminot*; but it is almost impossible to tell a Rose when sent by letter without water. The colour fades, and the petals fall from the Rose and lose their character.

QUOTATION (*A Subscriber of Some Years*).—The couplet you mention was certainly misquoted, and your own version is also incorrect. In "Hudibras," where it occurs, it reads thus—

"He that complies against his will
Is of his own opinion still."

WEIGHT OF GRAVES, &c. (*J. Lewis*).—The heaviest bunch of Grapes on record is that of the Syrian grown by Speechly at Welbeck, which weighed 20 lbs. We have seen Cucumbers 34 inches long.

NAMES OF FRUITS (*W. G.*).—No. 1 is not Red Astrachan, probably it is Red Wine; 2 is Hawthornden.

NAMES OF PLANTS (*G. W. J.*).—1, *Galium cruciatum*; 2, *Stachys sylvatica*; 3, *Sium officinale*; 4, *Lycopus arvensis*. (*G. M. B.*).—Probably *Malope trifida*, but specimen very imperfect. "The Acaia that the order of Freemasons prize so much," is quite unknown to us. Can any reader supply its name? (*H.*).—*Galaga orientalis*. (*T. L.*).—*Ibus Cotinus*. You can have the "Cottage Gardeners' Dictionary" and Supplement free by post for 7s. 2d. (*Sylpaw*).—*Ibus Cotinus*. The flowers are purple, but these downy threads are the stalks of abortive flowers elongated. (*Birkley*).—An *Asclepiad* with pendulous pedicels, but we cannot say what from the specimen sent. (*T. Pearson*).—1, *Selaginella apus*; 2, *S. Kraussiana*.

advisable in many cases, the argument in other cases does not seem to me so clear.

It is assumed that it is far more easy to breed one first-class pullet or hen than two, and this is true, but not to such a great extent as is assumed. If people will learn to breed, they will have little difficulty in breeding fair matches; and it is quite a mistake to suppose, as I saw stated the other day, that the most successful exhibitors are those who rear their hundreds of chickens. Generally speaking, a man who can breed one really first-class pullet can breed two, and does; still, two birds may undoubtedly be good, and yet not a good match, though here, also, I must remark that our best judges have of late shown a wise discretion in not laying so much stress on mere matching as they used to do, but have given prizes to good birds not an exact match, rather than to birds each of which separately was far worse, but did match. I would only wish to point out that if, by this or any other expedient, winning were ever made really easy, no one would care about winning any longer. All the talk about putting people who do not know how to breed on a practical "equality" with those who do comes to that. It cannot be done, and if it could, the "fancy" and all its charms would be gone.

Still, there are advantages in holding out encouragement to beginners, and even a "Showing-Made-Easy" has its uses like other "Made-Easies." Then, again, early in the year, even a good breeder likes to keep all his hens at home, and is thankful for any rule which only demands one bird away from his yard instead of two. This last is to my mind the strong point of the single-hen system, for the advantage just spoken of will to a great extent disappear as the plan becomes general. As it is, the breeder who has a good pair generally shows at places where pairs are provided, and leaves the single hen for others. But if single hens become general he will be able to make his first-class birds go just twice as far in showing, and will compete at many shows where he now does not. This is a consideration which appears to have been overlooked; but if it be remembered, it will be seen that the very advantages claimed for the single-hen system depend on that system being only partial, not general.

As to show proceeds, my impression is that advantages are pretty equally balanced. Probably entries of single hens are somewhat increased, but I believe, though my belief is contrary to what I have seen advanced, that sales are diminished. I have noticed that the prices of single birds are rarely so low as half that of pairs, and few people care to buy a single hen or pullet. As a matter of fact, I think it will be found that commission on amount of sales on the single-hen plan has nearly always fallen off. On the whole, therefore, I believe that as to show receipts there is little choice either way.

On the other hand, with regard to the effect, as a "show," there can be no doubt that one bird by herself is infinitely inferior. Everyone nearly remarked this at the Crystal Palace—the birds looked dull, tame, and spiritless. As a spectacle merely the plan was an emphatic failure; and I can speak from very careful and special note that four-fifths of the birds could have been matched in pairs of quite satisfactory quality, while the very best ones almost without exception had mates.

My own opinion as to the whole matter will therefore be readily guessed. I think that at shows where the competition is likely to be chiefly local, the single-bird plan is decidedly the best. Especially is this the case during early and spring months when birds are needed for their eggs; and at such seasons even shows of standing might adopt the plan with benefit to the amateur and to their own entries. But at the great shows of the year, when we all want to see the best that can be done, and to compare notes, and to strive in earnest but friendly rivalry, I should much regret to see the system adopted; and I question if it will be, unless it be at shows where mere number of entries is considered as the one great object of contrivance. If it be at these, I feel quite convinced that Birmingham will long be able to laugh at all competitors, for mere number of entries does not necessarily make the best show.—L. WRIGHT.

POULTRY, BEE, AND PIGEON CHRONICLE.

SINGLE BIRDS AT SHOWS.

This subject seems to have "exercised" many good people of late, and it seems to have been assumed that all the arguments have been on the side of showing single hens. I say single hens or pullets, because this is what the question really means; for we are all agreed that as a rule it is best to have the sexes separately. Birmingham—old Birmingham—may her shadow never grow less—taught us this, with many other good things; and her example has been so generally followed, in this one particular at least, that we may almost take separate sexes as admittedly the best arrangement for most shows, at all events of much standing, which can be devised; but, with regard to showing one hen or pullet by herself in a pen, while there is such to be said for it, and I think it may be taken to be really

PUBLISHING THE NAMES OF JUDGES.

We frequently see the names of the committee, treasurer, and secretary of poultry societies attached to the schedule of prizes, but seldom the name of the judge; and if an exhibitor writes to the secretary asking the name of the gentleman selected for that important office, he will mostly receive a very polite reply as follows:—"A gentleman of experience is engaged, but I am not at liberty to give you his name." Now, it is quite possible for him to be a "gentleman of experience" in some matters, yet his knowledge of poultry may be very limited. Some will say if exhibitors know who is to be the judge they may tempt him with a bribe; but I feel convinced the majority of our judges and exhibitors are men of honour, and will not stoop so low. There are, I admit, a few exhibitors who will do anything to win, but those few will always find out who is to judge, whether the name be published or not; therefore, to do

justice to the honest exhibitor, the names of the judges should always be made known, and I am satisfied committees will find it to their interest to give publicity to the matter in the future.

Two of the best breeders and exhibitors in the kingdom informed me recently that they would not send their birds unless they knew who was to be judge, for they had frequently been thrown out, even when showing Birmingham cup-winners, by some of the most miserable specimens. I gave one case in point. At a show not two hundred miles from London one of the gentlemen referred to sent two of his best pens, both of their cup-winners at several of the leading shows. They were placed first and third, and a pair only fit for the spit was second. He asked the judge why the birds were thus placed, pointing out the glaring defects of the second-prize pen. The judge acknowledged he was wrong, but he did not see it thus when he awarded the prize, at the same time saying, "You ought to be a better judge of that variety than myself." A few minutes afterwards the owner of the second-prize pen made his appearance, and, not knowing the owner of the first and third-prize birds, acknowledged to a friend that he was surprised and highly delighted at winning a 30s. prize with his pair of birds, as he only gave 7s. 6d. for them in Leadenhall Market. This is a specimen of the uncertainty of the awards made by one of our present poultry judges. Referring to the same judge, a Hampshire-breeder said, "I know what pleases his fancy; he never gives the prize to the best birds, but if I know any of the north-country judges are to award the prizes I always send my best stuff, or else I stand no chance. Last season I visited a show in the eastern counties, where a Spangled hen, worth about 5s., won the cup, and the best hen in the class, shown by Mr. Deldon, was left out in the cold." In the face of the above facts is it any wonder that many exhibitors owning good birds are determined to keep them at home, unless they know who is to officiate as judge? I hope other exhibitors and secretaries will give their opinion upon the matter. As Secretary of the Lowestoft Poultry Society I may say we always have published, and intend to continue publishing, the names of the judges.—L. WREN.

A DISTINCTIVE FEATURE BETWEEN BRAHMAS AND OTHER FOWLS.

THERE is a feature in the Brahma Pootra fowl which appears to me to distinguish it from all other kinds that I have noticed—viz., that the comb is placed entirely in advance of the eye. A perpendicular drawn through the inner corner of the eye will define the posterior extremity of the comb of the Brahma, whereas a perpendicular between the centre and the posterior corner would define that of the Cochins, Dorking, Game, &c., they having the comb running over the eye. The French breeds of fowl I do not include, as their combs are of quite another distinctive character.

The position of the Brahma's comb to my mind militates strongly against the idea of the Brahma fowl being a cross between any of these breeds, and I am in the habit of judging the degree of purity of a strain of Brahmas in a great measure by this character, other things as per established standard being normal. Further, I believe I may say we do not find this anterior position in any degree in any cross-breeds without there having been an infusion of Brahma blood-royal at some time.

Not having seen this character noticed in print, and it being an observation solely of my own, perhaps you will oblige by publishing it, that I may see what can be said for or against it.—J. R. CROKER, *Mulvern Link*.

[We thank you much for your interesting query. It had never struck us before; but on reading the above, we immediately caught up two good specimens, one Brahma, one Cochins, and submitted them to a close examination. We found, as you observe, a line drawn touching the inner corner of the eye all but cleared the comb and touched only the bare extremity of the point. We may mention the bird was a large and good specimen, with a fully developed comb. On submitting the Cochins-China to the same test, we found a straight line similarly drawn divided the comb as nearly as possible in the centre. We had no others at hand, but we will take an opportunity of trying many other breeds. Being firm believers in the purity of Brahmas, we hail your discovery, not because it makes our opinion stronger—we did not need that, but because such a fact tends to the conversion of those who will not believe because they never have believed. We have had them from the beginning in large numbers. They come always pure, and always true—no sports, no throwing back, no varieties of comb, no uncertainty as to the number of toes, no clean legs. From small beginnings they now form some of the most numerous classes at all shows. Inferior to the Dorking as a table fowl, they are equal to almost any, and they have a great virtue, that they are as hardy as a fowl can well be. They are content in confinement, and we have hatched and reared them in snow.

Cross bred birds are often described as pure ones, and their breeders or owners try to sell them as such. The unfortunate purchasers, breeding all sorts of oddities, condemn the breed as "composite." It is for this reason that discoveries like the above are really valuable.—Eps.]

SEDGEFIELD POULTRY SHOW.

The poultry prizes were not such as to induce any great number of entries, the amounts given being only 10s. and 5s. in each class, with a cup for the best pen in the Show; nevertheless some capital birds were shown. The cup was won by Mr. G. Procter with a grand pen of White Cochins, which were in condition in which Whites are seldom seen at this time of the year. The first-prize *Spanish* were fair in quality, but the rest bad, and in *Brahmas* only the winners were of value. In *Game* the first were Brown Reds in very good feather and good in handling and style; the second, Piles, a little too heavy in feather, but otherwise correct. *Hamburghs* were mixed classes and the entries poor in consequence; the winners were tolerably fair specimens. The only other birds at all noteworthy were the first-prize *Crève-Cœurs* in the Variety class, and the winning *Game Bantams* which were Black Reds; the first-prize chickens, the second-prize adult birds.

The entries of *Pigeons* were numerous, there being three prizes in each class, with four silver cups for the four sections, and the birds were shown singly. The Carrier cocks were a large and good class, but, on the contrary, the hens and both classes of Pouters were only poor; the cup for the section was awarded to a Carrier cock. Almonds were a nice class, the head, beak, and eye properties being striking. The first prize went to a hen, and the second to a cock. Barbs were tolerably good, but some of the best were rather out of bloom. Of Foreign Owls there were but five entries; the first prize went to a good Blue, and the second to a good White. Trumpeters were poor, but the Fantails—an extraordinary class, carried off the cup. Jacobins were good and numerous, and Turbits also a strong class, in which were many capital birds. English Owls were fair in quality, as also were some of the Dragons, while others were inferior. Magpies were exceedingly neat and small. The class for Ice produced some good birds, and the winners were of the Spangled variety. The Variety class contained some good Pigeons, and the cup was carried off by a new variety termed the Whiskered Owl—a rather plain-faced bird, with a half-frill starting from the shoulder points, and turning inwards towards the furl or ruffle.

The *Rabbit* classes were well supported, and more particularly in the Lops, in which class there were twenty-four entries, with not one really bad Rabbit among the lot, and six prizes were allowed to be awarded; the first prize going to a fine Black-and-white doe, extra first to a Black buck. The second prize was taken by a Grey-and-white doe, and extra second by a Fawn-and-white doe. The third prizes were awarded—one to a Fawn, and the other to a Blue doe. The Himalayans were very good in marking, and the Silver-Greys in fur; but the Angoras were not in the best order, though there were some good specimens shown.

It would be impossible to picture a more suitable site for a Show of this description than are the grounds adjoining Hardwicke Hall: the heavy timber serving to protect from the rays of the sun, and forming a welcome shade, while the scenery is sufficient to repay the visitor without other attractions. We published the awards last week.

ORMSKIRK AND SOUTHPORT POULTRY SHOW.

This was held on the 6th inst., when the following awards were made:—

DORKINGS.—*Coloured*.—1, J. Stott, Healdy, Rochdale. 2, J. Robinson, *he*, T. Hornsby, *Chickens*.—1 and 2, T. Statter, Manchester. *he*, T. Hornsby, Latham; Wren & Page, Lowestoft; T. Braiter, Earby, Skipton.
Brahmas.—*Blue*.—1 and 2, J. Robinson, *he*, M. Fairhurst, Ormskirk.
Chickens.—1, B. W. James, Wadley, Berridge. 2, J. Robinson.
Cochins-China.—*Buff*.—1, 2, and Cup, W. A. Taylor, Manchester. *he*, T. Stretch, Ormskirk. *Chickens*.—1 and *he*, C. Sidzwick, Rydleston, Keighley. 2, W. A. Taylor.
COCHINS-CHINA.—*Purplish or Ground*.—1, T. Stretch, 2, W. A. Taylor. *he*, T. Stretch; T. Asplen, Church. *Chickens*.—1, W. A. Taylor, 2 and *he*, C. Sidzwick.
Brahma Pootra.—*Dark*.—1 and 2, F. E. Ansdell, St. Helens. *Chickens*.—1, 2, and *he*, J. H. Fickles, Birkdale.
Brahma Pootra.—*Light*.—1, J. Mitchell, Mossley. 2, C. Lepland, Warrington. *Chickens*.—1, T. A. Dean, Marton. 2, J. Watts.
SPANISH.—1, A. Wickson, Earby. 2, J. Powell, Bradford. *he*, H. Bolton, Bingley; Furness & Sudall, Raatentall. *Chickens*.—1, J. Leeming, Broughton. *he*, H. Bolton.
HAMBURGH.—*Gold-spangled*.—1, G. & J. Beckworth, Chur. h. 2, J. Robinson, *he*, H. Bolton. *Silver-spangled*.—1 and 2, J. Robinson, *he*, H. Bolton.
GAME.—1 and Cup, C. W. Brierley, Millerton. 2, T. P. Lyon, Liverpool. *Chickens*.—1 and 2, G. Peet, Ormskirk. *he*, T. P. Lyon, Liverpool.
BANTAMS.—*Game*.—1 and 2, T. Sharpley, Rawtenstall. *he*, G. Maples, Wavertree. *Any other variety*.—1, H. B. Smith, Preston. 2, E. H. Walton, Rawtenstall. *he*, W. A. Taylor.
ANY OTHER VARIETY.—1 and 2, H. Bolton. *he*, W. A. Taylor.
GESE.—1 and 2, J. Walker, Rochdale. *he*, Capt. G. Anyon, Chorley; T. Harrison, S. H. Stott, Preston. *Brahmas*.—1, W. Penny, Preston. 2, J. Harrison, *he*, R. Barr, Ashton. S. H. Stott.
FONKYS.—1, J. Walker, 2, J. Redwood, Wigan.
DUCKS.—*Lylesbury*.—1 and 2, J. Walker, *he*, J. Robinson, Garstang. *Ruen*,

—I. P. Unsworth, Lawton, Newton-de-Willows, 2, T. Wakefield, Jolborne, *hc*, J. Walker, W. Penny, S. H. Stott; R. Gladstone, jun., Courtney.

PIFFONS.

POUTERS.—*Cock*.—1, T. O. Clinning, Birkdale. 2 and 3, W. Ball, Southport. *Hen*.—1, T. O. Clinning.

CARRIERS.—*Cock*.—1 and Cup, J. Stanley, Blackburn. 2, H. Yardley, Birmingham. 3, T. H. Stretch, Ormskirk. 4, J. Stanley, T. H. Stretch. *Hen*.—1, J. B. Buckley, Aughton. 2, E. C. Stretch, Ormskirk. *Young*.—1, A. Billeveid, Northampton. 2, C. Duckworth, Watlington. 3, E. C. Stretch.

JACOBS.—1 and 2, J. Fielding, jun., Renswaley, 3, F. L. Denny, Southport. *Black*.—1 and 2, J. Fielding, jun., Renswaley, 3, F. L. Denny, Southport. *Blue or silver*.—1, 2, and Cup, F. Graham, Birkensheat. 3, J. B. Buckley, *hc*, F. Graham; E. C. Stretch, Ormskirk; W. G. Union, Chester. *Any other colour*.—1, 2, and 3, F. Graham, *hc*, W. J. Mitchell, Birmingham.

TUMBLERS.—*Short-faced*.—1 and 2, E. C. Stretch, jun., 2, C. Duckworth, *hc*, H. Yardley. *Long-faced*.—1, J. Wats, 2, E. C. Stretch, 3, C. E. Duckworth.

OWLS.—*Foreign*.—1, 2, and 3, J. Fielding, jun. *English*.—1 and 3, J. B. Buckley. 2, P. Unsworth, Lawton. *Jacobins*.—1, H. Yardley. 2, J. Stanley. 3, F. L. Denny, Southport.

TURKEYS.—1 and 2, J. Fielding, jun., 3, J. Wats, Birmingham. *FANTAILS*.—1 and 2, J. F. Lovelock, Newark.

ANTWERPS.—*Short faced*.—1 and Cup, M. Hockford, Croston. 2, J. Stanley. 3, A. Justice, *hc*, W. G. Union, Chester. *Long-faced*.—1, A. Justice, 2, H. White, Manchester. 3 and 4, E. Ashton, Ormskirk.

ANY OTHER VARIETY.—1, H. Yardley. 2, Farness & Sadall, Rawtenstall. 3, R. White.

JUDGES.—*Poultry*: Mr. R. Teebay, Fulwood, Preston; Mr. J. Hindson, Liverpool. *Pigeons*: Mr. R. Teebay, and Mr. J. O. Wakeson.

NEATH POULTRY SHOW.

THE meeting of the Neath Association was held on the 7th and 8th inst., in a large suitable field lent by the Corporation. The pens were Billett's, of Southampton, and were well arranged against the fences, and the only point to which we would take exception was that the bottoms were covered with straw, which answers no good purpose.

The *Dorkings* were a good class for the time of year; the prizes went to Dark Greys. Buff *Cochins* were also good, and the cup was awarded to the first-prize winners, a capital pen; the second-prize pen in the same class contained a good hen but a very small cock, though nice in colour. The Partridge and other Coloured *Cochins* were very poor, and although there were some good and large Dark *Brahmas*, yet they were mostly in bad feather, the Light variety showing little improvement in that respect. Only the first-prize *Spanish* were worthy of notice. Of the Golden *Hamburghs*, Gold-spangled were first and cup for the section, and Golden-pencilled second and third. In the Silvers a pair of good Spangled were first, and Pencilled chickens second. Among *Polands* a neat pair of White-crested Blacks stood first, and Silvers second. Of *Game*, only the first-prize pair were good, but these were awarded the section cup, and were Brown-breasted Reds of rare merit. In *Game Bantams* the first and second-prize birds were Black-breasted Reds; the first adult as good as can be wished for, and the second chickens of this year. In the Variety class, *Creve-Coeurs* were first, and La Flèche second.

There were two classes for chickens, the first for *Cochins*, *Dorkings*, and *Spanish*. The first prize, and the cup for the two classes, were carried off by a grand pen of Partridge *Cochins*; the second prize went to excellent Buff *Cochins*, and the third to Black *Spanish*. In the class for Any other variety of chickens were also some very promising pens, particularly the pair of Light *Brahmas* which won the first prize, and the pen of Dark birds of that variety which won the second prize. The third-prize Duckwing *Game* were capital in colour and style, but slightly duck-heeled. An extra third prize was awarded to *Creve-Coeurs*.

Rouen *Ducks* were very good, but the Aylesburys were something wonderful in size, condition, and colour of beak; and the cup for the aquatic birds and Turkeys was awarded in this class. In the Variety class of Ducks was a neat pen of Black East Indian. Only one pen of *Geese* was shown, and these were Toulouse, but there were three pens of *Turkeys* of great size and in good order.

Of *Pigeons* the Carriers were very poor, in fact little more than Dragons, but all the Pouters were mentioned, the first and second prize-winners being White, in grand show, and long in limb and feather. Only one pair of Tumblers was exhibited, and the Jacobins were very poor. The winning Fantails were birds of this year, good in carriage and style of tail, and the cup for the best pen in the Show was awarded to the first-prize pen. Nuns were good; the first prize was taken by nestlings, and the second by old birds. Barbs were of ordinary merit, the first were Yellows and the second Reds, no others being worthy of notice with the exception of the winners of the first prize in the Variety class, which were Silver Runts of great size.

Among the *Carnaries* were some neat birds; the first prize went to a Crested Jonque Norwich, the second to a first-feather Dutch, and the third to a common Yellow. An aviary of wild birds was awarded an extra prize.

DUCKS.—1, E. Tr. Alwood, Tring. 2, W. Boyan, Swansea. 3, H. Tush, Swansea. 4, W. Boyan; C. Harris, Neath; K. Davidson, Bridgeton.

CARRIERS.—1 and Cup, T. A. Dean, Marsden. 2, C. Bloodworth, Beltham (Buff). 3, S. R. Evans, St. Day (Buff). 4, H. Peas, Buff. 5, C. E. Bloodworth, Swansea. *Any other variety*.—1, B. P. Bidder, Warrington. 2, J. H. Wats, *hc*, Renswaley. 3, D. Hart, *hc*, Penryn. 4, J. B. Buckley, *hc*, Aughton.

TUMBLERS.—*Short-faced*.—1, H. B. Morrill, Colmar, Cliffe, Dalton. 2, P. B.

Williams, Brecon. 3, E. P. Bidder. *hc*, W. Boyan. *Light*.—1, T. A. Dean. 2, Rev. N. J. Ridley, Newbury. 3, H. Feast. *c*, H. Studdy, Ashdale.

SPANISH.—1, H. Feast. 2, T. Ace, Ystalyfera.

HAMBURGHS.—*Golden pencilled and Spangled*.—1, Cup, and 3, Mrs. Rolfs, Monmouth. 3, C. Bloodworth, *hc*, H. Moore, Weston-upon-Mare; Mrs. H. Feast; Mrs. E. Feast; J. F. Davies, Neath. *c*, C. Buckland, Swansea. *Silver-pencilled and spangled*.—1, Mrs. Rolfs. 2, J. McCannell, Hereford. 3, Mrs. E. Feast. *hc*, Mrs. H. Feast. *c*.—Farrah, Neath.

POLANDS.—1, S. Jones, Neath. 2, C. Bloodworth. 3, Mrs. H. Feast. *GAME*.—1 and Cup, H. E. Martin, Fakenham. 3, A. Feast. *c*, T. Reece, Llandoff; J. Lewis, Neath.

ANY OTHER VARIETY.—1 and 3, A. Ashley, Worcester. 2, R. Wingfield, Worcester. *hc*, H. B. Pease, Brecon.

BANTAMS.—*Any other variety*.—1, A. Feast. *ANY OTHER DISTINCT VARIETY*.—1, J. Robinson, Garstang (Creve-Coeur). 2, Rev. N. J. Ridley, Newbury. 3, A. Feast. *hc*, Mrs. E. Feast. *c*, F. J. Gibbins, Neath (Chinese).

COCHINS, DORKINGS, AND SPANISH.—*Chickens*.—1, Cup, and *c*, P. Charles, Neath (Partridge Cochins). 2, C. Bloodworth (Buff). 3, A. T. Walters, Kidwells (Buff Spanish). *hc*, W. Boyan (Dorkings); D. Laine, Hardwick (Buff Cochins); D. F. Crosswell, Bagshot (Silver-Grey Dorkings).

ANY OTHER VARIETY.—*Chickens*.—1, T. A. Dean. 2, O. E. Crosswell, Early Wood, Bagshot. Extra 2, J. Cker, Hafod, Swansea. 3, D. W. J. Thomas, Brecon. Extra 3, A. Feast, Swansea. *hc*, Mrs. H. Studdy, Ashdale, Haverfordwest; W. Morris, Hereford; J. F. Davies, Neath. *hc*, Mrs. H. Studdy; W. Harris (2); J. Carr. *c*, J. F. Davies.

DORKS.—*Long*.—1, J. A. Lewis, Brecon. 2, S. H. Stott, Preston. 3, J. R. Paramore, Neath. *hc*, Mrs. Richard, Brecon; W. W. Cunnick, Brecon. *Any other variety*.—1 and Cup, T. Tomlinson, Lancashire. 2, S. R. Evans, St. Day. Cornwall. 3, Mrs. E. Feast, Swansea. *hc*, Mrs. H. Studdy; Mrs. H. Feast. *Any other variety*.—1, Mrs. Lewis, Neath. 2, Mrs. E. Feast. 3, H. Cuthbertson, Porthewlyn.

GESE.—1, Mrs. H. Studdy. 2, Rev. N. J. Ridley. 3, Mrs. Lewis. *TURKEYS*.—1, Mrs. H. Studdy. 2, Rev. N. J. Ridley. 3, Mrs. Lewis. *SELLING CLASS*.—1, D. J. Rhys, Neath. 2, W. Harris. 3, Mrs. R. Morgan. *hc*, A. E. Thomas.

DUCKS.—1, J. R. Paramore. 2, W. W. Cunnick (Rouen). 3, J. F. Davies (Aylesbury).

PIGEONS.

CARRIERS.—1, P. R. Spencer, Hereford. 2, W. Merriman, Swansea. *POUTERS*.—1, W. H. Tomlinson, Newark-on-Trent. 2, H. Yardley, Birmingham. *hc*, P. R. Spencer; T. A. Dean, Marsden. *c*, P. R. Spencer.

TUMBLERS (Short-faced).—1, H. Yardley. *JACOBS*.—1, H. B. Price, Brecon. 2, W. G. Davies, Swansea. *FANTAILS*.—1, Cup, and 2, W. H. Tomlinson. *hc*, W. Merriman.

NUNS.—1 and 2, T. A. Dean, Hereford. *BIRDS*.—1, H. Yardley. 2, W. H. Tomlinson. *ANTWERPS*.—1, H. Yardley. *TERMS ON OWLS*.—1, H. Yardley (Owls). 2, J. Croote, Heavitree, Exeter (Turbit).

EXHIBITING TUMBLERS (pen of not less than six).—1, P. Charles, Neath. 2, J. Weston, Neath. *c*, W. M. Davies, Neath.

ANY OTHER VARIETY.—1, Mrs. H. Studdy, Ashdale, Haverfordwest (Runts). 2, P. R. Spencer (Trumpeters). *hc*, W. G. Davies.

CANARY.—1, B. P. Bidder, Wannechurch. 2, E. Spooner, Baglan Hall. 3, J. Baylis, Neath. *hc*, A. Shepherston, Neath; R. Roe, Swansea; S. Daniel, Neath (4); B. P. Bidder. *c*, S. Daniel.

HORNINGLOW POULTRY SHOW.

THIS Show was held on the 8th and 9th inst., at Burton-on-Trent, and proved unexceptionally good. The arrangements were of a very superior character, the method adopted for the staging of the poultry being alike unique and satisfactory. As rapidly as possible the staging was completed by the simple plan of turning on end a number of empty ale casks, and then placing planking on them to receive the pens, supplied by Turner, of Sheffield. The casks proved to be a foundation incomparably secure, and the erection was completed with almost inconceivable rapidity. Such a hint to committees, if pressed for time, may be useful. Another point in the management is quite worthy of note—viz., that in every instance in which there appeared to be the slightest question as to the birds reaching their owners on the Saturday evening, they were carefully retained and attended to during the Sunday, and sent away by the earliest trains on the Monday morning. Excursion trains from distant localities brought together an immense number of visitors, and this, with the fact that a popular candidate for the district was simultaneously returned to Parliament, lent much excitement to the doings of the day, and made the Show an extraordinarily paying one. It would be well, perhaps, to revise the prize schedule for future shows, as neither Ducks, Geese, nor Turkeys had any place on the prize list, proving the only drawback to an otherwise excellent Exhibition.

The greatest feature of the Show was the *Hamburgh* classes, the Duke of Sutherland, Mr. John Rollinson, Mr. Henry Beldon, and a few others of high repute for these breeds, making prize-winning "a far harder job than anticipated." Such a collection of the grandest pens in the kingdom formed a *Hamburgh* show that once seen could never be forgotten. Among other objects of especial interest were the well-grown chickens of most of the larger breeds of poultry, that were brought to the show-pen in most creditable condition. *Cochins* and *Dorkings* were very fine, though, as most persons would anticipate, many of the adults were much out of plumage. The Golden and Silver-spangled *Polands* proved irresistibly attractive to the visitors, being represented by some of Mr. Beldon's best specimens; there were also some very fine *Mallards*, *Silky fowls*, and *Lep-lorns*. Some very good *Game Bantam* chickens were shown, but as yet too young for exhibition.

The most perfect order and good humour prevailed among the crowds of visitors who attended, and the weather was as

propitious as even the most anxious committeeman could have desired.

DORKINGS.—I, J. White, Warley, Northallerton. 2, Rev. E. Bartrum, Berk hamstead. 3, H. Yardley, Birmingham. *hc*, J. Watts, Birmingham. *c*, E. J. Draper, Burton-on-Trent; J. Tyler, Loughborough.

COCHIN-CHINA.—Buff—1 and *hc*, Mrs. Allison, Worcester. 2, H. Yardley. 3, H. Tomlinson, Birmingham. *c*, J. Ward, Ashby-de-la-Zouch. *Any other variety*.—1, H. Beldon, Gortstock. 2, S. H. Turner, St. field. 3, R. S. S. Woodgate, Fernbury. *hc*, M. M. Cashmore, Sheepshed.

BRAHMS.—Dark.—1, J. F. Smith, Sheffield. 2, E. Kendrick, jun., Lichfield. 3, H. Beldon. *hc*, J. Watts; Dr. Holmes, Chesterfield. Light.—1, H. Beldon. 2, J. Mitchell, Moseley, Birmingham. 3, A. O. Worthington, Burton-on-Trent. *hc*, E. Kendrick, jun.

SPANISH.—Black.—1, H. Beldon. 2, Pickering & Duggleby, Driffield. 3, Mrs. Allison. *hc*, H. F. Cropper, Walsall.

GAME.—Black Red.—1, R. Ashby, Nantwich. 2, Duke of Sutherland, Trentham Hall. 3, E. Wright, Horninglow. *hc*, J. Mason, Worcester; E. Wright, Brown Red.—1, J. Glassbrook, Burton-on-Trent. 2 and 3, E. Bell, Burton-on-Trent. *hc*, R. Ashley. *Any other variety*.—1, E. Bell. 2, R. Ashley. 3, E. Windwood, Worcester.

HAMBURGS.—Golden-spangled.—1, J. Rollinson, Lindley, Otley. 2, H. Beldon. 3, C. Dawes, Burton-on-Trent. *hc*, J. Rollinson (2); Duke of Sutherland; H. Feast, Swansea; T. Walker, Donon. *c*, J. Ward; S. W. Halkam, Whitwick. Leicester. *silver-spangled*.—1 and 3, J. Rollinson. 2, H. Beldon. *hc*, Duke of Sutherland; A. Sinclair, Burton-on-Trent; G. Hanson, Burton-on-Trent. *c*, G. Boote, Burton-on-Trent; H. Feast.

HAMBURGS.—Golden-pencilled.—1 and 2, H. Beldon. 3 and *c*, J. Rollinson. *hc*, Duke of Sutherland; H. Feast. *silver-pencilled*.—1 and 3, H. Beldon. 2, Duke of Sutherland.

BANTAMS.—Black or Brown Red Game.—1, C. Scammells, Trowbridge. 2, J. Richardson, Loughborough. 3, Duke of Sutherland. *hc*, E. Bell; C. Pratt, Burton-on-Trent. *c*, R. Ashley. *Any other variety of Game*.—1, R. Ashley. 2, J. Watts. 3, W. L. Mason, Chesterfield.

BANTAMS.—*Any variety except Game*.—1, H. Beldon. 2, T. Cropper, Bacup. 3, H. Feast. *hc*, Duke of Sutherland.

FRENCH.—1 and 2, R. B. Wood, Uttoxeter. 3, W. Dring, Faversham. *hc*, H. Feast; Rev. N. J. Bidley, Newbury.

ANY OTHER VARIETY.—1 and 2, H. Beldon. 3, E. J. Draper. *hc*, E. Kendrick; W. Jones, Walsall. *c*, Rev. N. J. Bidley.

WAZZ.—Cuck.—1, J. Richardson. 2, Duke of Sutherland. 3, R. Ashley. BRAHMA.—Cock.—1, Rev. N. J. Bidley. 2, H. Beldon. 3, Dr. Holmes.

The prizes were awarded by Mr. Edward Hewitt, of Sparkbrook, near Birmingham.

BISHOP AUCKLAND POULTRY SHOW.

THERE were something like three hundred pens shown here, although the prizes were small; in some of the classes, however, the birds were of great merit. Dorkings were a good class, and the first and second-prize Cochins, which were respectively White and Buff, proved extremely fine; but the Hamburgs were of an ordinary character. The Game class contained some very good birds, the winners being Brown Reds. Of Polands, the Golden were in good order, and the winners very good in crest and colour; as also the first-prize White-crested Blacks in the next class. Game Bantams were poor as a whole. The medal for that variety was won by the Black Reds. The Rouen Ducks were very large, and good in all particulars, and the Widgeons, to which the first prize was awarded in the Variety class, a neat good pair. Turkeys and Geese were large and in fair feather.

The above remarks apply to the adult poultry, but it was in the chickens that we found the most noteworthy collection. Dorkings were good and forward. The first-prize Buff Cocker cockerel in our opinion gave promise of great size, the pullet being well made-up; the second-prize pullet was also a sound-coloured bird. Whites were good but small, the Brahmas poor, and the Hamburgs only moderate in all classes. The Game chickens were a grand collection, the winners being Brown Reds in the first class, and Duckwings in the second. The Polands were Golden, and very forward and good, but in Red Game Bantams, only the first-prize winners were noticeable. In the next class Piles won both prizes, and the run was very close between the two pens.

In Pigeons, the first in Carriers was a Black, and the second a Dun cock, both moderate birds. The Pouters were all Blue-pied, and the winners in good order, large, and well marked. Both the winners in Tumblers were Almonds of good quality. Fantails were a fair lot, the first-prize birds being very good. In Trumpeters, only the two winners, which were Black, were of any merit. Jacobins were a capital lot, the winners being both Red hens; the first very small and neat in all points, the second only losing in size. Turbits were also good, the first a Blue of great character, and the second a very good Red, but rather large. English Owls were a moderately good class, and the variety good; a well-developed Yellow Barb was first, and a very handsome-faced Pigeon second.

The medal for points in poultry was won by Mr. Thomas Robson.

DORKINGS.—1 and 2, C. & A. Widdas, Beechburn Grange. *hc*, C. & A. Widdas; J. T. Proud.

COCHIN-CHINA.—1 and 2, G. H. Proctor, Durham. *hc*, J. Russell, Whitby; A. Bahar, Bishop Auckland; C. & A. Widdas.

BRAHMA POOTRA.—1, R. Moore, Durham. 2, R. Shields, Swatwell. SPANISH.—1, R. Moore. 2, H. Dale, Northallerton. *hc*, A. M. Bahar; R. Moore.

HAMBURGS.—Silver-spangled.—1 and 2, R. Moore. *hc*, W. Hodson, Evenwood. Golden-spangled.—1, R. Beeveside, Bishop Auckland. 2, T. Liddle, Bishop Auckland.

HAMBURGS.—Silver-pencilled.—1, R. Moore. 2, J. Russell, Whitby. *hc*, W. Jopping, Frosterley; W. Simpson, Frosterley. Golden-pencilled.—1, W. Atkinson, Bishop Auckland. 2, R. Moore. *hc*, V. Johnson, Frosterley.

GAME.—Black-breasted and other Reds.—1, C. E. Morgan, Bishop Auckland. 2 and *hc*, T. & J. Robson, Bishop Auckland. *Any other variety*.—1, T. & J. Robson. 2, T. McKenzie, Stanhope (Duckwing). *hc*, C. & A. Widdas.

POLANDS.—Golden.—1, C. E. Morgan. 2, J. T. Proud. *hc*, C. Walker; J. T. Proud. *silver-spangled and white-crested Black*.—1, J. T. Proud. 2, C. E. Moore.

GAME BANTAMS.—Black-breasted and other Reds.—1 and Medal, J. Ferry. 2, J. & W. Gill, Bishop Auckland. *hc*, J. Ford, Bishop Auckland; T. Ayre, West Auckland. *Any other variety*.—1, J. & W. Gill (Duckwing). 2, T. & J. Robson. *hc*, W. Atkinson.

BANTAMS.—1, A. M. Balmer. 2, A. Mitchell, Bishop Auckland. *hc*, R. Moore. Ducks.—Aylesbury.—1, O. A. Young, Driffield. 2, J. G. Milner, h's, T. Gibson; C. E. Morgan. Rouen.—1, W. Simpson. 2, J. T. Proud. *hc*, J. G. Milner; A. M. Balmer. *Any other variety*.—1, J. G. Milner (Widgeons). 2, O. A. Young. *hc*, J. G. Milner; Mrs. Quoch, Ferryhill (Widgeons); O. A. Young.

TURKEYS.—1, Mrs. Sanderson, Wolsingham. GESE.—1, O. A. Young. GUINEA FOWLS.—1, O. A. Young. 2, J. Robson.

ANY OTHER VARIETY.—1, T. & J. Robson. 2, R. Moore. *hc*, J. Russell, Whitby (Black Hamburgs); J. T. Proud.

CHICKENS.

DORKINGS.—1 and 2, C. & A. Widdas. *hc*, C. & A. Widdas; T. Stanfield, Sunderland. COCHIN-CHINA.—Buff.—1, 2, and *hc*, G. H. Proctor. *White*.—1, G. H. Proctor. 2 and *hc*, G. Bell, Beechburn.

BRAHMA POOTRAS.—1, J. Russell. 2, J. H. Blackwell. SPANISH.—1, O. A. Young.

HAMBURGS.—Silver-spangled.—1 and 2, T. Ayre. Golden-spangled.—1, R. Keeleyside, Bishop Auckland. 2, W. Tinkler, St. Helen's, Auckland. HAMBURGS.—Silver-pencilled.—1, W. Jopping. 2, J. Russell. *hc*, W. Simpson; T. Stanfield. Golden-pencilled.—1, R. Keeleyside. 2, J. Ferry. *hc*, J. Russell.

GAME.—Black-breasted and other Reds.—1, T. & J. Robson. 2, C. & A. Widdas. *hc*.—Elms: T. & J. Robson. Duckwings and other Greys.—1, T. & J. Robson. 2, T. McKenzie. *hc*, Mrs. Ellis.

POLANDS.—1 and 2, J. T. Proud. GAME BANTAMS.—Black-breasted and other Reds.—1, T. & J. Robson. 2, W. Grey, Tow Law. *hc*, J. Ford. *Any other variety*.—1, T. & J. Robson. 2 and *hc*, W. Gray.

BANTAMS.—1, T. & J. Robson. 2, T. Alderson. POULTS.—1, J. T. Proud. 2, J. Robson.

GOSLINGS.—1, J. T. Proud. 2.—Harrison, Bolam. *hc*, J. Robson. ANY OTHER VARIETY.—1, R. Moore. Extra 1, J. G. Millner (Hoodans). 2, J. Russell, Whitby (Black Hamburgs).

SPECIAL CLASS.—Cock, Cockerel, or Drake.—1, C. & A. Widdas. 2, J. T. Proud. *hc*, J. Russell; A. M. Balmer; C. E. Morgan; W. Atkinson; C. & A. Widdas; R. Curry (Black Hamburg). *c*, J. Sherwin, Ripon; J. Robson; C. E. Morgan; C. & A. Widdas (3). Hen, Pullet, or Duck.—1, J. Sherwin. 2, J. T. Proud. *hc*, A. Harburn, Bondgate; T. & J. Robson; C. & A. Widdas (2); F. Horseman (2). *c*, J. Russell.

PIGEONS.

CARRIERS.—1, R. Blacklock, Sunderland. 2, S. D. Eadley, Hereford. *hc*.—YOUNG.

POUTERS.—1 and *hc*, T. Rule, Gilesgate. 2, J. Kilpatrick, Whitby. TUMBLERS.—1 and 2, E. Dodds, Durham. *hc*, C. E. Morgan.

FANTAILS.—1 and *c*, T. Rule. 2 and *hc*, J. F. Lovelidge, Newark. TRUMPETERS.—1 and 2, T. Rule. *hc*, S. D. Eadley.

JACOBS.—1, T. Rule. 2 and *c*, J. Young. *hc*, R. Balmer (2); T. Rule. TUMBLES.—1 and 2, J. Young, Bishop Auckland. *hc*, J. F. Milner; J. Young (2).

OWLS.—English or Foreign.—1, J. Young. 2, T. W. Kilburn, Bishop Auckland. *hc*, T. W. Kilburn; R. Blacklock; J. Young.

ANY OTHER VARIETY.—1, J. F. Fawcett, Whitby. 2 and *hc*, M. Ord, Sedgefield. *hc*, J. S. Baddeley (Barb); J. Young (Barb); T. W. Kilburn.

RABBITS.—1, C. E. Morgan. 2, W. A. Robinson, Winstone (Lop eared). *hc*, G. Kington, Bishop Auckland; M. M. Mearns, Bishop Auckland (3); J. T. Robinson, Darlington. *c*, A. Gardner, Bishop Auckland; G. Oswald, Durham.

SOUTH LONDON FANCY RABBIT SHOW.

This was held at the Goat's Head, Cleaver Street, Kennington Cross, on the 11th inst. The following are the awards:—

Table with columns: Prize, Name, Breed, Length, Breadth, Weight, Age. Lists awards for various rabbit breeds like Fawn Doe, Sooty Buck, Black-and-white Buck, etc.

BROWN LEGHORNS.

A VARIETY still more esteemed is the Brown Leghorn, which has come into considerable notoriety of late in the United States. It appears to have been bred for some time, but little known; and the description in the published editions of the "American Standard of Excellence" is grossly inaccurate and incomplete, evidently owing to ignorance of the fowl. During the last two seasons, however, the breed has become more and more popular, and in 1872 eggs of it were advertised at the high price of \$10 per dozen. From an article by Mr. A. M. Halsted on Brown Leghorns, in the New York Poultry Bulletin of May, 1873, we make the following extracts:—

"This beautiful variety is daily growing in favour and popularity, and bids fair, at no distant day, to excel the White variety in the estimation of amateurs and breeders.

"Rather larger than the Whites, they are also more hardy, and being a yellow-skinned fowl, are more pleasing in appearance to the epicurean tastes of our fanciers. As egg-producers they are unrivalled; pullets frequently commencing to lay at four and a half months old, and continuing without cessation until well into the winter. Among New Hampshire farmers they are quite popular, owing to their strong constitution and

their excellent health during the long tedious winters. It is only quite lately that they have created any sensation at our poultry shows, and only the past year that the numbers shown have made the work of the judges anything more than a short inspection.

"The earliest knowledge we have of them is from Mr. F. J. Kinney, of Worcester, Mass., who writes:—"The first I ever owned I bought on board a ship in Boston Harbour, in the spring of 1833. This was the first trio I ever saw, and I believe them to have been the first ever brought to America. I have since had two other small lots direct from the city of Leghorn, in Italy, and expect more soon from the same place. The first trio weighed 9 lbs. 3 qrs., and were yearlings. Their combs and wattles were very large and coarse; ear-lobes entirely red, same as face, comb, and wattles. They were not Black-Red Games, nor Black-Red Leghorns, but Brown-Red—*i.e.*, the cock's breast was dark brown, spotted with lighter brown, the dark brown running-up the under side of the neck; his hackle was light brown, striped with black; the hens were feathered and coloured the same as the good ones are now, the colours being very distinct, and the pencilling the most beautiful of any fowl I ever saw, and the most distinct."

We have seen that there is some doubt as to the origin of the White breed; but besides the above importation, many others from Leghorn have been made since of the Browns, so that in their case at least the name is appropriate enough. Of this fact we have not the slightest question, having had it confirmed from numerous American correspondents, who testify to having seen birds recently imported either from Leghorn or other parts in Italy; but as to another point named by Mr. Kinney, the colour of the ear-lobe, there seems to be a great difference of opinion among American fanciers—Mr. Halsted and some others believing that the deaf ears on the earlier importations were red, while Mr. A. Beard, Mr. W. E. Bonney, and other breeders, say the early birds had white ears. The natural supposition would be that both were imported; and the difference is of little consequence, since all agree that the deaf-ears ought to be white. Of this there can be no question, as it not only agrees with the whole Leghorn or Spanish type, but is incomparably superior in appearance. There is, however, yet much difficulty in breeding all the chickens with white ears, but this, no doubt, will be accomplished before long.

American breeders have unquestionably much improved the Brown Leghorn since its first importation, which would account for the breed only lately coming into notice. Mr. W. E. Bonney writes of them:—

"In Brown Leghorn fowls, their gay plumage, lively appearance, and, in fact, every feature connected with them, is attractive and pleasing; and in this class we must soon recognise the leading variety, whether for fancy or profit. They mature early; I have known pullets to commence laying at three months of age, and continue laying during the entire season. They are non-sitters; and I never saw a case of roup or any hereditary disease among my fowls during the whole period of my successful breeding. I have bred all classes of fowls, and by far give the Brown Leghorn the preference; I shall continue making a speciality of them, adding fresh-imported blood when needed. I have bred them since 1869 (the first importation ever made into this country being in 1855), and when I commenced to breed they would hatch all colours—brown, black, Dominique, and in 1862 I had one white chicken in a pullet. Since then I have added fresh blood, sparing no pains to get select stock, and by careful breeding have accomplished their hatching true to colour."

The first Brown Leghorns ever received in England were sent to ourselves, by the kindness of Mr. A. M. Halsted, specially for portraiture in this work. They arrived on June 17th, 1872, one hen again being unfortunately injured in some way, bleeding profusely from the beak, and dying a few hours after receipt. The other hen laid next morning, and continued for a few days, when she stopped; this fact, as in the White birds sent us, showing well the laying qualities of the breed. We might describe the birds very briefly as combining the Spanish comb and type of head and body, with the colour or plumage of Black Red Game of a rather darkish tinge; the cock being a black-breasted bird, with hackles orange-red striped with black, and the hen salmon-breasted, with rest of the plumage partridge-marked, or brown finely pencilled over with dark markings. They are somewhat larger than White Leghorns, and rather shorter on the leg, averaging about half a pound heavier in the opinion of American breeders.

Being anxious to test the stock, and having some suspicion the birds might have been created by crossing White Leghorns with Game, we hatched a brood of chicks on the 1st of August; except one or two broken, every egg hatched, and not a chick died. We know no fowls which feather so quickly, except Houdans and Andalusians. Being very short of room and accommodation, owing to a recent removal, the chicks had an open shed to roost in, but grew up perfectly hardy, and with no care whatever, in spite of the very late date of hatching. They were

very uniform in colour in their first feathers, but in their second or adult plumage two of the cockerels moulted black, all but some reddish feathers on the hackle and wings. The pullets varied little, two being just like the mother, and the rest of the same type, but darker, somewhat like darkish grey Dorkings. One cockerel was just like the father, and a fourth brown-breasted. On the whole, and considering the want of what English fanciers consider careful breeding in nearly all American stock, we were surprised and gratified by the degree of uniformity thus apparent, and fully convinced that the breed was genuine, or a really distinct race.

Tastes differ, but we were much pleased with these fowls, and much regretted that utter want of accommodation at that time prevented our keeping more than our old favourites, the Brahmas. A neater and more pleasing style of bird could not possibly be; and as layers we consider this breed the best we have ever met with for moderate confinement. The Silver-spangled Hamburg may even surpass it on a wide range, as regards the number of eggs, but these are inferior in size; and the Brown Leghorn will thrive in a moderate-sized yard. The hen laid an egg nearly as large as that of a Spanish fowl, and after moult recommenced early, before any of our Brahmas had "begun to think about it."—(*Wright's "Illustrated Book of Poultry."*)

SWARMS AND HONEY HARVEST, 1873.

I COMMENCED this season with four boxes and four skeps, mostly fed liberally till May. The apple blossom was hardly used, the weather being bad and chilly; however, towards the middle of May I made two artificial swarms, which are doing fairly well. On June 19th I had a weak swarm, which died out or disappeared during my absence, having built some small pieces of comb; on June 22nd a very strong swarm, the largest I have ever seen, from one of the artificial swarms made in May, and transposed at once with the original stock. The various hives have built plenty of comb, but have no great stores of honey. Last year the lime blossom did wonders, this year it showed very little results.

I may perhaps just have honey enough for the winter, though I doubt this, and shall have, as compared with last year, six boxes and five skeps. My boxes are of the German type, of which I imported a pattern years ago.—*Buz, Gloucestershire.*

BEE-GOSSIP.—No. 1.

THE honey season in Devonshire, so far as I have been able to gather from my own experience and the reports of other bee-keepers, has been a very unfavourable one, more particularly for those who endeavour to obtain their share of their favourites' labours by the use of extra boxes or hives as supers, nadders, or otherwise. Very few of these have been completed, and fewer still have been filled, without several of the combs having been largely occupied by brood. We have had short spells of pretty good honey-gathering, but these have been generally succeeded by much longer intervals of unfavourable weather, in which the bees have been able to collect but little, added to cool nights, which drive the bees down from the supers—conditions altogether antagonistic to super-filling. The queens, under such circumstances, are much more likely to ascend for the purpose of laying eggs in the sparsely-occupied combs than when these last are being rapidly stored with honey. I think that cottagers' hives will generally be found tolerably well supplied with honey, with the exception of very late swarms. Swarms from cottage hives, so far as I have been able to learn, have been most uncertain. Some made their appearance in May, many did not swarm till July, and others hung out in large clusters under the floor-boards and round the hives for several weeks without swarming at all, thereby wasting the best part of the summer.

In my own experience this season with artificial swarms, and also of raising queens in nucleus boxes for this purpose, I have had more than usual disappointment. From the brood combs of my best Ligurian colony, from which I drove the bees to make a large artificial swarm, I succeeded in obtaining more than twenty sealed royal cells, which were distributed among various small and large families of queenless bees. The majority of the queens hatched out satisfactorily, giving promise of success, but, on subsequent inspection, several were missing, having probably been lost on their wedding trips, thus necessitating the entire process of queen-raising to be gone through over again. Also others of these young queens were a very long time before they commenced laying, so long in some cases that, not being able to find the queens or any signs of egg-laying, I concluded them also to be among the missing, and supplied the supposed disconsolate bees with royal cells or suitable brood-combs for raising fresh queens. A few days after, finding the royal cells given had been torn to pieces, and no royal cells commenced in the brood-combs supplied to the others, a search revealed the fact that queens had been present all the time, though their breeding had been unusually delayed. Not having been sufficiently particular in observing the dates of the

various manipulations, I am unable positively to state how long a time elapsed between the birth of the young queens and their first laying of eggs. I must, however, do justice to some of them in saying that subsequently they have proved themselves to be very prolific. I must now conclude this chapter of bee-gossip, but hope to write a second very shortly, giving a few more details of what has occurred in my apian practice this season.—S. BEVAN FOX, Exeter.

A BEVERAGE FROM ROASTED GRAPE SEEDS.—MONS. T. Schmidt calculates that 30 to 40 lbs. of seeds per acre of vineyard are ordinarily produced, and, with the exception of the tannin which they contain, and which is used in the clearing and manufacturing of wine, the whole is looked upon as a waste product. When, however, these seeds are properly roasted and ground, they possess an aroma very much like that of East India coffee, and the beverage obtained therefrom is about the same in taste, although not in strength, as coffee. The author recommends the following mode of procedure:—Take 1½ ounce of the ground preparation, and boil it for five minutes in a quart of milk, adding a little cinnamon and cloves. When filtered and sweetened to taste, a beverage is obtained resembling chocolate, with the same reddish tint. It also becomes thick like cocoa on being allowed to stand for a while.—(English Mechanic.)

OUR LETTER BOX.

Books (J. P. G.).—Morris' "Birds and Nests," published by Messrs Groombridge, Paternoster Row, in half-crown parts.

EDGEFIELD POULTRY SHOW.—The Secretary requests us to state that the first and second prizes for Cochins, also the cup, were awarded to Mr. G. H. Procter, Market Place, Durham, and not to Mr. P. A. Denham, as erroneously published last week. In Pigeons the following corrections are also made:—viz.:—Barbs, —1 and Cup, J. P. Fawcett. English Doves,—1, J. Dye. Any other variety,—1, Cup, and Extra 3, J. & W. Towerson. No Extra 2 was given.

BLACKBURN POULTRY SHOW (Correspondent).—Thanks, but the time which has elapsed is too great.

HASLINGDEN POULTRY SHOW.—In the Antwerp class second prizes were awarded to Mr. A. Justice, Mr. J. Stanley, and Mr. F. Woodhouse, there being three second prizes, and not two only, as the class was so good.

BRAHMAS NOT FEEDING FREELY (Colon).—You need not be uneasy that the appetite of your Brahmas falls off. Your feeding is good enough for any fowls. At this time of year they pick up much food over three acres. They have always been well fed, and consequently, having no lost ground to make up; they do not want as much food as fowls that are fed irregularly, or that have been underfed for some time. Continue to feed in the morning on slaked barley meal, mid-day give some Indian corn, and at evening repeat the slaked barley meal. With the range they have they require no more than this, and if they eat but little, so much the better for you. Backwater is not good for fowls, and it is more than likely if you gave it to them they would not touch it. Fowls only that are reared on it, as they are in France, are fount of it.

BREEDING BRAHMAS AND COCHIN BANTAMS (Cockerel).—In all breeding the first and essential point is to have stock you can depend upon, and having that, to choose your breeding birds from those that possess the qualities you wish to perpetuate. All the early-imported Brahma cocks (Dark) were speckled-breasted. A light-breasted Dark Brahma cock is an impostor; but the condemnation of a bird with a rich black breast regularly spotted with white, is not warranted by the history of the breed. It has long been known that it is very difficult to breed winning cocks and hens from the same birds, but it is not impossible. We differ from those who deery fresh blood. If we want to get any feather or property, we choose parents that possess them. The point we avoid in all Dark Brahma breeding is a buff tinge on the breasts and wings of the hens, or on the wings of the cocks. Light breasts in the hens are very common—almost the rule, but it is more desirable to choose breeding stock in which (as you want black-breasted cocks) the cocks have black breasts, and the hens are pencilled to the throat. We do not believe Cochin Bantams can be made; at any rate we cannot make them. We have tried, and bred enthusiasts. We have had imported birds that were perfect. Mark your fowls with different coloured leather or cloth round the legs.

POINTS IN SHOW CANARIES (William Savage).—Your being an invalid and unable to attend shows is to be regretted, for it is with birds as with other things, one practical lesson is worth pages of descriptive matter, and one visit to a show of high-class birds would teach you more than any pamphlet on the points of show birds with which I am acquainted. Several such have come under my notice from time to time, but it would not be difficult to drive the traditional coach-and-six through the best of them, which, apart from being very dogmatical, are for the most part effusions lacking any element of refinement, and are withal redolent of that peculiar atmosphere which permeates the back parlour of a beer shop. The Canary has for a lengthened period been in the hands of, possibly, not the best educated part of the community, though he is none the less to be admired on that account, nor are his friends the less to be commended for their discrimination in selecting such an interesting object for their attention. His literature, therefore, or that part of it more particularly relating to the bird as a show bird, is such as might have been expected. You do not say to what variety your bird belongs. When you ask in what class he should be entered, you must bear in mind there are several classes of each distinctive variety. From the description of yours I should say he has more Norwich blood in him than anything else, and he should be entered in the Unevenly-marked class, which includes all birds not coming under the definition Evenly-marked—i.e., marked on each eye, each wing, and each side of the tail, each or all of these marks, but no others. I cannot undertake to put a price on a bird I have not seen, and of which I do not know the pedigree. You must remember that if you send him to a show the price must include the cage in which the bird is exhibited.—W. A. ELKSTON.

RABBIT SCURVY (H. P. W.).—Your Rabbits will be free from the complaint you name if you mix sulphur with sweet oil and apply to the parts affected in the form of a thin paste every four days, which will bring off the scurf, and the hair will soon grow again. Rabbits in confined ill-ventilated hutches are subject to this attack. All hutches should be whitewashed, espe-

cially after containing Rabbits so affected. For this complaint is very infectious, and all Rabbits so troubled should be at once separated from others.

PRESERVING PEAS GREEN (The Gardener).—They may be preserved until the next spring if some of the summer crop are treated as follows:—Pick them when full grown, shell them, dry them gently but thoroughly, and then store them in canvas bags in a dry place. When required for use soak them in water for a few hours until plumped-up, and then boil them. The following mode has been reported to us by a person well qualified to judge of such matters as being very successful:—Carefully shell the peas, then put them in tin canisters, not too large ones; put in a small piece of alum, about the size of a horsebean, to a pint of peas. When the canister is full of peas fill up the interstices with water, and solder-up the lid perfectly air-tight, and boil the canister for about twenty minutes; then remove them to a cool place, and they will be found in January but little inferior to fresh newly-gathered peas. Bottling is not so good—at least, we have not found it so; the air gets in, the liquid turns sour, and the peas acquire a bad taste. What kind of Beans is it that you wish to preserve?

METEOROLOGICAL OBSERVATIONS,

CAMDEN SQUARE, LONDON.

Lat. 51° 32' 40" N.; Long. 0° 8' 0" W.; Altitude 111 feet.

Table with columns: DATE, 9 A.M., IN THE DAY, Baromet. at 29 in. and Sea level, Hygrometer (Dry, Wet), Direction of Wind, Temp. of Soil at 1 ft., Shade Temp. (Max, Min), Radiation Temperature (In sun, On grass), Rain.

REMARKS.

- 6th.—Bright morning, pleasant day; rather oppressive at night.
7th.—Fair but not bright in the morning, very fine day, warm in the afternoon and evening.
8th.—Lazy morning, but fine day; cloudy at night.
9th.—A most beautiful day, very bright with a cool breeze, but there was thunder at 1 P.M.
10th.—Morning fine, afternoon cloudy; rain commencing at 8 P.M., and continuing more or less heavily till the next day.
11th.—Wet and thick morning; fine forenoon and till 5 P.M., when it rained heavily for a short time.
12th.—Morning rather dull, midday fine, but the evening cloudy and rainlike. Excessively heavy shower of short duration on the 11th at 5.15 P.M.; the fall between 5h. 14m. and 5h. 1m. 10s. being 0.05 inch, and therefore upwards of six tons of rain per acre fell in the short period of seventy seconds.—G. J. SYMONS.

COVENT GARDEN MARKET.—AUGUST 13.

The same remarks apply to the markets generally as last week, quotations remaining nearly the same, excepting for Strawberries, which are nearly over. There are but few now to be had, and they are of very indifferent quality.

FRUIT.

Table listing fruit prices: Apples, Apricots, Currants, Currants, Figs, Filberts, Cobs, Gooseberries, Grapes, Lemons, Melons, Mulberries, Nectarines, Oranges, Peaches, Pears, Pine Apples, Plums, Quinces, Raspberries, Strawberries, Walnuts.

VEGETABLES.

Table listing vegetable prices: Artichokes, Asparagus, French, Beans, Beet, Broccoli, Cabbage, Capers, Cauliflower, Celery, Coleworts, Cucumbers, Endive, Fennel, Garlic, Herbs, Horseradish, Leeks, Lettuce, Mushrooms, Mustard, Onions, Parsley, Parsnips, Peas, Potatoes, Kidney, Round, Radishes, Rhubarb, Salsify, Savoys, Scorzoneria, Sea-kale, Shallots, Spinach, Tomatoes, Turneps, Vegetable Marrows.

POULTRY MARKET.—AUGUST 13.

Table listing poultry prices: Large Fowls, Smaller ditto, Chickens, Cackles, Game, Green Geese, Duckings, Pheasants, Partridges, Hares, Rabbits, Wild ditto, Pigeons.

WEEKLY CALENDAR.

Day of Month	Day of Week	AUGUST 21-27, 1873.	Average Tempera- ture near London.			Rain in 43 years	Sun Rises	Sun Sets.	Moon Rises	Moon Sets.	Moon's Age.	Clock before Sun.	Day of Year.		
			Day.	Night.	Mean.	Days.	m.	h.	m.	h.	m.	h.	Days	m.	s.
21	Th	Chard Horticultural Show.	72.5	49.7	61.2	14	57	47	35	2	8	7	28	2 54	233
22	F	Newcastle-under-Lyne Horticultural Show.	71.6	49.7	55.6	17	59	4	7	7	46	3	29	2 39	234
23	S	Todmorden Horticultural Show.	71.8	49.0	60.4	21	0	5	5	7	57	4	30	2 24	235
24	SUN	11 SUNDAY AFTER TRINITY.	71.6	47.9	58.7	16	2	5	3	7	7	6	31	2 8	236
25	M	Twilight ends 9.16 P.M.	74.1	49.7	61.9	16	3	5	0	7	16	7	8	1 52	237
26	Tu	Wotton-under-Edge and Banbury Horticultural Shows.	72.5	48.4	60.4	15	5	5	58	6	24	8	19	1 35	238
27	W	Length of Day 13h. 59m.	73.3	49.1	61.2	12	6	5	56	6	34	9	21	1 18	239

From observations taken near London during forty-three years, the average day temperature of the week is 72.5°; and its night temperature 49.1°. The greatest heat was 89°, on the 25th, 1839; and the lowest cold 31°, on the 26th, 1831. The greatest fall of rain was 1.33 inch.

A SOCIAL GATHERING OF AMATEURS.

[The following, from the pen of our valued correspondent, Rev. William Lea, St. Peter's, Droitwich, is a report of a social gathering of amateur gardeners, who meet annually at his house, and talk over the various subjects in which they are severally interested. They are all gentlemen living in a pretty wide radius of Droitwich, and are almost all known as contributors to the pages of the Journal. Such gatherings as these are productive of much good, and we should be glad to see the example of the worthy Vicar of St. Peter's imitated in other districts.]



We usually meet in the middle of the Strawberry and Rose season, and each guest brings a specimen of his *specialite*, whatever it may be: but this year our meeting was more than a month later than usual, and, consequently, the only Strawberry represented on the table was Dr. Roden's *Fragaria tardissima*, which grows in large clusters like the Hautbois, and certainly deserves its name. But though the Straw-

berries were over, we had the experience of the most abundant season ever known to guide us in the classification of their merits, and as far as I could gather in this district, they would stand in the following position.

First of all comes Dr. Hogg, who seems everywhere to have surpassed himself this year. In 1870 he was magnificent, in 1871 and 1872 a comparative failure, but in 1873 he has come to the front again, and recovered his position as the king of Strawberries, both in size and flavour. The only objection raised against him is, that the second ripening of berries is very inferior to the first in size, and does not possess that peculiar carpet-bag shape, and I might almost say dimension, for which the first is distinguished—in fact they seem to go back to the type of their parent the British Queen. In the same class we were inclined to place Sir J. Paxton, on this soil the handsomest of all Strawberries, and a great bearer; British Queen, La Constante, President, the largest cropper, the hardiest and longest-lived of all; and Dr. Roden's Early Prolific.

The second class would contain rather a longer list of names. At their head would come those old patriarchs Keens' Seedling and the Elton Pine, still hard to beat when the season suits them; Frogmore Late Pine, Trollope's Victoria if the season is not too wet, the Filbert Pine, Sir C. Napier, Stirling Castle Pine, and Reeves' Eclipse, both enormous bearers; Admiral Dundas and Eleanor, both of enormous size. In this list might be added two other well-known varieties, where they will grow—Oscar, which is often fine the first year, but then dies away; and Sir Harry, which on my soil soon runs back to its parent, Hooper's Seedling.

In the third class may be placed such varieties as Black Prince, Marguerite, La Chalonnaise, Rib-man, Cock-comb, and others, which are only worth growing as specimens where the sorts above named succeed; but it does not do to speak positively on this, for no fruit varies so much according to soil and climate as the Strawberry.

I must not, however, omit to mention the Hautbois,

which have been particularly fine this season. I have allowed the old Hautbois, the Royal, the Belle Bordelaise, and the Monstre to run together in one bed, and the result has been very satisfactory.

Now that I am on the subject of Strawberries I will add a bit of gossip, which may be interesting to some of your readers, especially after the letter which appeared in your last number. The general opinion of gardeners is that a Strawberry bed will not last more than three years, some even recommend growing them as annuals. I saw last year a bed fourteen years old which still bears abundant crops, though, as I was told, it has never had a bit of manure given it since its formation. The bed is about an acre in extent, and is on one of the allotments at Dudford, a settlement made by the late Fergus O'Connor. The plants were originally set in rows 3 feet apart, and allowed to run together as they would, till the bed was one mass of Strawberries; then paths were hoed crosswise, so as to give ventilation; then, again, a few years later, in an opposite direction; and so the bed has gone on until now, bearing good crops every year. The soil is a stiff hungry clay, which will bear little else. The varieties grown are Aigburth Seedling and Premier, which on better soils are only third-class varieties, if so much; but they seem to suit the soil, and produce a very profitable crop.

Now for a few words about Roses. On one point all were agreed—that Roses vary according to season, and that the best Rose of one year will seldom hold its position the next. Here, in 1872, La France was the belle of the garden. Next to it I should have placed Dupuy-Jamain, but both are inferior this year, and after the first blooms La France was sadly wanting in freshness. On another point, too, all the rosarians of the party were agreed, that the Roses have been better this year than for many previous seasons. The following names particularly distinguish themselves:—Marchal Niel, Marie Baumann, Alfred Colomb, Mdle. Eugene Verdier, Louis Van Houtte, Pierre Notting, Felix Genero, Duke of Wellington, Climbing Devonensis, Celine Forestier, Boule de Nieve, and three Tea Roses which grow vigorously on the Briar—David Pradel, Niphotos, and Buret. Baroness Rothschild, Countess of Oxford, Therese Levet, and others have not been so good here as in former years, and suffer much from mildew; and of the new Roses there seems to be none which will rank among the first twelve, unless Madame Laeharme and the Perle de Lyon turn out as well as is expected. President Thiers wants substance; Etienne Levet, Madame Bellon, and others are deficient in distinctive character; but Abbe Bramerd and (here) Baron Bonstetten have proved very fine dark Roses, and Coquette des Blanches may prove a better edition of Boule de Nieve. The difficulty of growing fine blooms on this soil (a light loam) is occasioned by the enormous number of buds which are thrown out at the end of every shoot; and even if they are thinned down to one, the plant seems to have exhausted itself in the effort, so that the one left is not so fine or so voluminous in petal as the single bud which a stronger soil will send forth at the

end of the shoot. Perhaps some of your readers may be able to suggest a remedy for this over-productiveness, which has been more remarkable than ever this year.

As our gossips on these occasions are principally on hardy fruits and flowers, I can give no information to that large class of your readers who delight in glass; but on the subject of Plants, it was mentioned that Belle de Louvain is likely to prove a valuable addition; also a local Plum called the Apricot, which is a great bearer, and possesses a most desirable quality—exceeding toughness of wood. The question was raised how far the Pershore Egg Plum is suitable for stocks for grafting other varieties. Some thought it would prove too short-lived, others considered it superior to every other, on account of its great vigour of growth. The Plum crop in this district is but partial, many of the finer sorts having failed altogether, and the damage done by the bullfinches in the winter is visible in the nakedness of the boughs; and apparently where this Charybdis has been avoided, the crop is now in danger of falling into the Scylla of the blackbird's maw. These voracious birds, having finished the Raspberries, Gooseberries, and Mahonia berries, are now turning their attention to the unripe Plums and Apples. The Apple crop is abundant everywhere, and the cordons are very fine; but Pears generally are a failure, with the exception notably of Louise Bonne and a few other sorts.

In addition to our gossip, we had a new scientific treat in a very powerful microscope which was brought by one of the party; under its powerful glasses the mildew on the Rose leaves, which is sadly prevalent this year, was resolved into long cotton wool, but without any signs of life. It was the same with the black blight, with which here and there the Plums leaves are covered. The black covering was resolved into large pieces of slag, and one might have imagined that he was looking at a heap of scoria from a volcano, or from an iron furnace, but still no signs of life. But it was very different when a portion of American blight from an Apple tree was investigated. A formidable and most repulsive-looking monster, about the size of a rat, with claws like a lobster, and covered in a rusty coat of mail, was seen kicking about, evidently in a very vicious temper at having his repose disturbed.—WILLIAM LEA, *St. Peter's, Droitwich.*

CULTURE OF ROCHEA FALCATA.

This is a perfect gem in the class of plants to which it belongs, and when a goodly-sized specimen is obtained and flowered to perfection, its beauties and other qualifications to which it can lay claim are not likely to be soon forgotten. It is a plant, however, that does sometimes disappoint the cultivator, when its healthy appearance leads him to look forward to a successful blooming period, for some of its most vigorous growth will suddenly rot-off at the junction of the leaf with the stem, and such a misfortune will at times overtake it on the stem just above the soil. Again, sometimes the roots will die off suddenly and destroy all hopes of rearing a good plant. These, I think, are the principal ailments to which the plant is liable, and a remedy for them is, I think, to be found in a very careful system of watering at all times, guarding more especially against frequently wetting the leaves, or placing the plant where it receives drip from the glass. A cold and damp atmosphere is against its progress, and an unsuitable soil, as well as careless watering, will create a tendency in the plant to go off at the roots as above stated.

Once when I was a youngster and saw the plant brought to a flower show with its beautiful bloom-trusses protected with wadding and tissue paper, a discussion arose among its many admirers upon the best sort of soil to grow it in. At first they were not very decided, for while one recommended sandy loam and peat in equal proportions, another advised all sandy peat; but it was evident that this particular specimen had a consistent mixture to either of these, and when the exhibitor made his appearance, he gave as his mixture a light, sandy, but not a rarely rich loam, adding one-third of pounded potsherds, and I have grown my plants in a similar mixture and can recommend it. But when I could not obtain light loam, I have used a small portion of mortar rubbish.

Being a fine-rooted plant it may be potted firmly and must be well drained, but it is easily overpotted as well as over-watered; judicious treatment in these matters is one of the secrets of successful culture.

The plant enjoys a light and airy place in the greenhouse near the glass, and ought always to stand on a dry bottom,

and where the water can drain freely from the pot. In winter it must be kept much drier than at any other time. Its principal growing time is from the beginning of the year till July, at which time it flowers and lasts for a considerable time.

After blooming it will throw out several shoots, some of which may be taken off to raise a stock, or if no shoots appear cut a plant down within 2 or 3 inches of the soil, and it will produce numbers of shoots which will strike freely in any situation. I prefer rooting one cutting in a small pot, because then they can be grown on without interruption.—THOMAS RECORD.

PROTECTION FRAMES.

We have these in varied materials; those of recent introduction differing from the old in having earthenware in place of wood, and in parts so as to be easily taken to pieces, and transferred from one crop to another. They may have their uses, but having no experience of them, and being served so well by those old-fashioned ones which we know familiarly as garden frames, I see no reason for change, yet I will not make any ill-natured remarks on these of recent introduction. There is room in our gardens for both. Novelty may endure a time, stability and utility in the end will win.

Passing over garden frames, which are known to all, and their usefulness universally admitted, allow me to draw attention to that class of protectors known as the curate's or ground vineries, and to give some account of the uses to which they may be put throughout the year. I do not know the exact dimensions of the original ones, but ours, as made by our estate joiners, are 4 feet wide. The sides are of 1½-inch red deal, 11 inches deep or high; the roof a span, formed of frames or lights 2 inches thick, each 6 feet long, and both sides easily raised, the lights being hinged to the ridge. The frame is in 12-foot lengths, and so arranged that they join together, and so form any length required. The sashbars are about 1 foot apart, and the glass used is 2½-oz., puttied-in. I am no believer in "jumped joints," nor in glazing without putty. We want to retain as much heat as we can, and keep out as much cold as possible in protectors. By having loose ends we can have the protectors 12 feet, 24 feet, or more in length, as may be wanted, the frames being made with two fixed ends. The frames, to recapitulate, are span-roofed, 4 feet wide, 11 inches high at the sides, and 2 feet 2 inches high in the centre. They are strong, substantial, and are easily moved from one crop to another. This is done in a short time, without liability of breakage.

It should be borne in mind that frames, whilst they protect, at the same time forward the crops they enclose, and this to a considerable extent.

Presuming we have a length of, say, 60 feet, let us see to what purpose it may be put in protecting and forwarding in the course of a season.

In February, as soon as the soil is free of frost, we may place the frame over a bed of Asparagus, with the view of having heads fit to cut three weeks or more before they come-in in the open ground. All we do is to fork over the bed in the usual way, and make the surface fine, then put on the frame; but it is well to give a sprinkling of salt before doing so, for slugs are apt to be active when the heads are appearing, and on these they prey. The lights are kept close, no air is given until the heads appear and are 2 or 3 inches long; then we tilt on the south side about 3 inches day and night when mild, reducing the ventilation if cold, or closing if frosty. The shoots come up strong, and are fit to cut three weeks to a month before these in unprotected beds adjoining, and they are kept on the bed until the cutting in the beds not covered becomes general, when we admit air freely, tilting the lights on both sides, and removing altogether in a few days. The effect on the Asparagus, in addition to its giving heads three weeks earlier, are, that the shoots come up strong, and have fat swollen heads, with which none we have in the other beds can compare. There is as much difference between one and the other as between French and English Asparagus. It is also much more delicate in colour and eating. The fault of our out-door Asparagus early in the season is that it grows, from the cold and changeability of our climate, much too slowly to be tender and good. With the protecting or forwarding frames we secure greater warmth, collect and husband the little sun heat we have; a more equable temperature is attained, and a correspondingly earlier and better produce.

By the close of April or beginning of May, the seasons varying as much as a fortnight in forwardness or backwardness,

the frame will be at liberty, and we can place it over Strawberries, and it will cover two rows, they being in rows 2 feet apart. We placed ours on the Strawberries this year on the 30th of April, and on the 30th of June we had ripe fruit from them, the sort Sir Joseph Paxton, and some of the fruits weighed 1½ lb. It was not until the 15th of July we had the satisfaction of gathering the same variety out-doors from plants in rows adjoining. In this case we have a clear gain of fourteen days. Within a fortnight, or to July 15th, we had in a length of 2½ feet gathered 20 lbs. The fruit was very fine, and swelled-off well. They had air constantly day and night from putting on the frames to ripening, the lights being raised 4 inches on the south side. They had no water, and did not suffer in the least either from drought or heat. I am so well pleased at the result, that protection will be more extensively practised in future. At the time of placing part of the lengths on the Strawberries we put a 36-foot length on a plot of ground fully exposed, and sowed at once with Dwarf Kidney Beans, a row of Canadian Wonder in the centre, and a row on each side of this of Sir Joseph Paxton. To test what difference it would make as between those sown in the frame and those out-doors, I sowed Sir Joseph Paxton in a row about 18 inches from a south wall. Those in the frame, as well as those in the open ground, came up very indifferently—a result, no doubt, of the cold and wet state of the ground. Those in the open ground were all but a failure, the most part of the seed rotting in the ground; enough, however, remained and grew to show the difference in the time of maturing. The frame was kept close, no air whatever being given until the plants formed the seed or first leaves fully, and were showing the true leaves—in fact, these were partly developed before any was given, and then the lights on the south side were tilted 4 inches, and remained so day and night. Only one watering was given, and that when the plants were half grown, or a few days before they were in flower. We commenced to pick from them July 3rd, and had gathered from them 1750 pods from 7 to 9 inches long before those in the open ground were fit to gather, which they were not until the 4th of August. Here, then, we have a clear gain of a month, and not only that, but the pods were double the size and weight of those out-doors. They were sown April 30th. When those in the open ground come in it is evident we can dispense with the frame from the Kidney Beans, and having some strong plants of Cucumbers we may place the frame on rich good ground, and put out the plants in it 6 feet apart, and we shall have some fine fruit in September. The frame may be tilted on the south side a few inches in the hottest part of the day, and be closed early in the afternoon. If we have Tomatoes planted in a row 3 feet apart at the close of May, and the shoots be allowed to lie on the ground and cover a space 4 feet wide, we can place the frame over them when it comes off the Kidney Beans, and have a fine lot of Tomatoes in autumn. They do as well, or better, than those grown against a wall. The Orangefield Tomato is the best for this purpose. With the lights tilted 4 inches on the south side, they will have enough of air. This year, with a temperature out-doors at 90 (we had it that on the 22nd July), neither Kidney Beans nor Cucumbers, with the small amount of air named, were in the least scorched.

About the middle of July, if in the open, or if in a sheltered spot at the end or early in August, we put in three rows of Kidney Beans, so that they may be covered by the frame, which we will put on early in October, and tilt on the south side 4 inches, closing only when frosty, and with mats over the lights if more than 6° of frost; indeed, if the temperature fall to 32°, the protection of mats ought to be given. We shall then have Kidney Beans with certainty up to the middle of November or later. The best kind for this purpose is Sir Joseph Paxton or some other early sort.

At the end of September we plant in a sheltered spot Lettuces from a sowing made early in August, say 1st, in rows, the side rows 6 inches from the sides of the frame, and then 1 foot apart. This will give us four rows, which we will have all the year round; and between these a row each of Commodore Nutt, which may be described as a miniature All the Year Round, very much less, and coming in very much earlier—in fact it hearts in more quickly than any Lettuce I am acquainted with, and may be planted 4 inches apart, and then have good hearts—excellent for salads whole, stripped of its outer leaves. It is a very desirable kind for freezes and for early work, taking up little space. Commodore Nutt will be of first, the frame being placed over the Lettuce in November before any

weather; and with air in mild weather, closing only when frosty, and protecting with straw and mats in severe weather, we have nice Lettuces in winter. Though we sustain less frost, wet and frost, Lettuces are always more in request than early, however well blanched. The frame when it comes off the Lettuce may be placed over another lot of Lettuces from a sowing made the third week in August. Hicks' Cos and Lord's Favorite or the immense Hardy Green are the best for this purpose, placing them in rows 1 foot apart at the beginning of October, the Cos in the centre and the Cabbage kind at the sides. This lot will be in early in spring, in time for the frame to be placed over Strawberries or Kidney Beans; or we may forgo the spring Lettuce, or have extra frames, and put them on the Asparagus beds in January if we give heat, or in February if no heat be used. There is no crop we grow in a garden and which we require to be forwarded, but these frames will bring in a fortnight or three weeks, and in some instances a month earlier than such as have no protection. They only need to be once used to be appreciated, their value and the uses to which they may be put will soon suggest themselves. In another paper I hope to treat of them with heat as afforded by fermenting materials.—G. ARNEY.

NEW METHOD OF PLANTING STRAWBERRY BEDS.

HAVING read of a new method for forming Strawberry beds, I thought I would try it, and it proved a great success. In previous years our crops have been very poor, considering the attention they have had; but this year with the new method we had abundance of fruit. The way in which I planted my bed is as follows:—I did not cut any runners off the old bed, but allowed them to run into a mass. In the autumn I lined strips about 9 inches wide and 2 feet apart through its length, and cut them in squares of 9 inches. These I took up with a spade at 3 inches deep. In the bed prepared for them I had trenches dug 2 feet apart, and placed the squares of Strawberry roots in them, at a distance of 18 inches from each other. The roots were not injured in the least, and the crop was excellent. I had the trenches that were made in the old bed filled with one part well-rotted manure and two parts stiff loam, and the bed was soon covered with plants. Thus, by degrees you can renew the old bed as well as form new ones. Certainly with the old plan of planting single roots we obtained finer specimens of fruit, but unless fruit for show is required, I advise everyone to try the above plan for quantity, and they will not be disappointed.

A market gardener near here, who grows large quantities of Strawberries for sale, mows the tops off as soon as they have done fruiting, covers them up with longish manure, and rakes it off in the spring. This is rather rough treatment, but he always has an immense quantity of fruit.—I. SHELLEWELL.

GARDEN NETTING.

I SHOULD feel greatly obliged if you would kindly allow me, through the medium of your widely circulated paper, to state what I consider to be a piece of right-down cheating with regard to the sale of garden netting.

A short time ago my employer wrote for 100 yards of netting, 4 yards deep—that is to say, 400 square yards, at 1/4 per yard; consequently I, as a matter of course, expected to have as much netting as would cover 100 square yards of ground. The netting came in due course, and the first thing I did after it came was to open it out the entire length and measure it, when I found I had got, as I expected, a piece 100 yards in length. So far so good, but now comes the rub. I had a plot of Gooseberries that I wanted to keep from the birds. The plot is 14 yards wide; so I thought if I cut my 100 yards into 6 lengths, and run them together so as to form one piece, I should have sufficient to cover a piece of ground 22 yards long, by 14 yards wide, and that would be allowing a spare yard for falling over the trees at each end and sides. Well, fancy my disappointment then, when I found it would not cover above half what I had expected it to cover; or, in other words, supposing I had a wall 100 yards long and 4 yards deep, the quantity of netting ordered above would not cover much more than half of it.

Now, I do not profess to know much about buying garden netting, but it seems to me to be anything but fair dealing for a person to advertise and sell netting to cover so much ground, when he knows very well that it will not cover much more than

half of it.—JOSEPH POWELL, *Gardener to Viscount Harberton, Tregunter Park, Talgarth, South Wales.*

THEORY AND PRACTICE OF TREE-PLANTING.

From everything we see and read it is clear that the great part played by evaporation in successful tree-planting is not generally understood, yet on this one thing alone rests failure or success. It makes no difference whether it be winter or summer, there is always moisture escaping. In winter it is from the stems or branchlets, and in summer from these and from the leaves. All this continuous loss of moisture must be immediately made good by root action, or the plant is lost; or the part of the plant which suffers most goes first. It is a popular notion that there is no evaporation in winter. This is a fatal mistake. There is not nearly as much as in summer, but still quite as much in proportion to the activity of the roots.

Now, in transplanting trees, there is but one absolute cause of failure, and that is that the moisture escapes faster than the roots can supply it, and therefore in transplanting, everything we do should be for the encouragement of rapid root-growth, or for the prevention of rapid evaporation until the roots grow.

Of course there are incidental causes of failure. If a tree be badly dug, and half the roots cut away that ought to be on it, it has a worse chance for its life than if properly dug. Or if the roots be allowed to dry, the smaller roots are injured, and only the thicker ones are left to carry on the water work. Still it all amounts to the one thing, which is the moisture dries out of the branches faster than the roots can supply it.

We know how this is in making cuttings, and it is equally true of a tree. We take a piece of stem without roots, but as we know it will wither, we put it in a damp greenhouse, or even cover it with a bell-glass. If we did not it would dry up before the roots appeared. So in out-door cuttings. If we take a large Willow branch and plant it just as it comes from the tree, it will likely die. The sap is escaping from all the small branches, and there are no roots yet to make good the waste. We cannot put a bell-glass over a large Willow branch. If we could it would check the evaporation, and perhaps there would be stronger and better roots for all this top. But not being able to do this we do the same thing in another way. We cut away all the small branches, leaving nothing but a stake or a post, and then it sprouts out like grass on a warm summer's day. Though it has no roots at all, yet such a Willow stake grows better than a Willow tree with all its roots and the numerous twiggy branchlets left on.

This is the lesson for the tree-planter. A tree may, and often does, grow well without any pruning of its tops; but as there is always some injury to its roots, whereby they are prevented from immediately or fully supplying evaporation, a shortening is always beneficial; and this cutting back—sometimes to "bare poles," should always be proportionate to the apparent injury done to the roots, or according to the amount of cold, dry winter wind, or warm, hot spring weather that the plant is liable to encounter.

It will thus be seen that there is a greater risk in winter from fall planting, than in the spring season from planting at that time, if the trees happen to have large heads with numerous branches; but if this matter of evaporation be fully understood, and the tree pruned according to the season, there is no more risk at one season than at another.

This knowledge of the loss of plants by evaporation of their juices can be turned into great practical value in the management of young nursery stock for the winter. If set out in their final places in the fall, they are pretty sure to have either the sap dried out of them, or be drawn out of the earth by the freezing and thawing of the ground. The best way is, therefore, to bury them wholly in earth on the ground, or in the earth that slopes well, so that no stagnant water can be about the roots. One of the best nurserymen we know, who plants out thousands on thousands of young trees every year, and rarely loses one in a million, gets all his young stock in the fall, covers it with earth in this way, and thus has it on hand to work at whatever day suits his purpose in spring. Trees of larger size are also pruned at planting, and we have heard him remark that in his opinion most nurseries which fail in America—and hundreds of new ones annually do fail—mostly do so from their failures to get stock to grow, which need not be, provided they are properly handled.

We believe this firmly, and further that half the trees annually planted die, the majority of which might be saved if only

this thought of evaporation of the moisture were uppermost in the minds of the planters. There is, probably, little new in this chapter to intelligent horticulturists; yet we believe it will be a benefit to thousands, if we are to judge by the losses we see.—(*American Gardener's Monthly.*)

THE BEAUTIFUL AND USEFUL INSECTS OF OUR GARDENS.—No. 8.

BUTTERFLIES, it has been remarked, are like bankers in one particular, their hours of business are mostly from nine to four, or something like that; indeed, there are butterflies one scarcely finds stirring much before 11 A.M., unless the morning be particularly bright; but then again, there is here and there a species, like the Garden White and the Large Heath, that will be on the wing until 6 or 7 P.M. (A sarcastic friend suggests that butterflies and bankers have another point of resemblance, inasmuch as butterflies make no honey, they only avail themselves of that made or acquired by other objects; they cannot claim to be producers, and belong not to the industrial portion of the insect race.) However, it is quite certain that the title of "Children of the Sun" is appropriately applied to these insects, so much do they rejoice in its full rays, with rare exceptions, such as the Ringlet, which seems rather partial to shady places.

"What becomes of the butterflies at night?" said a juvenile querist, who was found, on cross-examination, to be imbued with the notion that there was a fresh emergence every day during the summer, and that those of the previous day died-off. As some older folks have had the same misapprehension, it should be noted that the life of no butterfly is quite so ephemeral as that, extending certainly, even in the case of non-hibernators, to at least a fortnight. At the setting of the sun, or before, butterflies disappear from view in the garden, but it is not at once to sink into a repose which closes their existence. On blades of grass in sheltered corners, on the branches of trees, or on walls and palings, they settle down to await the return of daylight, unless snatched-up by some "early bird." Hence the dusk of evening is not a bad time to look for and "settle" butterflies injurious to our gardens; yet the entomologist is rarely welcome when he obtrudes himself, with the intent of making captures, into the domains of the garden; there is a sort of impression on the mind of the horticulturist that the insect-hunter is likely to leave something behind him rather than diminish materially the enemy's numbers. A great naturalist of our day sorrowfully records a bit of his experience when he was following the swift-winged Colias Hyale in Surrey. "It was here, in market gardens forbidden to the public, that I made her acquaintance. Here were employed a multitude of female Hibernians in the healthful pursuit of horticulture. On one occasion my quarry led me into their midst, when lo! they abandoned their occupation and pursued me with the very same energy I was wasting on the yellow-robed nymph; the scene must have been an exciting one, and would have reminded a classical spectator of Meleager, or Orestes, or *Œdipus* pursued by the Furies: alas! the resemblance to *Œdipus* is greater now!" We will hope not.

The Brimstone (*Rhodocera Rhanni*) is an insect not unfrequent in English gardens, though apparently not an inhabitant of Scotland, and it is noticeable at two periods of the year—in April, and then again in August or September. Being yellow-robed like the fair favourite of the author quoted, it is sometimes confounded with the common and often-annoying Garden Whites, some of which appear at times with a yellowish tinge. But *R. Rhanni* belongs to another family, that of the Red-horns, and a glance at the short and thickened red antennæ at once gives us a marked distinction, and a near examination of the wings in either sex renders it impossible to confound this species with the only white butterfly near its size—viz., *Pieris Brassicæ*. The females of the Brimstone have a palish hue, the colour of all the wings being greenish yellow, while the males are of a brilliant yellow; the differences have been compared to those existent between the two preparations of brimstone known as the "sublimed" and the "precipitated." The most charming speciality in this butterfly is the investiture of long silken hairs, which cover densely the dark thorax, rising to its summit in a sort of crest. When fresh from the chrysalis this butterfly is an active flyer, the spring specimens, after their long hibernation, showing less alertness. It is the males at that season we most usually see in gardens, the females being engaged in depositing eggs.

The eggs are not to be found on any garden plant, but solely, so it is stated, on two species of *Rhamnus*—namely, *R. catharticus* and *Frangula*. I have on various occasions taken the eggs and reared the larvæ to maturity upon the latter plant, and others, like myself, have failed to take the insect off *R. catharticus* near London. But the habit of the species, probably, differs with the locality. The caterpillar is so much the colour of the Buckthorn leaf, that a person may hold one in the hand and yet not detect it, should it be reposing, as they often will, along the midrib. They are of sluggish habit seemingly, and yet feed-up with rapidity in warm weather, say in about five weeks. The wrinkled warted body of the caterpillar, small head, and dull green colour, are strongly suggestive of a relationship to the *Pieridæ*, and the *Rhodoceredæ* do with them form part of that division of our butterflies having cylindrical larvæ. The pupa is totally different from that of the Whites, being singularly humped; it is very carefully secured to a leaf or twig by an anal attachment and a silken band.

One of the boldest of our butterflies is the Painted Lady, also designated *Vanessa Cardui*,* which comes to our gardens during the summer, making cursory visits. Later on in the season its visits are more from necessity than choice, as the garden parterre yields more honey than the scattered wild flowers of autumn. We may see it sometimes hovering about



Vanessa Cardui.

till the end of October, by which time, if not sooner, the chilly nights send it into winter quarters. This insect is unfortunately named, inasmuch as it in no way resembles a "painted lady," and though the pencilling on the under surface of the wings is varied and exceedingly beautiful, it is equalled (Mr. Newman thinks surpassed) by that of the Red Admiral (*Vanessa Atalanta*). On the wing the species is too rapid to be deemed ladylike in its movements; perhaps it may be regarded as feminine in its pertinacity, for if you drive one of these insects off a flower it will come back again, and brave the net; and the same thing occurs even when an individual is settling on a rut in the road. The upper surface of the Painted Lady has a slight resemblance to the Admiral in the forewings, but instead of the well-defined rods and blacks of that species, we have markings more intricate, and of more diversity in colour. In certain years this butterfly is abundant generally, in others it is poorly represented; but there are many places in the south where it occurs every season. To the north of the metropolis, in those rural districts of Middlesex, Herts, and Essex, lying nearest to London, it is, I think, more scarce than formerly; in Kent and Surrey, within sound of St. Paul's, the butterfly has occurred pretty steadily for years past. *V. Cardui* is also one of those butterflies that have a partiality for the coast. The Irish specimens are particularly fine, judging from some I have received, and there the species disports itself high up the mountain sides, as also in some

districts of Scotland. This insect is additionally of interest as being a native of almost every country entomologists have explored.

Though specifically named from the Thistle, *V. Cardui* is also found in the larval state upon Nettles, each individual leading a solitary life, and spinning a few threads, by which it draws the leaves of the food-plant slightly together. The larva is spiny, like those of the *Vanessa*, and it is rather difficult to rear in confinement. Having arrived at maturity (usually in July), it attaches itself by the tail to some projection, and becomes a chrysalis, meriting that appellation, inasmuch as it is really adorned with golden markings.

Just now a lively little fly, whose economy has been already alluded to, is earning itself the thanks of the cultivators of the Cabbage tribe. Its services, to speak in modern phrase, "must be seen to be appreciated." When we consider, also, how eagerly birds of several species pick up the larvæ of *Pieris Brassicæ*, it is a wonder that the caterpillar of this butterfly holds its own from year to year, as we see that it does. My friend Smith thought it very odd, and quite opposed to sound arithmetical calculation, that the larger insect did not disappear before the smaller, since a strong larva of *P. Brassicæ* yields some twenty or thirty flies, which gives a great advantage on the side of the parasite. But, on the other hand, it must be remembered that the parasite has also its insidious enemy, as observed by the Rev. J. G. Wood; and the ichneumon-fly attacking *Microgaster glomeratus* is considerably larger than that species, which gives an advantage to its opponent; only this again is, there is very little doubt, the prey of something else, according to a rather hackneyed couplet which it is not needful to quote. But whereas *M. glomeratus* attacks the butterfly caterpillar, it is evident that the fly parasitic on the former would have difficulty in reaching the larvæ which are snugly nurtured in the caterpillar's body; and we find that this fly accordingly seeks out the cocoons of *M. glomeratus*, and deposits its eggs amongst them.

Observing the number of larvæ which make their way out of the carcase of a single caterpillar of *P. Brassicæ*, one would be apt to suppose that each fly selected one only to receive her brood; but on this point we have not absolute certainty. The weather in some years has much influence on the mutual relations of the ichneumon and the butterfly. Heavy showers just at the time when the female flies should be depositing their eggs probably diminish their numbers materially, while the caterpillars of *Pieris Brassicæ* are tolerably indifferent to any rain which does not entirely submerge them, though more susceptible of cold. Tiny as is this *Microgaster*, and unattractive to the naked eye, the microscope brings some beauty out of it. A recent writer on garden insect remarks, "When this insignificant little creature is placed under the microscope the tiny body shines out in metallic splendour, glittering with an intensity the eye can scarcely bear; and the wings appear in all their beauty, their surface glorious with opalescent hues playing upon them with every change of light, and covered with minute hairs, each of which glitters separately."—J. R. S. C.

ROYAL HORTICULTURAL SOCIETY.

AUGUST 20TH.

This was but a very small show, but to the quality of the Gladioli and Hollyhocks exhibited no exception could be taken.

Of the Gladioli there was a splendid display, though the stands were not numerous. Messrs. Kelway & Son, Langport, Somerset, took the first position in the open class for twenty-four spikes. These consisted of *Horace Vermet*, splendid, Beauty of England, *Timon*, *Porsena*, *Ball of Fire*, intense orange scarlet, feathered with purple; *Damia*, very fine, white and rose; *Madame Desportes*, *Kossini*, *Parsonii*, *Ariane*, *Pictum*, very large; *Clara*, *Numantia*, *Lulbe*, *Lavinia*, *Lady Bridport*, *Pollis*, and five seedlings. Second came Mr. J. Douglas, gardener to F. Whitbourn, Esq., Loxford Hall, Ilford, with an excellent stand, including fourteen seedlings, *Orphee*, *Adolphe Brongniart*, and *Octavie*, fine. Third came Mr. G. Wheeler, Warrminster.

In Class 2, for twelve spikes, the Rev. Lord Hawke, Willingham Rectory, was far ahead of all others with magnificent spikes of *Horace Vermet*, *Lacépède*, *Eugène Scribe*, *Sir W. Hooker*, *Shakespeare*, *Adolphe Brongniart*, *Didon*, *Marie Stuart*, and *Armide*. These were distinguished from those in all the other stands by the great breadth of their segments, as well as by their numerous flowers on a spike. Mr. Douglas was second with excellent spikes of *Legouve*, *Meyerbeer*, and several seedlings.

For six spikes Lord Hawke was again first; the Rev. H. H.

* The accompanying illustration is from Figuier's "Insect World," published by Messrs. Cassell.

Dombraïn second with *Legonvé*, Madame Desportes, and Horace Vernet, fine; and Mr. Douglas third.

For six spikes of Hollyhocks the Rev. Lord Hawke was first with magnificent specimens of *Alba superba*, white; *Talisman*, fine crimson seedling; *Eleanor*, pink; *Queen of Yellows*, sulphur; and *Midnight*, blackish maroon. Mr. W. Chater, Saffron Walden, was second with *Fire King*, crimson; *Purity*, rose; *Whitley King*, bright crimson; *Ethel*, flesh white; *Beacon*, rosy crimson, and *Orange Prince*, salmon buff. Mr. Minchin, The Nurseries, Hook Norton, was third.

The best twenty-four cut blooms came from Mr. W. Chater. In this stand were fine examples of *Golden Drop*, *Bijou*, *Walden King*, *Marion*, *Victor*, *Black Knight*, *Fred. Chater*, *Purity*, *Jessie Dean*, and *Conquest*. Mr. Wheeler, Warminster, was a good second; Mrs. P. Brace, Ossian, *Royal Scarlet*, *Royal Albert*, *Oscar*, and *Gladiator* being noticeable for their size and quality. The third prize was taken by Mr. Minchin. For twelve, the prizes went to Lord Hawke, Mr. Minchin, and Mr. B. Porter, gardener to Mrs. Benham, Isleworth. Lord Hawke had several fine seedlings, and beautiful examples of *Fred. Chater*, *Phryne*, *Alfred Chater*, and *Octavia*.

Cut spikes of *Phloxes* made an effective little display of themselves. Mr. Parker, Exotic Nursery, Tooting, was first, and Messrs. Downie, Laird, & Laing, Stanstead Park, Forest Hill, second, with very fine spikes. The following varieties were especially fine—viz., A. F. Barron, Madame A. Verschaffelt, Madame Antin, splendid colour; Mons. Donneau, Madame Domage, lothair, and Madame la Comtesse de Turenne. Mr. Ware, Hale Farm Nurseries, Tottenham, was third.

Of twelve hardy perennials Mr. Parker sent the only group, comprising fine *Phloxes*, *Delphinium Nahamah*, dark blue, *D. Keteleeri*, *Rudbeckias*, *Helianthus orgyalis*, and other plants. A first prize was awarded.

Of miscellaneous subjects Mr. Ware, of Tottenham, contributed a numerous group of herbaceous *Lobelias*. From Mr. Turner, Royal Nurseries, Slough, came a capital collection of *Dahlias*, for which, as well as Mr. Ware's *Lobelias*, extra prizes were awarded.

Prizes were offered for single dishes of *Apricots*. Moorpark, large and fine, from Mr. Kirtland, Bletchington, Oxon, and Mr. Gardiner, gardener to E. P. Shirley, Esq., Lower Ealington Park, Stratford-on-Avon, was first and second; and excellent fruit of the same kind from Mr. R. Scott, Kidlington, third.

FRUIT COMMITTEE.—Alfred Smee, Esq., F.R.S., in the chair. A Cucumber was received from Mr. J. Munro, Little Heath, Potters Bar, called *Improved Rabley*, a very handsome Cucumber, a foot long, of dark green colour, and with a small white spine. It was highly approved, and as Mr. Munro intends sending it to the September meeting, a decision was left for further information.

Mr. W. Tillery, The Gardens, Welbeck Abbey, sent a dish of *Barrington Peaches*, large and very handsome, to which a cultural commendation was awarded. Mr. Gilbert, of The Gardens, Burghley, sent a dish of *Apricots*. Mr. Bennett, The Gardens, Hatfield, sent a seedling Melon called *Hatfield*, which was not of any merit. Mr. A. Watkins, Bishop Stortford, sent a new hybrid Melon called *Acme*, a large coarse-looking fruit, which was scarcely ripe. Mr. Gallop, The Gardens, Bradford Peverell, Dorchester, sent a new Melon called *Golden Queen*, which had almost become putrid, and another called *Improved Golden* was also very badly flavoured. Mr. Cooling, nurseryman, Bath, sent a seedling Apple of great beauty, of an oblate shape, covered with light crimson, and thickly covered with fawn-coloured spots; the flesh is slightly tinged with red, and is markedly acid, without much flavour. Mr. F. Dancer, of Little Sinton, sent branches of Apple trees grown on the *Paradise* stock, showing the great profusion of fruit borne by these varieties—*Cox's Pomona*, *Cellini*, *Stirling Castle*, and *Small's Admirable*; a letter of thanks was voted to Mr. Dancer.

FLORAL COMMITTEE.—Dr. Denny in the chair. The subjects submitted to the Committee on this occasion were very limited in number. First-class certificates were awarded to Messrs. Kelway, of Langport, for *Gladiolus Hesperia*, orange scarlet, pale purple shaded with white in the lower segments; for *Neogenes*, rose purple with a white band in the upper segments; *Scopas*, pure white, purple throat, broad segments, fine spike; and *Captain Stacey*, orange rose, flaked with purplish maroon, light centre, purple band. *Calyce*, white, in the way of *Madame Desportes*, though not certificated, is excellent. A first-class certificate was awarded to Mr. R. Lord, Old Bottom, Stansfield, for *Picotée Mrs. Lord*, with a heavy rose edge. First-class certificates were also given to Mr. W. Chater, for *Hollyhocks Fire King*, reddish crimson; and Mrs. W. Chater, salmon rose, large and fine; also to Mr. Douglas, gardener to F. Whitbourn, Esq., for *Gladiolus Mary Kinear*. Lord Hawke had first-class certificates for *Hollyhock Vaugnard*, dark purplish crimson, and *Lilac Queen*, two remarkably fine varieties. Mr. W. Bull, of Chelsea, had also a first-class certificate for *Gladiolus Purpureus auratus*, greenish yellow with dark markings in the throat, but

by no means comparable to florists' varieties, though it may give rise to variations.

To Messrs. E. G. Henderson & Son, of St. John's Wood, first-class certificates were given for *Pegonia Prince of Wales*, deep scarlet, and *Prince Teck*, double, light scarlet.

Messrs. Veitch had a first-class certificate for *Aster tanacetifolia*, lilac blue, with ornamentally-cut foliage; and the same firm also exhibited the poisonous *Blumenbachia cordata*, with rather showy orange flowers, likewise fine plants of *Celosia Huttoni*, with very ornamental rose-bronze foliage backed with purple.

From Mr. Eckford, gardener to Earl Radnor, Colehill, came a stand of *Verbenas*, of which *Paradise Williams*, deep rose with a crimson centre, and *Her Majesty*, rose, with a dark crimson eye, were distinguished by first-class certificates.

Mr. McLachlan, Glasgow, had a cultural commendation for a *Cockscorb* called *Glasgow Prize*, of which he showed three specimens with combs measuring from tip to tip 2 feet 9 inches, 3 feet, and 2 feet 9 inches, by 11, 15½, and 17½ inches in breadth, and in colour brilliant deep crimson. A cultural commendation was also given to Mr. Fewell for a handsome specimen of *Adiantum farleyense* 3 feet 8 inches in diameter. Among the other subjects exhibited may be noted a collection of *Hollyhocks* from Messrs. Paul & Son; a golden *Gymnogramma* from Mr. Brown, gardener to Mrs. Alston, Elmdon Hall, Birmingham; some pretty golden *Coluses* from Messrs. Downie & Co., of which *Prince de Scilla* was the best; and two pretty kinds of *Echinops* from Mr. Croucher, gardener to J. Peacock, Esq., Sudbury House, Hammersmith.

THE dates of the Shows of the Royal Horticultural Society for 1874 have been fixed as follows:—Third Wednesday in March, third Wednesday in April, second Wednesday in May, first Wednesday in June, first and third Wednesdays in July, first Wednesday in September, and second Wednesday in November. The Council are to be congratulated on this timely announcement, by which all concerned will be able to make arrangements for the coming year; and we congratulate the exhibitors also, not so much on account of this early notice, as the relief they must feel at the number of shows being reduced from eighteen, as they were this year, to eight. This arrangement will enable the Council greatly to increase the interest and attractiveness of the shows, as well as considerably to augment the amount of the prizes.

As yet no decision has been come to as to the Provincial Show for 1874, and this is in some measure due to no action having as yet been taken by provincial towns. We have heard of several that intend to give an invitation to the Society, but as no intimation has been officially communicated, of course nothing can be done. We would advise those towns which intend to issue an invitation to do so speedily, so that the necessary steps may be taken soon to prepare a schedule, and have the arrangements in some state of advancement, instead of crowding everything into the last few months.

A Committee of exhibitors was appointed yesterday at South Kensington, to confer with a Committee of the Council, and to assist in the preparation of the general schedule for 1874.

EXHIBITION FRAUDS.

[THE following is a letter received by Mr. William Paul, from M. Sisley in reference to the letter on this subject which was published at page 76.]

ALTHOUGH I have not the honour of being known to you, I take the liberty to congratulate you on the noble and independent spirit you have shown in publishing Mr. Walton's letter in THE JOURNAL OF HORTICULTURE. I am quite of your opinion that it is high time that a stop should be put to the fraudulent practices to which horticulture is subject, and I hope that your noble example will be followed, and that the cause of straightforwardness will triumph. I have translated your letter, and have sent it to my friend Carrière, Director of the *Revue Horticole* of Paris, to have it published. I hope that you will approve of the step.

I have since some time attempted to make the same idea prevail for our future exhibitions of the *Circle horticole* Lyonnais, of which I am the Secretary general, but have not yet succeeded. Many of our horticulturists imagine that the frauds serve their commercial interests. I think not.—JEAN SISLEY, Lyons.

RIPENING PEARS.—Besides the common test of ripeness for picking—namely, gently raising the fruit to see if it will readily detach itself at the stem, the specimens may be placed

thinly and evenly on the floor of a cool room, on a blanket previously spread, and then covered with a second blanket. In a short time the effect of the treatment will be apparent in the most golden-coloured Bartletts, and rich, ruddy-looking Seckels imaginable. Pears perfected in this manner rarely have the meanness of their naturally ripened companions; nor do they prematurely decay at the core as when left on the tree.

PORTRAITS OF PLANTS, FLOWERS, AND FRUITS.

GODWINIA GIGAS. *Nat. ord., Aroideæ. Linn., Monœcia Polyandria.*—Native of Chontales mountains of Nicaragua, where it was discovered by Dr. Seemann. "In its native state the tuberous root of *Godwinia* attains a circumference of 2 feet 2 inches, and a weight of 90-92 oz. The petiole reaches 10 feet in height, and has a metallic lustre and mottled surface resembling a snake standing erect, and bears a blade 3 feet 8 inches long. The peduncle is shorter than the petiole, about 5½ feet, and the spathe alone is 2 feet long. The plant grows with great rapidity, and emits a peculiar odour."—(*Bot. Mag., t. 6048.*)

SONERILA BENSONI. *Nat. ord., Melastomaceæ. Linn., Triandria Monogynia.*—Native of Madras Peninsula. Flowers an inch in diameter, bright purple, borne on long red peduncles. "The *Sonerilas* are beautiful plants, inhabitants of humid, cool, shaly mountain regions of India and the Malayan Islands, often growing on mossy rocks and tree trunks. Though easily raised and flowered, they have hitherto proved to be very difficult of continued cultivation, partly no doubt from being kept in too hot and damp a condition, but no less to their soft and succulent stems, which rapidly decay in the winter months, when their vitality is checked by cold or other causes."—(*Ibid., t. 6049.*)

DENDROBIUM LITCHELOBUM. *Nat. ord., Orchidaceæ. Linn., Gynandria Monandria.*—Dr. Lindley, the author of this species, observes that it belongs to the *D. mobile* group, but that besides its different habit, it is a much handsomer plant, with a longer lip and very acute petals and sepals. Its native country was unknown at the date of its publication, and it is not now certain; but judging from the number of forms allied to *D. mobile* that have lately been received from Rungoon, Malmaise, and the Tenasserim provinces, it is most probable that it was imported from thence. Very shortly after Dr. Lindley had published it, it was described as *D. Hanburyanum* by Prof. Reichenbach. "Flowers about 2 inches in diameter; sepals and petals bright purple, reticulated, the latter nearly white at the base; lip 1½ inch long, curved like a trumpet with the mouth upwards; claw white, barred with deep purple; disk deep violet purple bordered with a broad faint yellow band, which is edged with purple."—(*Ibid., t. 6050.*)

SILENE HOOKERI. *Nat. ord., Caryophyllaceæ. Linn., Decandria Trigynia.*—Native of California, where it was first discovered some forty years ago. Flowers 2 to 2½ inches in diameter, pale rose. "*Silene Hookeri* is well adapted for rock-work cultivation; it was introduced by Professor Bolander, who sent seeds to Mr. Thompson, of Ipswich, who forwarded living specimens to Kew, which flowered in May of the present year. The flowers are very fugacious."—(*Ibid., t. 6051.*)

CINCHONA CALISAYA, var. JOSEPHIANA. *Nat. ord., Rubiaceæ. Linn., Pentandria Monogynia.*—Native of Bolivia and Peru. A very distinct-looking form of *Cinchona Calisaya*, probably identical with the *Itzhu Cascarilla* of the Peruvians, which grows abundantly in the same regions as *C. Calisaya*, but in open meadows, not woods, but the bark is of inferior quality. Flowers white, very fragrant.—(*Ibid., t. 6052.*)

MASDEVALLIA VEITCHIANA, IGNEA, LINDENI, HARRYANA, AND TOVARENSIS.—The habit of all these species is very similar. From the root springs up a tuft of oblong, spatulate, leathery leaves, generally obtuse, and tapered into a stalk of moderate length. Among these rise up the taller scapes, each terminated by one or more of the remarkable flowers. In *Masdevallia Veitchiana* the sepals, which form the conspicuous part of the flowers, are of a brilliant orange-scarlet, with a spot, or in some varieties a stripe, of rich crimson-purple, produced by the presence of multitudinous hairs, and yielding a most remarkable contrast; the upper sepal is erect and comparatively broad. In *M. ignea* the sepals are of a fiery-orange, marked with lines of deeper red or crimson, while the upper sepal is projected forwards. In *M. Lindenii* the sepals are of a lovely puce-purple, with a whitish throat, the upper one being nar-

rower and turned backward. In *M. Harryana* the sepals are of a brilliant rosy-magenta, varying in hue, and sometimes, as in the form called *M. Denisoni*, passing into crimson of intense and glowing brilliancy. This species appears to be the most prolific of flowers, and the most charming in colour of any yet introduced. In *M. tovarensis* the flowers are white, the white being of very remarkable purity, and the flowers grow from three to five on a scape. *Masdevallias* should be potted in shallow pots in a compost of fibrous peat, mixed with crocks, charcoal, and coarse sand. The drainage should be very perfect, as they require an abundance of water at the root, and also in the atmosphere. They should be kept near the glass, but out of the sun during summer, and should have as much sun as possible during the rest of the year. The winter temperature should not fall below 40°, nor exceed 60°; while during the summer months they must be kept as cool as possible, consistent with the other requisite conditions. The surface of the soil in which they are grown may with advantage be covered with living sphagnum moss, which not only assists in keeping an equable degree of moisture about the roots, but it is very effective as a set-off to the plants."—(*Florist and Pomologist, 3 s., vi., 169.*)

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THE SEAT OF SIR RICHARD BULKELEY WILLIAMS BULKELEY, BART.

IN journeying from Bangor to Beaumaris you arrive at the cemetery of the latter town, and on inquiry find that the land was given by Sir Richard Bulkeley; also that most of the houses of the town belong to him. On the hillside above you see a mansion and far-extending noble woods, and these also are his; next you reach Beaumaris Castle, and learn that he is its Constable; further on you pass Fryars, another of his mansions; then you come to the deer park, a walled enclosure, which, with its herd of fallow deer, also belong to the same gentleman; beyond that you reach Penmon Abbey, also having the same proprietor; he is patron of its church, as he is of that of Beaumaris and two others close by; next you arrive at the rabbit warren, also his; crossing that you reach rocks, also his, on which the lighthouse has been raised, and near which the miserable wreck of the *Rothsay Castle* occurred; crossing a narrow strait you reach Puffin Island, also belonging to Sir Richard Bulkeley. In that direction you can travel no further, but if you make a circuit to the westward and inquire who is the proprietor of each farm you pass even to a distance of fifteen miles from Beaumaris, you will find for the most part they belong to him; moreover, he is Mayor of the place. Well, therefore, may he be called "King of Beaumaris," and glad are we in being justified for adding that he and Lady Bulkeley act as good sovereigns should act; and we have great pleasure in aiding to fulfil the Welsh proverb, "The liberal shall not lack praise."

Englishmen of the north, east, and south may be excused for asking for information relative to Sir Richard Bulkeley, and we reply that he quite comes up to the Welsh definition of a gentleman, "a man having a pedigree." The family is of Anglo-Saxon origin, and its name signifies a resident in the bull's meadow (Bul-key-legh), and this is recognised in the family crest, a bull's head. Mr. Nicholas states that they trace their descent from Robert de Bulkeley, Lord of the Manor of Bulkeley in the county of Chester during King John's reign, and that the first who came to Anglesea was William Bulkeley, Esq., appointed Constable of Beaumaris Castle in 1140. From that time to the present they have occupied at various periods the appointments of High Sheriff, Members of Parliament, and in all other ways being leaders of the county. Down to the close of the sixteenth century the family residence was within 100 yards of the church of Beaumaris, and of that residence, known as Hen-plas (the Old Hall), there were until very recently some remains, but now a Presbyterian chapel has taken its place. In 1618 Sir Richard Bulkeley, Knight and first Mayor of Beaumaris, erected a mansion on Baron Hill, and it was not materially altered until 1770, when it was enlarged by the then Viscount Bulkeley, but far greater additions and alterations have been effected by its present possessor. The name, Baron Hill, is a modern form of Bar-on-Hyll, the Bushy Hill.

The woods of noble trees, Beech, Elm, Ash, and Oak crown the hill, and extend along it for miles. Those woods are fronted, and deep passages into them are planted with *Wellingtonia gigantea* and other Conifers and evergreens, so that at no season of the year are they dreary from the absence of

foliage. There are seven entrance lodge-gates to the park, all opening to roads leading to the house, and through or close to those woods.

Those roads, all gracefully winding through the well-kept turf of the park, are open to the public four days in each week—Tuesday, Thursday, Saturday, and Sunday. Visitors to Beaumaris fully appreciate this most pleasant and beneficial privilege, and the townspeople would do the same if they were deprived of it. Other towns struggle hard to obtain a park, and raise monuments, as at Chester, in honour of the man who confers upon them the costly enclosure—for costly it is to keep well furnished and cultivated; in Beaumaris the townspeople have a park entirely gratuitously.

We entered at the lodge gate nearest the woods at the park's northern boundary, and here and throughout a half-mile walk we were surprised as well as pleased with the intense green and vigorous growth of every species of evergreen in the avenue through which we passed, and which crowded on both our right hand and our left, except where, on the latter side, openings are judiciously left to allow of views of the Menai Strait and the Carnarvon mountains beyond. Laurels, Evergreen

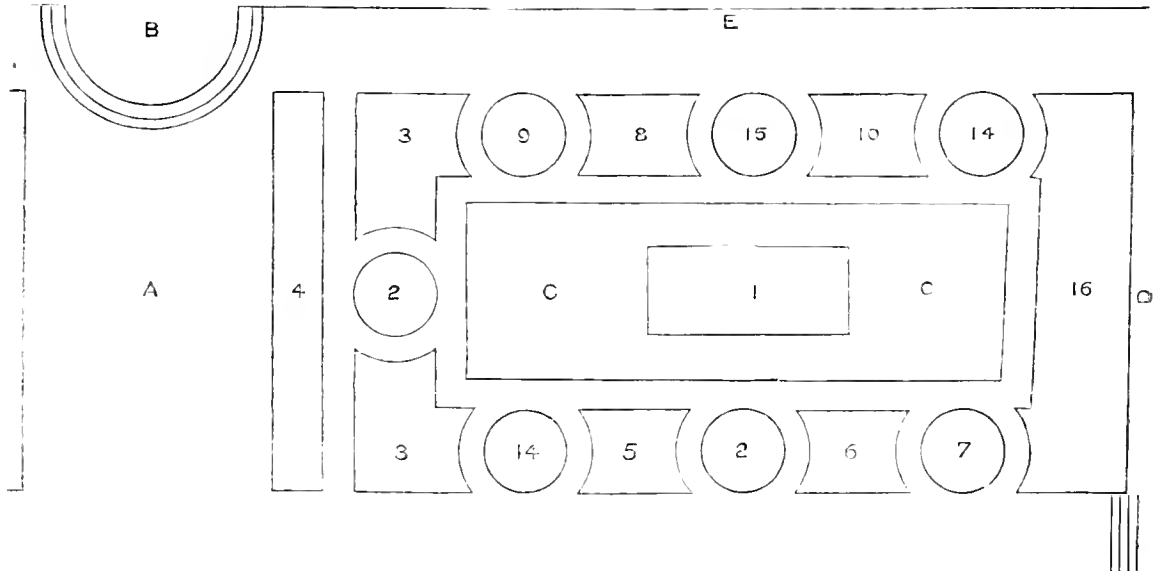
Oaks, Portugal Laurels, Conifers, are alike luxuriant and of perfectly balanced growth; the latter character being preserved to them by the high ground and deciduous woods, which shield them from the prevailing and most powerful winds, which here are from the S.W.

Among the Conifers growing by this road and scattered about the grounds are the following, all planted about nineteen or twenty years since—

	ft in.	Girth of trunk at 3 ft. from soil.		Diameter of branches.
		4 ft.	8 in.	38 ft. 0 in.
<i>Pinus excelsa</i>	33 0	.....	.....	.....
<i>ponderosa</i>	45 6	.....	7 9	46 0
<i>anstracia</i>	35 0	.....	5 5	24 0
<i>Abies Morinda</i>	35 0	.....	4 8	26 0
<i>canadensis</i>	24 0	.....	.....	24 0
<i>Cedrus atlantica</i>	32 0	.....	3 0	22 0
<i>Deodara</i>	35 6	.....	.....	25 0
<i>Libani</i>	28 0	.....	.....	34 7
<i>Cryptomeria japonica</i> ..	30 0	.....	.....	28 0
<i>Araneaia imbricata</i> ..	28 0	.....	.....	18 0
<i>Cupressus macrocarpa</i> ..	27 0	.....	.....	20 0
* <i>Wellingtonia gigantea</i> ..	33 0	.....	6 0	17 6

* Planted in 1858 out of a 7-inch pot.

There are also some good specimens of the following—Thu-



REFERENCES TO PLAN.

- A, A, Gravel walk.
 - B, Summer house.
 - C, C, Grass plot.
 - D, Yew hedge.
 - E, Terrace.
1. Rhododendrons and Azaleas.
 2. English Yew.
 3. Herbaceous plants.
 4. Rose bed.
 5. Stella Geranium.
 6. Calceolaria floribanda.
 7. Diadematum Geranium.
 8. Calceolaria Beauty of Montreal.
 9. Clipper Geranium.
 10. Amy Host Geranium.
 - 11, 14. Portugal Laurel, 10 feet by 10 feet.
 15. Calceolaria amplexicaulis.
 16. Ribbon border. First or front line, Crystal Palace Lobelia; second, Calceolaria Anrea floribunda; third, Calceolaria Beauty of Montreal; fourth, Geranium Bijou; fifth, Geranium Amy Hogg; sixth and seventh, Dahlias of sorts.

jopsis dolabrata, Cupressus Lawsoniana, Thuja gigantea, Picea Pinsapo, P. Nordmanniana, and many others too numerous to mention.

The following are a collection of Hollies, among which are some good specimens—Waterer's Gold, Perado, balearica, Gracier, Handsworthii, Angularia, Marginata, Altaclarensis, Silver Queen, Bronze, Ovata, Donningtoniensis, Myrtifolia, Hodginsii. *Weeping on Stems*.—Yellow-berried, Spinosa, Argentea variegata, and many others.

One Sweet Bay we saw is 35 feet high, and the diameter of the space covered by its branches 20 feet. A Portugal Laurel is 15 feet high, with 20 feet diameter of branches; and a common Laurel 16 feet by 16 feet.

The road by which we entered might be named appropriately the Terrace Road, for terrace it is throughout, carved out of the rocky hillside. Seats for visitors to rest on are fixed at intervals opposite openings admitting views of the scenery; and midway between the lodge and the mansion is a little chapel protecting the sarcophagus of Princess Joan. It is of stone, 4 inches thick, slightly ornamented; is 5 feet 8 inches long, 18 inches wide at the greatest breadth, and 10 inches deep. An inscription placed above it states that it contained the remains of Princess Joan, a natural daughter of

King John, and consort of Prince Llewelyn ap Iorwerth, and that she was interred about the middle of the thirteenth century at Llanfaes Friary, a religious house of Franciscan Friars, founded by her husband about two miles from Baron Hill. After remaining there for nearly two hundred years it was removed and placed in a field hard by, where it served as a watering-trough for cattle. From thence it was removed not many years since by command of the late Lord Bulkeley, who had it placed where it can now be seen. On another slab the following lines are inscribed—

"Blessed be the man whose chaste and classic mind
This unassuming monument designed;
Rescued from vulgar use the sculptur'd stone,
To breathe a moral o'er thy ashes, Joan;
To show mankind how idle is the aim
To thirst for relics, or to strive for fame;
To teach them too to watch life's fleeting day,
Nor grasp at shadows which soon pass away;
For nature tells us in angelic breath,
There's nothing certain in this world but death."

An additional interest attaches to this sarcophagus, because Joan was the mother of the child which, tradition says, was the cause of the death of that greyhound whose place of burial at the foot of Snowdon is so well known at Bed-Gellert. King John had given to Joan's husband that greyhound, whose

correct name was Kil-hart, in allusion to his speed and strength as a deerhound. The prince, returning home and seeing the dog bloody and the child's cradle overturned, hastily plunged his sword through the dog, suspecting him of destroying the child, and then, too late, found the child asleep beneath the bedclothes by the side of a dead wolf. The prince, tradition further adds, founded an abbey at the place now known by the greyhound's name, and the friary at Llanfaes, in gratitude for his child's preservation, and, let us hope, to show his repentance for his hastiness.

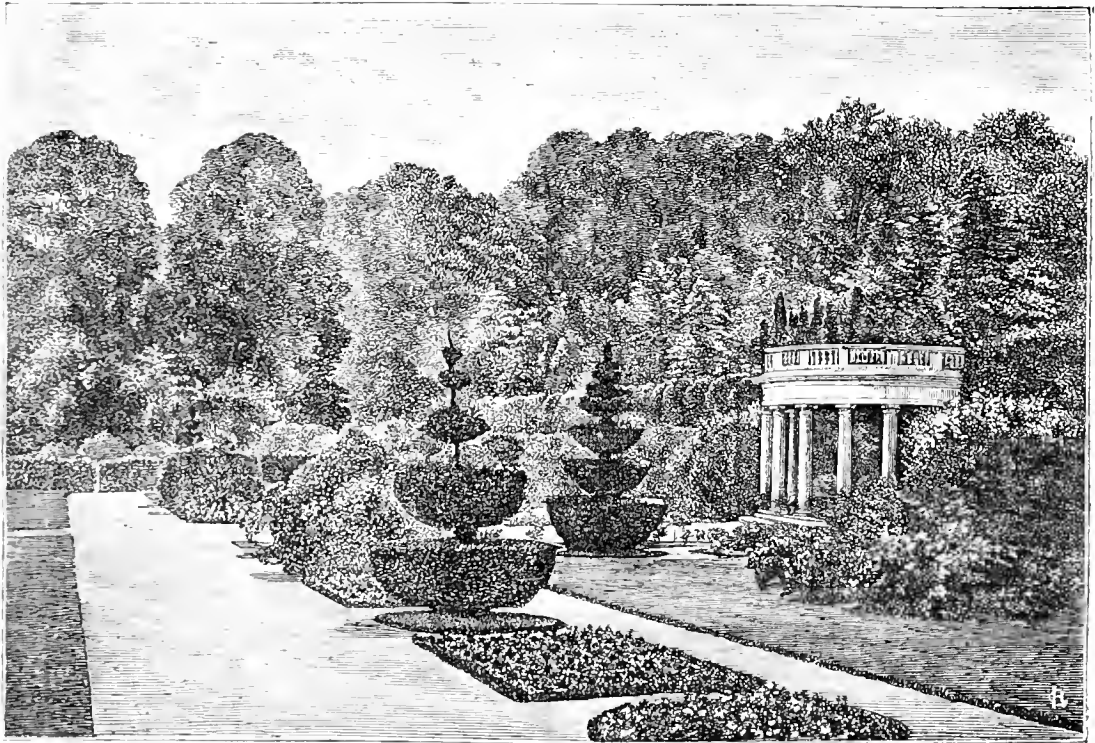
Passing on we reached a semicircle of seats, from before which a flight of stone steps descend to the garden, a portion of which is represented in the accompanying engraving from a photograph taken by Mr. J. W. Ambrose, Beaumaris.

The view across this part of the garden extends over a fountain beyond, to the main walk which seems to lead away to the mountain scenery afar off, and is very effective. The beds are tastefully planted, and the growths here are as healthful and luxuriant as elsewhere. The soil being a loam 5 feet deep

resting on a rocky subsoil, added to the sheltered position, sustains the good gardening. We need note but one or two examples. The masses of Pampas Grass are grand, as may be judged from the fact that one mass bore 150 spikes of flowers. A *Pinus macrocarpa* close to them increased its height 5 feet in two years.

In passing away from this beautiful domain we halted to look upon the view, as seen from the terrace in front of the house. With the park and its scattered woodland for the foreground, and the Menai Strait in the mid-distance, beyond rise up the peaked chain of Carnarvonshire mountains, full fifteen miles in a line of which are seen from the Great Orms Head to Penrhyn Castle. At the feet of that range are visible the fields and woods around, as well as the white walls of the houses of Llandudno, Penmaenmawr, and Aber.

Lastly, in close—too close—vicinity we must note the vinery and greenhouses. The two vineries are each 50 feet in length, 14 feet in breadth, and 13 feet in height. The early vinery contains Black Hamburg, Muscat of Alexandria, Black Prince,



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and Strawberry Vines; the late vinery Black Hamburg and Black Alicante Vines. All of them were models of health and vigour, though they are old, and their size may be appreciated by the fact that on a Muscat of Alexandria there were seventy bunches, averaging certainly 2½ lbs. each, and from which Vine at thinning time two hundred bunches had been cut away. On remarking the cleanliness of the Vine stems and branches, Mr. Gough, the head gardener, said that it was owing to the Gishurst compound with which they were dressed; but we must add, the entirely healthy large leaves and abundant well-coloured Grapes testified to good and well-attended culture.

The greenhouse and plant-house are respectively 69 feet and 51 feet long, which are certainly not half the amount of glazed shelter that is usually allowed for the quantity of plants those two structures have to provide, and we are puzzled in endeavouring to discern how Mr. Gough obtains them. The beds of about twenty acres of dressed ground at Baron Hill, and thirty plants changed every second day for the drawing-room and entrance hall, besides flowering plants for about three-fourths of an acre—all flower-beds—at Nant, have to come from those two houses.

Now we must pass on for a full mile to Fryars, where is the kitchen garden. It is about five acres in extent, surrounded

by a 10-foot wall, and subdivided by other similar walls. The Peach wall, covered with glass, is 270 feet in length. The Cucumber house, in which also are cultivated Melons, Dwarf Kidney Beans, and Strawberries, is 123 feet long, but divided by a glazed partition. This length is required, because Sir Richard Bulkeley wishes for a Cucumber to be on the table every day—whether he gets it we did not inquire, but we saw plants, all vigorous, in various stages of growth, as if there was the effort made to gratify the requirement.

Another glazed range, also 123 feet in length, is devoted to the production of Potatoes, Asparagus, Tomatoes, and other forced vegetables.

The walls are well furnished with Pear, Plum, and Cherry trees, and the crop upon them, perhaps, was just below an average. The kitchen vegetables need no particular notice; but here, as in all other departments, we must express our high estimate of the evidence of Mr. Gough's skill, as we also do of his intelligent courtesy to ourselves. Nant is the flower garden of Baron Hill, but we must endeavour to do justice to it separately.

EVERGREENS APPARENTLY GNAWED.—Like your correspondent "H. E., Hawkehurst," I have been puzzled by what seemed to

be traces of the jaw-work of large larvæ on Rhododendrons, Laurels, and other evergreens. I cannot believe it to be that, nor has observation shown that snails or slugs have to do with it; and as "J. O. W." suggests, it is rather attributable to a decay arising from some morbid condition of the leaves, and hence portions of the leaves are torn away by the agency of rain or wind.—J. R. S. C.

NOTES AND GLEANINGS.

PEOPLE'S GARDEN.—A few minutes' walk from Willesden Junction a limited liability company, which has on its directory the names of Lord Lyttelton, Mr. Harcourt Johnstone, Mr. Solly, Mr. Baxter Langley, and several others connected with the social and intellectual improvement of the masses, have secured some fifty acres of ground, and laid them out after the style of the Crystal Palace park as ornamental grounds, and with all appliances for the performance of athletic exercises. The People's Garden is accessible by train from Broad Street every quarter of an hour, from the Mansion House every half hour, as also from Euston; while the Brighton, South-Western, and Great Western, having running powers into Kensington, render the gardens within the reach of all dwellers on the southern side of the river, and also the west of the metropolis. The flower garden is arranged with borders cut in the grass, and tastefully grown with flowers; the lawns are laid-out for croquet; the exercise ground affords every opportunity for aspirants for fame in aerial tumbling to become proficient in the art; the cricket ground is to be equal to any of those to be found near London; and the platform for dancing, built on 360 piles, is at present the largest in the world. Added to these advantages, which an enterprising board have liberally bestowed, is the natural advantage of a lofty situation, from whence a commanding view is obtained of the counties of Essex, Kent, and Surrey. With these materials at hand the company hopes, by affording gardens and recreation grounds for shareholders and members, to secure for them healthy and rational amusement of an elevating character. A shareholder is made on very easy terms, as the shares are £1-shares, and the amount may be paid either in one sum or at the rate of 1s. 9d. a-month. Shareholders have the privilege of introducing annual members at 5s. each, all of whom have to be balloted for, and so stand a test of respectability. The result of a three-years existence is that the garden is the daily resort of many thousands of persons from all parts of London, but more particularly on Saturdays, Sundays, and Mondays. On Saturday afternoon last the gardens were the scene of a grand horticultural show, at which cottagers, nurserymen, florists, gentlemen's gardeners, and amateurs were invited to exhibit specimens of flowers, fruit, and vegetables in competition for prizes of the value of £40. The Judges on the occasion were Mr. Barron, of the Royal Horticultural Society; Mr. Dean, and Mr. Richards, gardener to Baron Rothschild. The show of different products was highly creditable to the exhibitors; and the fruit and vegetables, coming as they did in many cases from the gardens of the cottager class in the neighbourhood of Willesden and Acton, were an indication of a healthy taste for horticultural pursuits among the working population. The cultivation of such a taste is one of the objects of the People's Garden Company, and they consequently awarded a variety of prizes to the best exhibitors. The button-hole flowers were remarkably successful, and formed very neat and attractive collections. Fruit showed very well. There was also a lovely show of exotics lent by the Royal Horticultural Society. The tent in which they were exhibited was well filled by visitors all day, and no doubt it would have been patronised much longer but for a gale of wind which sprang up about half-past six o'clock and swept the marquee clean from its bearings, burying flowers, fruit, vegetables, and visitors instantaneously in its rums. The visitors were not hurt, but many valuable plants suffered great damage. The gale, however, answered one good purpose: it blew an impending storm swiftly away, and left the many pleasure-seekers to dance in a dry, though cool atmosphere, to the strains of the band of the 1st Middlesex Artillery, till nearly eleven o'clock, when the special train left for Euston.—(Standard.)

— We have the pleasure to confirm the favourable reports of JEE'S PROLIFIC BLACK CURRANT, which have appeared in the pages of some of our contemporaries. Last year we received some of the plants from Mr. Lee, of Clevedon, Somerset, which have this season borne a fair crop of fruit, and we were struck by the tenderness of the flesh and the sweetness of the flavour,

far excelling in both respects those of the old Black Naples, which were growing alongside of them. We strongly recommend this valuable addition to our small fruits to all fruit-growers.

— ONE of the grass gum trees of Australia, XANTHORREA AUSTRALIS, is coming into flower for the first time in Europe, in the succulent house at Kew. There is also a fine plant of AGAVE JACQUINIANA, removed to the Palm house for the sake of space, which is now in full flower.—(Nature.)

— THE sale is announced of the COLLECTION OF AGAVES, FOURCROYAS, AND BEAUCARNEAS belonging to M. De Jonge van Ellemeet, of Oostkapelle, near Middlebourg, in Holland, and which is to take place about the middle of September next.

BEDDING PLANTS IN THE LONDON PARKS.

NO. I.

NEVER have we seen a better display of bedding plants than that which is now to be found in the London parks, and notably in the Green and Hyde Parks; there the beds are gorgeous with flowers and redundant in leafage, where the object sought is leaf-colouring, and the arrangement susceptible of little, if any, improvement. There is necessarily much of dry detail in describing bedding arrangements, and in carrying these out there is a considerable amount of repetition, still it is thought that a few notes on the bedding-out, as exemplified in the London parks, may not be without its utility.

We shall take the Houses of Parliament as our point of departure, and proceed from thence to the Marble Arch. In Palace Yard, near the Victoria Tower, the beds are chiefly filled with Castor-oil plants, Eucalyptus globulus, and Cannas intermixed with Variegated Maize. There is also a fine bed of Solanum macranthum. We now cross St. Margaret's Square adjoining the Abbey by a path, on each side of which is an oblong enclosure, laid out in oblong and circular beds, resplendent in colour in a setting of the brightest of green. We have before had to notice the beauty and softness of the turf, and this year it is in as high condition as it was in the last; there is no brownness, no bare places, but all is smooth, regular, and as nearly uniform in colour as turf can be. There are twelve beds in each enclosure, of which only those at the corners are circular, the rest oblong. All the circles in the northern half are margined with Echeveria secunda glauca, edged with Lobelia pumila grandiflora, forming a dwarf dense mass of blue, and having an inner line of Iresine Lindeni. The oblongs at the sides and ends are margined with Golden Feather Pyrethrum, and edged with Gnaphalium lanatum, forming an excellent setting to the bright masses of Geraniums with which the majority of them are planted. Two of the circles, pairing with each other, are planted with Peach-blossom Silver-variegated Geranium, intermixed with Verbena venosa; other two with Crystal Palace Gem, golden-leaved. In the oblongs are fine masses of Geraniums Lord Palmerston, Editor, Lord Derby, Mrs. Laing, Gaines's Dwarf Calecolaria, and Jean d'Amour Heliotrope. A bed of Murillo Geranium, earmine, is also very fine. On the south side all the circles are margined with Echeveria secunda glauca, and edged with the pretty prostrate Mesembryanthemum cordifolium variegatum, whilst the oblongs have a margin of Blue Bonnet Lobelia, planted intermediately with the graceful white-striped Dactylis glomerata variegata, inside of which is an edging of Iresine Herbstii. Two of the circles at opposite ends are filled with Beauty of Calderdale Bronze Geranium, and other two pairing with each other with Queen of Queens, silver-leaved Geranium, intermixed with Purple Queen Verbena, which far surpasses Purple King in colour. Among the other beds, those of Indian Yellow Geranium, Orange Nosegay, Rubro-cinctum, and Fire King are very good, the last-named especially so. Tom Thumb's Master has run to leaf too much.

In passing through St. James's Park, it may be remarked that a number of Aucubas, Privets, and some Box, the Privets 9 or 10 feet high, have been successfully transplanted to the south side of Stafford House garden on the French system, by raising them by levers; and this having been effected with good balls on the 12th of April, the bushes are now perfectly established, only one or two of the Box trees showing any sign of removal. The site, it may be added, was thoroughly prepared by taking away all the old soil, and replacing it with that thrown out from foundations. On an artificial island in the Serpentine recently formed there is a similar example of successful transplanting, and in this case the trees and shrubs are of larger size.

We next enter the Green Park, and by the side of the path on the east side leading towards Piccadilly, although exposed to the full sweep of our prevailing wind, the south-west, there is a series of oblong beds margined with Blue Lobelia, which in most instances are extremely good. The position is so much exposed that the more tender bedding plants are not trusted in it, but we never saw this portion of the bedding in better condition. Without entering into detail respecting each particular bed, we shall merely signalise a few of the best. Mr. Paul's Bonfire Geranium in particular deserves high and honourable mention, and, though not so good here as elsewhere, is the most effective of its colour—a crimson scarlet. It is plainly distinguishable by its bright glow from a considerable distance. Murillo, deep crimson, is also very fine. Vesuvius, orange scarlet, though it must yield the palm in size and colour to some of the newer varieties, well maintains its reputation as a thoroughly reliable free-blooming kind; and as the season advances, from what we know of it, it will probably be found blooming freely till cut off by frost or distributed to the poorer classes who receive the spoils of the London parks—not, however, as the ill-natured might suggest, as a kind of “black mail” for refraining from appropriation, but to encourage their love of flowers. Here we may observe that throughout the run of beds from Westminster to the Marble Arch, and through Hyde Park to Albert Gate, about two dozen plants would cover the amount of visible abstractions. No doubt this small amount of damage is partly attributable to the careful supervision of the officials and police, but it must be due in much greater measure to the good feeling of the public. A thousand watchers could not secure such a result. Of other beds on this side, Waltham Seedling Geranium, and Albion Cliffs and Daybreak, silver variegated, are noteworthy.

We now come to the north side of the park; running parallel with Piccadilly we find alternately two circular and two oblong beds. These from the east end to Palmerston House are all margined with *Echeveria secunda glauca*, and edged with Purple King Verbena. In this series, beds of Geraniums Excellent, Lucius, Mrs. Laing, and Queen of Queens are the most noticeable. From Palmerston House to Down Street Gate the same margin and edging is continued. An oblong bed in this series filled in the centre with *Coleus Verschaffelti*, surrounded by bands of *Centaurea* is very effective. Among other good beds may be mentioned circles of Queen of Queens, silver-leaved, and Golden Chain Geraniums, and an oblong of *Centaurea* with a centre of *Coleus Verschaffelti Improved*. This is much more glowing in colour than the ordinary form, but we shall have to notice it in still higher colour further on.

From Down Street Gate to the west end of the park the edging is of Sportsman Verbena, but this, probably owing to the trees, is not a success; but there are several good beds of Geraniums, but into these we shall not enter minutely, as we shall have to notice others far surpassing them in our next notice, which will be of Hyde Park.

WORK FOR THE WEEK.

KITCHEN GARDEN.

THE operation of sowing now recommended will not admit of much delay, still it will be nearly useless to sow without watering and shading; therefore, if this cannot be conveniently done, the various sowings must remain over till a change of weather take place. Continue to water all the crops that will receive actual injury without it, particularly Celery. *Basil* and *Morjorum* should be cut and dried just as they are coming into flower. Make a sowing of *Carrots* for early spring use on a light, dry piece of ground that is moderately rich. If *Cauliflower* seed was not sown last week it should now be put in, and another sowing should also be made in about a week in favourable situations. The latter sowing will be early enough, no advantage being gained by having the plants very forward before winter. Plant some of the last sowing of *Celery* for spring use, as it will not be necessary to earth it up. They may be planted at a foot apart. Also plant for seed. If *Cucumber* seed was not sown for plants for house culture through the winter, cuttings should be immediately put in to produce plants for that purpose. Those in frames or on ridges will now require an abundance of water. Make a last sowing of *Endive* for spring use. Continue to transplant from former sowings when the weather is favourable. If a sowing of the various sorts of *Lettuces* to stand the winter was made during the past week, another good sowing should be made at the end of the present one. The former will do for transplanting in the autumn, and the latter may remain in the seed bed to be transplanted in the spring. Get ready the materials for making-up *Mushroom* beds next month, clean-out the old beds, and lime-white the walls of the house to destroy

insects and give the whole a clean appearance. Sow seed of Spanish, Tripoli, or Strasburg *Onion* to stand the winter. The Welsh may also be sown for drawing in the spring. The other sorts are best transplanted in the spring for bulbing. The winter crop of *Spinach* should now be sown, if not yet done. We have before recommended the Flanders variety, we wish we could see it in more general cultivation. Sow a small quantity of Cabbage Lettuce with the Spinach.

FRUIT GARDEN.

The bunches of out-door Grapes, to ripen the fruit, might be enclosed in half-globes of glass, which may be obtained at any glass-blowing establishment, and any spare lights of framing or Peach houses might now be profitably fixed against favourite Vines or Peach trees. Where wasps or flies are troublesome the fruit may be defended with gauze or thin bunting, but where much attention in ripening the wood is necessary, nothing is better than covering each fruit very thinly with cotton wadding. The garden engine must be brought into frequent use during the present hot weather. Peach and Nectarine trees should be washed once or twice a-week, and also have an occasional root-watering. Protect all wall fruit from birds where they are numerous. Plums should also be protected from wasps; use bunting or coarse canvas for this purpose, as nets, unless the meshes are considerably less than an inch in diameter, do not afford the necessary protection. Look to the ripening fruits; gather them carefully when ready.

FLOWER GARDEN.

Chrysanthemums must now be layered, either giving them a twist or making an incision up the under side before they are pegged-down. Those intended for the greenhouse may be taken off, and they will sustain no check from removal—that is, if they are gradually severed from the old plants. Give them plenty of liquid manure after they have formed roots. The seed pods of the first blooms of Carnations must now be well watched, and the calyx slit down to avoid the accumulation of wet; it will be a good plan to allow them to hang downwards. Seeds of Pinks must be gathered; half what we have this year saved will be sown immediately, and the other half next June. Shoots slipped-off and dibbled in sand and leaf soil, and kept moist and shaded, will root well. The Tulip bed for next year's planting must be often turned to sweeten by exposure to sun and air. The bulbs, also, may be examined, and any alterations made in the arrangement of the roots according to memoranda made at the blooming time. Discard all bad and inferior kinds, those with foul cups, pointed petals, &c. Auriculars must be kept free from decayed leaves, and the pots regularly supplied with water. Pansy seed may still be sown. Young plants should be pricked-out in beds, as should also any self-sown seedlings worth saving. Train-out the strong-growing shoots of Dahlias, and pull off the deformed buds as they appear.

GREENHOUSE AND CONSERVATORY.

“Shorten the supply of water as the night lengthens” is a good old maxim, and more applicable to the conservatory now than to any other structure, as it is generally occupied at this season with a mixed collection of flowering plants, many of which are probably stove or half-stove sorts, which require but little water in a low temperature. Cinerarias, Violets, Chinese Primroses, Chrysanthemums, and all other plants that will flower this side of Christmas, must be duly attended to, and such annuals as have been proved, to bloom in pots in the spring, should now be sown. Since, however, the practice of forcing flowers in the spring has become general, these annuals have been discarded in many places, as they occupy room where better things can be wintered.

STOVE.

Such plants as will flower this autumn may yet be well supplied with water, and occasionally with liquid manure, but all other stove plants should be watered more sparingly after this time, and it should be performed early in the day. The house may be shut-up early in the afternoon, even with a strong sun heat. At this season, when plants are ripening-off, a high night temperature is not so injurious to them as when they are beginning to grow in spring. In dull weather slight fires may be used in the daytime, so that plenty of air may be given to the plants.

PITS AND FRAMES.

These are now fully occupied with half-hardy plants, which grow freely in such places in the autumn. The lights should be drawn off at night to let in dews, but defend them particularly from heavy showers or continuous rains, at the same time admit large portions of air by tilting the lights at top and bottom. This is a good time to pot Camellias for blooming in the spring, and also to graft them in close frames without artificial heat. Although this is the proper season for propagating some half-hardy plants which are used for bedding-out during the summer, we by no means recommend it to the extent to which it is sometimes carried. Instead of having an immensity of small plants to take care of through the winter, half a dozen old plants of some sorts, and a few more of others, would furnish cuttings to propa-

gate from in the spring for the largest place, and the plants would be found to grow when planted far better than those which had been propagated in the autumn, in consequence of not being stunted, as the whole of their roots would be in a healthy state. Sow the seed of *Pelargoniums* immediately it is gathered, and also that of any other perennial plant, if ripe before the middle of September. Sow *Mignonette* for flowering in the winter.—W. KEANE.

DOINGS OF THE LAST WEEK.

FRUIT AND KITCHEN GARDEN.

In this department we have been keeping the hoe at work, and on walks and borders which could not be readily hoed any weeds were picked out by the hand. Last year we had much trouble in destroying weeds owing to the continued wet; and, probably from a larger proportion of them being allowed to seed than usual, the crops have been full of weeds this year. A great effort should be made early in the season to destroy all weeds, but gardeners cannot work impossibilities, and the press of work in May, through bedding-out and other operations, is apt to cause this department to be neglected.

We find it necessary to look over the Apple and Pear trees about twice a-week to pick off all fruits infested with the maggot. Seven or eight years ago it was very seldom that a sound dish of Apples could be obtained from our garden owing to the *Apple maggot*, now we have very much diminished its numbers. We tried dusting the trees with dry lime just before the buds burst in the spring, but the most effectual remedy is to gather all fruit from the ground daily, and pick off twice a-week any fruit attacked; thus, by preventing breeding, we ultimately get rid of the insect.

We have been potting *Strawberries* from 3-inch into 6-inch pots. Some persons prefer to layer their Strawberry runners in their fruiting pots at once; they fancy it is a saving of time and labour. In potting it is necessary to ram the compost in quite firmly, and not to place the plants deeper in the pots than they were before. The best compost for them is decomposed turfy loam four parts, to which is added one part of rotted manure. After the plants are potted place them in an open position out of doors; a vacant space in the kitchen garden suits them as well as anywhere, and it should be as near water as possible, as they require a good supply when the pots are filled with roots.

FRUIT AND FORCING HOUSES.

Pinerias.—At this season, after the suckers have been potted and the fruiting plants re-arranged, little more is required except attending to watering and ventilation. During hot weather, especially about the end of summer and in autumn, it is desirable to ventilate freely both at the front and back of the house. Shading is seldom necessary at this time of the year; indeed, when Pines are in good health it is as well not to shade them at all, except in a house where the fruit is ripe and ripening. If the fruit at that time is exposed to burning sun it will in all probability be injured. We have a recollection in our early days of injudiciously exposing some Smooth-leaved Cayennes to strong heat and sunshine to forward them for an exhibition, and before the fruit was well ripe it began to decay.

Vinerias.—In the late vinerias the Grapes are very nearly ripe, and here, as in the Pine houses, plenty of ventilation is the rule. If the houses are kept close and dry the Grapes will not colour well. Many of the old gardeners made a rule to withhold water in any shape as soon as the Grapes began to colour. We fancy that damping the paths and border once or twice a-day is beneficial to the Grapes, and causes them to finish-off better.

Cucumbers.—It is now time the plants were put out for the winter supply. For this purpose there is probably no better sort than *Telegraph*, but when the stock is kept-up from seeds it varies considerably. When a good stock is obtained, it is the best way to propagate it from cuttings; this is the only means of keeping it true. Many prefer the black-spined varieties, and one of the best of this type is *Blue Gown*; it is one of the long-fruited sorts, and, consequently, does not bear so many fruits. When in an early stage of their growth see that no insect pests attack them. Red spider is very destructive to *Cucumber* plants, and they will not progress freely if either this or green fly attacks them. Syringing freely twice a-day destroys the first, and fumigating with tobacco destroys the second. Our pits, where the Cucumbers are planted-out, are furnished with pipes for bottom heat, and when the plants are put out we only fill half of the pit with compost, and when that is well filled with roots, in the other half fresh compost is put.

ORCHARD HOUSE.

We have now discontinued syringing the trees, as the largest proportion of the fruit is now ripe, and here as well as in other houses where fruit is ripening, air is admitted night and day. Some of the earliest varieties of *Peaches* were noticed last week as being ripe. Large Early *Mignonne* is a good Peach, but it is, as far as we have observed here, not so good as Early *Grosse*

Mignonne. *Stirling Castle Peach* is very fine this year. It has been more highly coloured than *Royal George* and *Grosse Mignonne* and is very distinct. *Dymond* is an excellent Peach, and has ripened with us this year for the first time in pots. Another new *Nectarine*, raised by Mr. Rivers, has a good crop of fruit, and the colour and flavour are all that can be desired; it is said to be a cross between the *Stanwick* and *Elruge*, and is appropriately named *Stanwick Elruge*. It partakes most of the *Elruge*, and but very little of the *clingstone*; however, it is an excellent sort and can be highly recommended. We are very careful in watering them when the fruit is ripening, as too much or too little will be equally injurious, and will cause the fruit to be wanting in flavour.

CONSERVATORY AND PLANT STOVE.

The plants in the stove have been repotted and re-arranged, giving them plenty of room. No plants should be allowed to crowd each other at any time; in autumn especially, plenty of space should be allowed them. We do not shade so closely now, and in every way give the plants suitable treatment for the time of year. Hardwooded plants require different treatment from the usual occupants of the stove—such as *Orchids*, *Ferns*, and fine-foliaged plants. The latter require shade during hot sunshine, but only when the sun shines; it is bad treatment to allow the shading material to remain on when the day is cloudy. The hardwooded plants should have plenty of sunshine so that the wood may be well ripened, which will cause them to flower well next year.

Liliums are a special feature in the conservatory. This is a class of plants which does not require much attention during their period of growth, and for this reason, as well as for their great beauty, should be cultivated to a large extent. Nearly all of them succeed well grown in pots, and by a little forcing and retarding a succession of bloom can be obtained all through the summer and autumn months. One of the earliest is *L. longiflorum*, with its clear white trumpet-shaped flowers. *L. auratum* in variety will maintain a long succession, as, grown under precisely the same treatment, some of the sorts will be in flower at least six weeks before the later-flowering. Then there is the beautiful *L. lancifolium*—white, red, and rose; and last, though not least, *L. tigrinum*, also in variety. The double variety recently introduced continues in flower a long time, and we have now in flower in the greenhouse *L. tigrinum splendens*, and it is exceedingly effective, its deep orange flowers offering a distinct contrast to the white, rose, and reddish-coloured flowers of the others. Those which have finished flowering we remove to an open space out of doors, and supply sparingly with water until the foliage dies-off, when they are repotted and plunged in some light material out of doors.

Stage Pelargoniums we have cut down, taking cuttings of those we required, and we would say here that all cuttings of this class of plants do best in a cold frame, pit, or on the stage of the greenhouse. We have seen considerable expense and trouble incurred in making a hotbed in which to place the cuttings, when they would have succeeded much better if the frame had been placed on the ground, and the cutting-pots plunged in spent tan, cocoa-nut fibre, &c. I can remember well, when a boy in a provincial nursery, that the nurseryman had a large quantity of stage *Pelargonium* cuttings sent to him, and every one of them was killed through being placed in a hotbed; not from excessive heat, had it been in April or May all of them might have grown, but similar treatment did not suit the matured wood in autumn.

Chrysanthemums now claim a large share of attention. Those who are growing them for exhibition will now be on the alert to "set" their flower-buds; we have been tying and placing sticks to specimen plants, and have removed them to a more open part of the garden. At this season they require all the sun and air possible.

FLOWER GARDEN.

We are now putting in cuttings of all the *Zonal Pelargoniums*, beginning with the *Tricolors* and *Variiegated* sorts. Some persons put in the cuttings in the open ground, where they do well, but it is necessary to lift and pot them before frosts come. We use boxes, as being more convenient, and if through any press of work we cannot pot them when we like, they sustain no injury if left in the boxes till a more convenient season.—J. DOUGLAS.

TO CORRESPONDENTS.

N.B.—Many questions must remain unanswered until next week.

Books (E. F.).—"The Garden Manual." You can have it post free from our office if you enclose twenty postage stamps with your address. (*Ten-years Subscriber*).—We have a little work now going to press which will exactly suit you. It will be published in three or four weeks.

Rose MILDRE (R. B. P.; and C. B. G.).—The receipt you refer to was given on March 23rd, 1871, and was as follows:—We strongly recommend constant syringing during the growing season with pure rain water, to which has been added a small quantity of soft soap and clear soft water. A strong mixed solution of the latter can be kept in an earthenware pacheon, and

added, when it is settled, to each canful of water, which is used in syringing. This treatment will both invigorate the plants and keep them free from aphid and millew.

MANAGER OF NURSERY (J. Palmer).—As you have a sign-board inscribed, "Palmer's Floral Nursery," and sell the produce, you are not liable to pay for the manager as a servant. He is employed in the trade. Your having another trade to attend to and live by makes no difference.

CUCUMBER DISEASE (A. B. C.).—Your Cucumbers are attacked with the disease for which we know of no cure, except to destroy the plants, and to begin afresh with new soil.

GUM IN CUCUMBERS (Bith).—This is a disease which is more than usually prevalent this season. We have had repeated examples of it sent us, and what we regret most of all is, that we can offer no remedy. It is one of those diseases which, like the Potato murrain, has as yet defied all the skill of science to deal with it.

APPLES (Mrs. C.).—We should not advise you to try Lord Burgheley as a standard in the south of Scotland, but we have no doubt it would do on a wall. Shepherd's Fame is a winter Apple, in use from October to March. You may try Keswick Codlin in addition to Lord Stirling. It is a fine early cooking Apple, and succeeds well as a standard in the south of Scotland.

BUDDING WEEPING ELM, &c. (A Constant Reader).—The end of July is the best time to bud the trees you name, but it may be done now, taking the buds from the shoots that have full-sized fresh leaves, removing the wood. You may practise the budding up to the middle of September.

BRITISH FERNS FROM SPORES (G. H. T.).—Drain some square pans one-third their depth with crocks, large over the holes and finer at top, finishing off with small, on which place a thin layer of moss, then half-an-inch layer of sandy fibrous peat three parts, one part yellow loam, made fine and sifted through a quarter-inch sieve, what remains in the sieve being used for the first layer on the moss, as above stated, an inch thick. Add to three parts of the sifted soil one part of silver sand. Thoroughly mix, and fill the pan to within an inch of the rim, pressing it firm, and making the surface level and smooth, and water through a fine-rosted watering-pot. Let the pans stand three hours, then water again, and when settled scatter the spores on the surface, which may be done by holding the frond with the ripe spores over the pan and gently brushing with the hand. Cover with a square of glass the size of the pan, and set on a damp shelf or other moist bottom in a house safe from frost, as a greenhouse, shading from sun or strong light, and keeping constantly moist. In due course the plants will appear, when the panes of glass may be raised a little on one side by a thin piece of wood, raising it by degrees as the plants advance in growth, and removing it by the time they can well be handled. They may then be potted-off singly in small pots, and if kept close and moist they will soon make good plants.

EXOTIC FERNS FOR EXHIBITION (T. P.).—Of the Ferns you give us to select from, those we should consider most likely to make specimens are *Geiophlebium appendiculatum*, *Asplenium exilis*, *Adiantum emarginatum*, *Asplenium bulbiferum*, *Adiantum assimile*, and *Pteris serrulata cristata*.

VARIOUS (A. G.).—The best time for putting in Laurel cuttings is the last week of September, or from the first fortnight of October to the middle of November. For stretching on wood framework for covering half-hardy plants in winter, use frigidum. The best time to transplant Spruce and Austrian Pine is in moist weather from October to the middle of November, or the first mild weather after the middle of February. Take up the plants of *Azalea pontica*, and pot them for forcing as soon as the leaves have fallen. Pot the Roses at the end of September. After potting Geraniums taken up from the open ground this autumn we do not recommend their being cut-in closely; defer doing so until March. Zonal Geraniums may be distinguished from Nosegays by the former having the petals much broader, more rounded, and in a good variety overlapping, so as to form a circle, the petals being disposed equally around the eye, and the trusses are much smaller. In Nosegays the trusses are large; the three lower petals, though larger, are more rounded than the two upper ones (there being a wide division between them), and not nearly so much so as the upper petals of the Zonals, whilst the two upper petals are narrow and blunt-ended. Take Waltham Seedling as the type of a Nosegay, Clipper or Madame Mazarin as representing the Zonals, and you will soon see the difference. They also differ in the foliage, that of the Zonals being much more rounded and flat.

FUCHSIA TRAINING FOR STANDARDS (Fidjett).—You will not have any chance with standard Fuchsias in competition with those grown as pyramids or bushes, both being examples of good cultivation. The case would be different were the prize offered for standards; then those with stems 2 to 24 feet high could hardly be called standards. Standards should have 4-foot stems. It is natural for the first blooms to be larger than the succeeding flowers, the first should be removed, not allowing the plants to flower until they are well furnished, and the majority of the flowers opening at a time. We cannot undertake to name florists' flowers, they are too numerous and too much alike, and those you sent were wretchedly withered. The thermometer in a greenhouse should be in the shade, or with the face facing north. A temperature of 80 is not too high for Fuchsias in July and August, with air at top and bottom. A temperature of 65 to 75 is, however, more suitable.

POTTING GOLDEN DRAGON PELARGONIUMS, RESINE LINDENI AND COLEUS WINTERING (Edm.).—Lak, up the Pelargoniums at the end of September, removing any soil that will come away freely, and shorten the roots a little; then pot them in a size of pot that will just hold the roots, and place them in a cold frame, keeping them rather close for a few days afterwards, admit air freely. Seven-inch pots would, we think, be large enough. Resine Lindeni and Coleus will strike now in a cold frame kept moist, or any time in September in a gentle hotbed if kept moist and shaded from bright sun. Both are wintered safely in a house with a temperature of not less than 40. They will live in a lower temperature, but not well, and should be kept dry.

LASTANDRA MACRANTHA FLORIBUNDA CULTURE (G. J. R.). We have it now in flower in a stove, in order to succeed well, it requires also a light airy position, but shaded from powerful sun at midday. Like the Peromys and others of their tribe, it is impatient of sudden changes of temperature or moisture, especially when making fresh growth, the leaves wither and fall off at the joints of the shoots; for this we know of no remedy except more careful attention to watering and airing. It will thrive in a greenhouse after the above plan.

PLANTS INHIBITED BY SMOKE OF BRICK-KILNS (L. P.).—There is no doubt that the smoke or vapours of a brick-kiln will drift directly towards your house, though situated at a considerable distance, and if the vapours enter they would seriously damage the plants. We think it likely the injury has been caused by the smoke of the brick-kilns.

SMOKE NUISANCE (G. Mordike).—Use coke, it will heat the flue as well as coal does.

SALAD—ROSE COLLECTION (W. J. W.).—Beetroot and Celery are the ingredients of a salad; but if you wish to exhibit for a prize offered for the best salad, you had better have a greater variety, such as Lettuce, Mustard, and Radishes. "A collection of Roses" is a very vague description. It must be of different varieties, usually not less than twelve. The prize list ought to specify the number, and whether there is to be a single flower or a truss of flowers of each variety.

RHOIODENDRONS, &c. (T. R. H.).—Write to any of the leading nurserymen who advertise in our columns. The one you named could supply all you wish for of every kind, and would advise you honestly. We should return the stamp if you had enclosed one.

TREATMENT OF VINES (St. Brigit).—You ought to have stopped all the side shoots, whether they had bunches showing on them or not. Your house must be very much crowded now; it would, therefore, be desirable to cut back some of the growths to give the wood a chance to ripen, but do not cut too severely. "Practical Treatise on the Grape Vine," by W. Thouson. Blackwood & Sons.

SYRINGING FRUIT TREES (B. B.).—Discontinue syringing a few days before the first fruit ripens; but you should have the trees quite free from red spider at that time, as, if any of this pest should be on the trees, it will spread with amazing rapidity.

BEST SIX EARLY TULIPS (J. A.).—Le Matelas, Proserpine, White Pottebakker, Crayolara, Vermillion Brilliant, and Fabiola.

HERRAGEOUS PLANTS FOR SUMMER BEDDING (A Fifteen-years Subscriber).—The great fault of herbaceous plants is that they do not continue sufficiently long in flower. They are, however, fine in their season. *Agrostemma coronaria* flore-pleno, crimson; *Delphinium Belladonna*, blue; *D. alpeconoides*, blue; *Geranium sanguineum lancastrense*, red; *Lobelia fulgens* St. Clair, scarlet; *Lycnis Haageana superba*, orange; *Mimulus cupreus*, yellowish orange; *Gnothera macrocarpa*, yellow; *O. taraxacifolia*, cream; *Papaver nudicaule*, yellow; and *Silene Schafta*, rosy pink. Why not take off the monotonous aspect by having beds of *Lilium*, *Gladiol*, *Carnations*, *Phloxes*, *Pyrethrums*, *Antirrhinums*, &c.?

ORANGE TREE CASTING ITS FRUIT (A Very Old Subscriber).—The shedding of the fruit is probably due to imperfect fertilisation of the flowers, or it may have arisen from an inactive state of the roots, occasioned by too frequent and heavy waterings having soddened the soil and rendered the roots inactive. The casting of the fruit, if not caused by imperfect fertilisation, generally arises from a check to the roots. See that the drainage is good and the soil sweet.

RE-ARRANGING GARDEN (G. M. F.).—We do not see what more you could have done as regards the preparation of the ground and the stations for the fruit trees, only you say nothing about drainage, and that should be the primary consideration in all improvement of land. We presume it is efficiently drained, or the fruit-tree stations will be only wells for water, in which no fruit tree will thrive. Your walls will answer for Pears, Plums, and Cherries. We should have Pears on the west aspect—viz., Marie Louise, Beurre Diel, and Glou Morceau; Plums on the east aspect—viz., Belgian Purple, Transparent Gage, and Coe's Golden Drop. The other station on the same aspect you may plant with May Duke Cherry, or you may try a *Kaisha* Apricot. The lawn we should have made level, and quite fine on the surface, the ground having been well dug, manured, and firm so as to prevent irregularities afterwards, and then sow in the first moist weather in September the best mixture of lawn grass seeds, which may be had of any respectable seedsman, and roll or beat well with the back of a spade after sowing. It would be well to give a light dressing of manure in November.

PEAS FAILING—PEARS WARTED (J. E. C.).—The Peas were attacked by thrips. The warts resembling the sordida of lichens are exactly analogous to the lenticelles of trees, which is not surprising, as the fruit of the Pear is a continuation of the branch. The white particles which look like fungi are only some of the bleached dignity cells, whose structure is so curious under the microscope.—M. J. B.

TOREA SUPERBA CULTURE (J. H.).—We never saw this with a tall stem. That seen by your employer was probably *Torea hemophyllioides*, which when old, has a stem about 2 feet high. Mr. Williams, a good authority, says of the whole genus:—"In potting, perfect drainage is essential, and good fibrous peat and a portion of silver sand is the best soil that can be used. They grow more rapidly in the tropical fernery in a close case, with an abundance of shade and frequent sprinklings with water over the fronds, and also make fine objects planted in sheltered moist places in the open fernery, but thrive best in the cool house."

SUNFLOWER AND ITS USES (A Constant Reader).—Many facts have been adduced to show that the Sunflower has the property of purifying air laden with marsh miasm, absorbing a great quantity of moist and noxious gases, and exhaling an ozonised oxygen. Moreover, the French Sanitary Commission has lately pointed out that the Sunflower is a most useful plant; it yields about 40 per cent. of good oil, the leaves furnish an excellent fodder, and the stem, being rich in saltpetre and potash, makes a good fuel. The seeds used in small quantities are good for fowls; they are very nourishing.

NAMES OF PLANTS (G. D. M.).—*Melilotus lancastris*. (*E. H. Rodd*).—It is true *Lycopsis arvensis*. The forked cymes are not unusual. (*X. Stumouth*).—*Mandevilla suaveolens*. (*Clare Subscriber*).—1, A *Stachys* of which you have not sent a leaf; 2 and 3, apparently varieties of *Abies excelsa*; 4, *Cupressus Lawsoniana*; 5, *Taxus adpressa*; 6, *Pinus excelsa*. (*Geo. Wall*).—1, *Polygonum aviculare*; 2, *Stachys sylvatica*; 3, *Gnaphalium arvenarium*. (*C. S.*)—No one can determine the names of plants from such scraps.

POULTRY, BEE, AND PIGEON CHRONICLE.

DELAYED INCUBATION.

Mr. J. M. Wain, in a number of the "American Bulletin," cites the case of a hen which left her nest after six days' incubation, and when so discovered "the eggs were very cold." "She (the hen) was certainly off all night, and probably part of the previous day." In this case the certainty (all night) should count for twelve hours, and if we allow for the probability, three hours,

the episode is no improvement upon the Englishman's record of results. The occurrence vouched for by Mr. Wade, exhibited an instance of arrested incubation for about the same number of hours that the eggs were exposed to the cold, as on the twenty-third day (no hour given), but about two days—probably less—behind time) eight out of ten hatched. Mr. Wade did not pretend to set forth with any precision when the eggs were set, at what hour they were hatched, nor how many hours they were deserted. I conclude, therefore, that they were as many hours late as they were hours neglected, for my long and studied experience of just such a question has led me to believe in the exactness of the rule that twenty hours of abandonment does not check even the growth of the chick, provided always that they have native stamina of race, and that the weather is not so killing as to retard vegetation. This may appear a strong and curious assertion to make, but I am fortified by almost a life-long, personal, experimental, and critical experience. Mr. L. Wright, in his "Illustrated Book of Poultry," page 49, relates an incident where the eggs became stone-cold, but fails to observe the time lost, although by treating them with water at 105° they "eventually hatched;" how long after maturity, not stated!

When these circumstances attracted my attention, I would fain have added what knowledge I possessed of the subject, but I preferred to hold my peace—never having preserved the exact details of any of the abundant examples which I have met—until an opportunity should appear of sufficient interest to scrutinise carefully and register with accuracy; for I deem such a question as the one involved devoid of all usefulness if deprived of the minutest particulars of facts. Recently, an event in my yard has afforded me the opportunity, which I need not say I seized, and after this long preamble I will, with your permission, proceed to explain it.

On Saturday, 19th April, 1873, I set a hen at 6 p.m.; the eggs were, therefore, due to hatch on Saturday, May 10th, at 6 p.m., according to ordinary received impression of the period of incubation, which I hold to be more or less inaccurate. On Saturday, 26th April, at 8 p.m., in the dark, she left her nest (having sat just a full week), and could not be found. No hen was procurable that night, and the next day being Sunday nothing was done; but on Monday, 28th April, at 8 p.m., another hen was borrowed, which took to the eggs readily. Having to borrow a hen, the charge of them was not confided to her until darkness had set in. Here then was a loss of forty-eight hours! The second hen sat steadily until Wednesday, 7th May, when, being attacked with diarrhoea, her illness caused her to forsake her nest at 6 a.m. At this time no further endeavour was made to save the eggs, and they remained in the nest until Friday, 9th May, at 3 p.m. (a lapse of fifty-seven hours), when, having two hens come off, I doubled-up the broods, and gave the rejected batch of ten eggs—having discarded three that were added—to one of the two hens, to see what sort of business she could make of the trial. Bear in mind that the sum of the time during which the eggs were uncovered, uncared for, and untreated to any application of heat, was 105 hours! Now let one take from that, twenty hours, as the time in which I think chicks suffer no loss in growth, and I obtain eighty-five hours as the period to be made up by extra incubation; and that this estimate was not incorrect the result shows, as on Tuesday, 13th May, at 6 a.m., eighty-four hours after due, all the eggs with one exception hatched out strong and healthy chickens. Here was an arrest of incubation of eighty-four hours, although the eggs had been unprotected during 105 hours. This may appear incredible, but to prove the calculation, and to render it more extraordinary still, let me allude to the fact that twenty-one days or 504 hours are usually allowed for incubation, whilst in the case now instanced the eggs were only under the hen 460 hours! Leaving forty-four hours to be accounted for between 504 hours the stereotyped quantum for incubation, and 460 hours in which these neglected eggs were delivered of full-grown chicks. I think this proves both of my ideas (1st) that a chick will grow for twenty hours or so after being deserted in the shell, and (2nd) that the natural and sufficient period for incubation is twenty days. For add twenty hours of growth to 460 hours (the time when the eggs were actually under the hens), and there are 480 hours in all. Now take twenty-four hours from 504 (being twenty days instead of twenty-one), and there is the proof—480 hours. If I am asked why this should be, that eggs can pass through so many shocks and chills, I can only say I know not any reason for it. But this I know, that out of thirteen eggs I received ten lively chicks, which it took three hens to hatch, and that the three only sat altogether 460 hours, or twenty hours less than twenty days. If it proves anything at all, it is that close sitting kills; that a chick will grow twenty hours after it is left alone, and that twenty days are sufficient to hatch chickens if the mother hen is not too ardent an incubator. Upon general principles, then, I would recommend that every chance should be given before a clutch of valuable eggs be abandoned. If by the feel it is ascertained that there are chicks within, wait until the discoloration of the shell announces the fact of decomposition having begun.

I may add that the egg I said was not hatched had within it a live chick, in whose behalf I performed a Cæsarean operation, by taking it out of the shell. At first it showed great weakness, but soon came round under the influence of a spirit lamp and cotton batting, and it, and all the others of the belated brood, are as thriving and active as any in my possession, and I am apt to fancy that they are more vigorous, which may be only partiality. Up to this time not one has died.—R., *Tarrytown-on-Hudson*.—(*American Pet-stock Bulletin*.)

BRAHMAS' COMBS.

THE forward position of Brahmas' combs, noticed by Mr. J. R. Croker, is not peculiar to them alone, as the combs of pure-bred Malays are placed similarly, which, together with the fact that a cross between the Malay and a single-combed breed of fowl produces triple combs (a matter that I have never seen mentioned, but of which I have much experience), warrants the supposition that Brahmas are a well-established cross between Malays and Cochins.—O. P. H. Z.

HAS Mr. Croker compared the comb of the Brahma with that of the Malay? I am inclined to think that he will find the "distinctive feature" he points out in the Malay. The Brahma is a good useful fowl, but I feel sure it is a mongrel having Malay blood in it.

More than twenty years ago I produced the pea comb by crossing a Malay hen with a Dorking cock. Three chickens out of nine had the pea comb, and one was combed like a Light Brahma. Besides, in some American book on poultry, I think Bennett's, the history of the production of the Brahma is given, showing that it was produced in America by certain crosses made there.—R. B. P.

PUBLISHING JUDGES' NAMES.

I FULLY endorse all that has been said by Mr. Wren in last week's Journal. It ought to be imperative on every Committee to publish in the schedule the names of the judges. My experience as an exhibitor and breeder of some years' standing, teaches me that it is only fair to all to publish the names of the judges. As you say, the secretary's name, and the names of the patrons, president, and committee are published, why not the name of the judge? He is the most important officer in the show. It is easy to see in many cases why it happens thus—the judge may have only a very meagre knowledge of fowls, and yet because he is a friend of some of the gentlemen belonging to the show, or because he has been judging at some other show, they invite him.

An objection raised to this mode of procedure is, that if the name of the judge is known good exhibitors will not show when a man is judging whom they may think incapable of judging, and very right too. Would any man who understands what are good birds send his best specimens to what he may term a lottery? for sending them to be estimated by some judges is nothing more. I and other exhibitors have decided not to show if the names of the judges be not published. Would it not be much better for a society to engage a thoroughly competent judge? and if financial difficulties did present themselves, I am sure no exhibitor would object to paying 6*l.* extra for the entrance fee. If they would do this they would find it advantageous. Shows are often ruined on this account, especially local shows, for a local show and a local judge are a farce. How often do we see a class limited to two entries because a local judge knows all the birds in the district.—G. H. PICKERING, *Middle Street, Driffield*.

HETTON POULTRY, PIGEON, AND RABBIT SHOW.

THE above-named Show was held on Tuesday the 12th inst. in the Hetton Hall grounds, than which a more suitable or more attractive place could not be found. The poultry were arranged in the old-fashioned box pens in double tier in the lower portion of the meadow, and for the amount given in prizes the entries were very good, but in the absence of a catalogue we are not able to give a correct list of the winners.

In most of the adult classes there were very good birds, the *Spanish* being a fair lot, and the *Dorkings* very good. The *Cochins* were poor, but *Brahmas* very good, and all the *Hamburghs* noteworthy. The winners in the above classes were mostly Messrs. Buglass, Clarke, Proud, Whitfield, and Moor. In large Game Messrs. Robson had it almost to themselves with good birds; while in Game *Bantams* Mr. Hunter stood well with some stylish birds, Mr. Laing, of Sunderland, taking the chief prizes in *Ducks*. In chickens the Brahmas were forward and good, and the Red Game chickens exceeding fine in all particulars, while the Game Bantam chickens of that colour were the best class in the Show. The principal prizes in this were won by Messrs. Robson and Hunter. The winners in *Polands* were Golden, and very forward and promising birds.

Pigeons were poor, with the exception of English Owls, but,

on the contrary, the Rabbits were good. A large cage of young Lops contained some most promising animals.

The Judge was Mr. E. Hutton, Pudsey.

PADDOCK POULTRY SHOW.

This was held on the 16th inst. The following are the awards:—

- BRAHMAS.—1, H. Beldon, Goltstock. 2, J. Bail y, Earby.
- HAMBURGHS.—*Golden-spangled*.—1, H. Beldon. 2, G. Haigh, Holmfirth.
- Silver-spangled*.—1, H. Beldon. 2, J. Robinson, Garstang. *Golden-pencilled*.—1, H. Beldon. 2, J. Robinson. *Silver-pencilled*.—1, H. Beldon. 2, J. Robinson.
- BLACK.—1, N. Marler, Denton. 2, H. Beldon.
- GAME.—1, H. Beldon. 2, J. C. Brooke, Holmfirth.
- BANTAMS.—1 and 2, G. Nobles, Staincliffe. 3, T. Cropper, Bacup.
- SPANISH.—1, J. Powell, Bradford. 2, H. Beldon.
- POLANDS.—1, J. Robinson. 2, S. H. Wood, Diggle.
- COCHIN-CHINA.—1, H. Beldon. 2, T. F. Anstet, St. Helens.
- DORRINGS.—1, J. Robinson. 2, J. Walker, Rochdale.
- HOUZANS.—1 and 2, J. W. Hibbert, Hyde.
- GEES.—1, J. Walker. 2, J. Crossland, Royds Mount.
- DUCKS.—*White Aylesbury*.—1, J. Walker. 2, H. Hutchinson, Littleborough.
- ROUEN.—1, J. Newton, Salsden. 2, J. Walker.
- TURKEYS.—1, J. Walker, Rochdale.

PIGEONS.

- CARRIERS.—1 and 2, G. J. Taylor, Farnlow.
- CROPPERS OR POUTERS.—1 and 2, G. J. Taylor.
- TRUMPETERS.—1 and 2, W. Harvey, Sheffield.
- TUMBLERS.—*Almonds*.—1, G. J. Taylor. 2, W. Harvey. *Any variety*.—1 and 2, G. J. Taylor.
- FANTAILS.—1, W. Tomlinson, Newark. 2, J. F. Loversedge, Newark.
- BARBS.—1 and 2, G. J. Taylor.
- TURBATS.—1 and 2, G. J. Taylor.
- JACOBS.—1, G. J. Taylor. 2, W. Harvey.
- ANY OTHER VARIETY OR COMMON.—1 and 2, G. J. Taylor. c, J. Thresh, Bradford.

RABBITS.

- HIMALAYAN.—*Buck*.—1 and 2, S. Ball, Bradford. *Doc*.—1, S. Ball. 2, J. Hallas, Huddersfield.
- ANGORA.—*Buck*.—1, S. Ball. 2, T. Gurnes, Northampton. *Doc*.—1, H. Cox, Wobley. 2, G. C. Hutton, Bradford.
- LOPE-EARED.—1, G. J. Taylor. *Prize for the Unimproved Rabbit on the field*. F. Banks, London. 2, J. Hume, York. *Doc*.—1, F. Banks. 2, A. H. Easton, Hull.
- SILVER-GREY.—*Buck*.—1, A. H. Easton. 2, S. Ball.
- COMMON.—*Buck*.—1, J. Hallas, Huddersfield. 2, F. Berry, Mirfield. *Doc*.—1, A. Haigh, Longroyd Bridge. 2, J. Hallas.
- ANY OTHER VARIETY.—1, G. R. & K. Hackett, London. 2, F. Banks.

CATS.

- PERSIAN.—1, W. Appleton. 2, J. Dvson, Paddock.
- MANX.—1, B. Helliwell, Delph. 2, D. Horne, Luckwood.
- TORT-OISELLE OR TORT-OISELLE-LAND-WHITE.—1, R. Spivey, Huddersfield. 2, J. Binns, Lindley.
- BLACK.—1, A. Thornton, Mosley. 2, R. Shawcross, Oldham.
- GREY TABBY.—1, J. Henrich, Huddersfield. 2, J. Hampshire, Liversedge.
- JUDGES.—*Poultry*: Mr. J. Jordan, Dalton, and Mr. R. Lane, of Birmingham. *Rabbits and Cats*: Mr. Fisher, of Crosshills, near Skipton, and Mr. G. Johnson, Kettering.

MALMESBURY POULTRY AND PIGEON SHOW.

CONSIDERING the inconvenience there is in arriving at this small town, there being no railway within five miles, the Committee must be heartily congratulated on the success of the Show held on the 14th inst. Birds came even from Worcester, Oxford, and Basingstoke.

The chief features in the poultry classes were *Game* fowls. Black Reds were very good, this year's birds taking first honours. Light *Brahmas* and *Cochins* were exceedingly good, and fairly surprised the rustics of the neighbourhood. *Bantams* were very good, Black Reds taking first, a handsome pen of this year's Duckwings being second. Rouen *Ducks* and the Black East Indian were all that could be desired.

In *Pigeons*, Pouters were the chief feature, two pairs of grand White birds taking the first and second prizes. Trumpeters and Jacobs were good, though only two pens of the latter were shown. Antwerps were very strong and good. The class for Any other variety brought forth some really good birds, a pair of really handsome Pygmy Pouters being first, and Yellow Barbs second.

- DORRINGS.—1, E. Hooper, Calce. 2, C. Cole, Malmesbury.
- SPANISH.—1, W. Holston, Bristol. 2, W. Hanks, Somerford Magna.
- GAME.—*Black-breasted Red*.—1 and 2, F. S. Godsall, Stroud. *hc*, E. Bowly, Worcester. G. Hanks, Malmesbury. *Any other colour*.—1, E. Witwood, Worcester. 2, E. F. Woodman, Cirencester. *hc*, J. Andrews, Worcester; E. Bowly.
- COCHINS.—1, S. Beckland, Crutwell. 2, J. S. Maggs, Tetbury. c, Rev. N. J. Ridley, Newbury.
- BRAHMAS.—*Dark*.—1, J. Prinder, Cirencester. 2, E. S. Godsall. *hc*, T. Jones, Malmesbury. *Light*.—1, Mrs. Sterne, Devizes. 2, W. Hanks. *hc*, G. Ellison, London; W. Latham, Wotton Bassett; Rev. N. J. Ridley.
- HAMBURG.—1, H. Thompson, Highworth. 2, J. S. Maggs. *hc*, R. Barrett, Stroud. c, G. Day, Somerford.
- ANT OTTER VARIETY.—1, J. Binton, Warminster. 2, J. Archer, Wotton Bassett. *hc*, Mrs. Sterne; Rev. N. J. Ridley; J. S. Maggs.
- GAME BANTAMS.—1, E. Bowly. 2, G. Holloway, jun., Stroud. *hc*, E. Bowly; C. Scamling, Trowbridge; S. Tilling, Malmesbury.
- BANTAMS.—2, W. Garnham, Lasborough.
- TURKEY.—1, Rev. N. J. Ridley. 2, S. Gibbs, Somerford Magna.
- GEES.—1, G. Cole. 2, G. Hanks.
- DUCKS.—*Rouen*.—1, G. Holloway, Stroud. 2, T. Jones. *Aylesbury*.—1 and 2, J. S. Maggs. *hc*, G. Hanks.
- ANY OTHER VARIETY.—1 and 2, G. S. Sainsbury, Devizes. *hc*, C. Cole.

PIGEONS.

- CARRIERS.—1 and 2, T. Jones, Malmesbury. *hc*, W. Tomlinson, Oxford.
- POUTERS.—1, R. Barrett. 2, G. Holloway. *hc*, H. C. Howard.
- TUMBLERS.—1, R. Barrett. 2, T. Jones. *hc*, W. Hodgson, Bristol.
- TRUMPETERS.—1, A. P. Maurice, Basingstoke. 2, S. Beckland, Crutwell.

- ANTWERPS.—1 and 2, W. Tomlinson. *hc*, R. Barrett, jun., Stroud; J. S. Maggs.
- JACOBS.—1, G. Holloway.
- FANTAILS.—1, Dr. Hunter, Malmesbury. 2, W. Holston. *hc*, R. Barrett.
- ANY OTHER VARIETY.—1, G. Holloway (Pygmy Pouters). 2, W. Tomlinson (Barbs). *hc*, W. Tomlinson (Barbs); R. Barrett (Dragoons); W. Hodgson (Nuns); J. S. Maggs (Barbs); J. P. Salway (Turbits).

- RABBITS.—*Lop-ear*.—1 and 2, C. Arthur, Melksham. *Himalayan*.—1 and 2, C. Arthur. *Silver-Gray*.—1, C. Arthur. *Any other variety*.—1, C. Arthur. 2, A. Bailey, Malmesbury.

Mr. Martin, of Worcester, was the Judge.

POLYGAMY IN PIGEONS.

PIGEONS, say the various treatises, are strictly monogamous; and the rule thus positively stated I have hitherto regarded as being one which did not admit of an exception. There is, of course, the well-known proverb that there is no rule without an exception, but as regards the monogamous nature of Pigeons I have never until this year met with an illustration of the truth of the proverb.

I do not attempt to speak of the experience of other Pigeon fanciers in the matter; but my own experience has been that although, if they have not been properly mated, two birds will sometimes "break pair," as it is said, and each bird take to itself a new partner of the opposite sex, the male bird of a pair properly mated will not associate himself with a second female partner and at the same time continue to consort with the hen with which he was first mated. Such, I say, has hitherto been my experience; but I have this season met with what I believe to be a remarkable exception to the rule in question, and as a statement of the facts may interest some of the readers of "our Journal," I will endeavour to give a short account of the case.

I may begin, then, by saying that I became possessed a short time since of two pairs of Tumbler Pigeons, one a pair of Black Shortfaced, and the other a pair of Blue Long-faced Tumblers. These two pairs of birds were placed together in the same house, but apart from all other Pigeons. They had not been more than a very few days together when I observed that the Black hen took but little notice of the invitations made to her by her own partner to enter a nest, whilst she seemed much attracted by the attention shown to her by the Blue cock. This state of affairs was immediately followed by the Blue cock altogether beating-off the Black one from the companionship of his hen, and by his driving both hens to nest most persistently. In a very few days two nests were made in two separate corners of the house, and a pair of eggs was laid in each nest. Both hens commenced sitting, and during the period of incubation I believe that the Blue cock regularly took his turn on each nest, for I repeatedly saw him sitting first on one nest, and then on the other. I should mention that from the time when the two hens were first taken charge of by this bird, I have never seen the other bird either approach his own hen or attempt to enter her nest, nor have I ever seen him attempt to pair with the Blue hen, so there cannot have been a change of partners.

Now for the hatching. The eggs laid by the Blue hen were, during my temporary absence from home, injured by some means; but I ascertained by an examination of them that each contained a bird. From the eggs laid by the Black hen two birds were hatched, which lived until they were about three weeks old. Both birds were Blue, so that their parentage on the male side may be regarded as fully established. The cohabitation of the one cock bird with the two hens did not, however, end here, but has continued down to the present time. Somewhat more than three weeks ago the two hens again went to nest, each, again, sitting on a pair of eggs. On this occasion as on the former, the Blue cock has, I believe, regularly taken his turn of sitting on both nests. All the eggs, too, have again proved fertile, two young birds having been hatched from each pair of eggs. One pair of these young birds I have been under the necessity of shifting to the care of nurses, a circumstance which I regret, as I should have been glad to have observed how the one cock bird would have managed with the two pairs of young ones claiming his attention at the same time. The foregoing is, as I have already indicated, the only case of the kind that has come under my observation in any way; but perhaps other readers of the Journal will state what their experience has been.—R. W.

HONEY HARVEST IN DUMFRIESSHIRE.

THE honey harvest in the clover districts of Dumfriesshire, which have no heath in their vicinity, has now been gathered, and the result in a great measure corresponds with that recorded by your esteemed correspondent, "B. & W." The bee season of 1873 is the worst that has been experienced since 1855, which was only a shade better than 1853 and 1851. There is no surplus honey. All efforts to get supers stored with sweets failed. In every case they were appropriated by the queen to breeding purposes. When the spoiled combs were cut out and new ones built they were again filled with brood. But I am not disposed to think that either "sourness of soil" or "winter rains" have

operated at all against the secretion of honey, for whenever a fine day occurred it was found in abundance.

The season opened with the fairest prospects. On the 20th of May the best stocks were at the verge of starvation, but by the 8th of June they were filled to overflowing. Not one empty cell was to be seen. After that date, however, no addition could be made to their stores. Damp showery weather set in, and has continued up to the date at which I write (August 11th). This alone may explain our disappointment, for if the products in the nectaries of flowers were washed-out by heavy rains, or much diluted with water, the labours of the bees will be vain. To have honey of good quality, and to permit of its being successfully gathered, the atmosphere must be so dry as to cause evaporation. So long as the flowers are wet with dew or atmospheric moisture pollen may be collected, but comparatively little honey will be carried into the hives. With the exception of some five or six days which occurred at intervals, the last nine weeks have been damp throughout. Breeding stocks have, in consequence, been obliged to draw largely upon their stores, but those from which fertile queens were from time to time removed are in very good condition. These latter, having little brood to maintain, were just able to earn a subsistence and continue their *status quo*.—R. S.

HORSERADISH.—Very few people know that pieces of horseradish added to the vine jar in pickles improves their flavour and prevents mould.

OUR LETTER BOX.

BLACKPOOL POETRY SNOW (*H. B. Smith and Others*).—You are quite justified in complaining that there were no pens, and the birds had to be shown in the baskets they travelled in. It was probably intended to be a makeshift affair, as it was not advertised.

POULTRY-KEEPING (*L. M. N. P.*).—We did not see the pamphlet you refer to. We believe that we made our extracts from the provincial paper of the county where the speech was delivered.

FOWLS INJURED BEFORE REACHING THE SHOW (*H. Moore*).—We would publish full particulars if they would prevent similar malpractices. As your birds were highly commended, notwithstanding their feathers had been clipped off, it is doubly annoying. It is an additional evidence that the travelling baskets should be locked, the key being sent to the secretary by post.

FEEDING POULTRY AND OTHER BIRDS (*B. S.*).—All live food has a tendency to make birds thin, and to render them dissatisfied with other food. We advise you to discontinue the beetles, except now and then a few thrown down. Wherever they constitute the daily food we should look for a great mortality, and we do not in any case recommend them. The real use of live food is in rearing or "meating-off" certain birds. There is sometimes a critical period in the life of a young Pheasant when it will eat nothing in the way of ordinary food. It has become dissatisfied and wanders about hungry in the midst of plenty, crying, Peep, peep, peep. At these times only ant's eggs, or live food in the shape of maggots will save them. Another case where live food is required, is when it is necessary to get a recently caught Nightingale to feed. The food is scraped beef mixed with yolk of egg. The trough inside the cage is filled with this, and a meal-worm is half buried in it. The upper half writhing and twisting about attracts the bird. It pulls out the worm, and in eating it it eats some of the food adhering to it. The worm is buried deeper every day, thus giving more of the food, and at last it is discontinued. Those, however, who keep Nightingales in cages, know that at certain times appetite has to be renewed by the gift of a few meal-worms. It is not so with fowls, but with many birds the live food is always held as a valuable last resource, and is used for that only.

POULTRY IN NEW ZEALAND (*D. Z.*).—There are plenty of pure fowls in New Zealand, and more are being sent out. We cannot help thinking eggs may reach as far in condition for sitting, but our experience is unfavourable to the belief. The best means of conveyance is a steamer. We cannot at present quote the exact cost of transit, but it is not much. The tank should be tin or zinc.

PROLIFIC TURKEY (*W. B.*).—Your hen Turkey, which has produced eighty eggs, has laid far more than the usual number. Has she never been broody?

AYLESBURY DUCKS' PLUMAGE YELLOW (*Ignoramus*).—We have no doubt the plumage of the Ducks is affected by the dirty water of the pond, especially if yard and stable drainage runs into it. Keep them from it, and let them run in the highest grass you have while the dew is upon it early in the morning.

BRAHMAS BROODY (*Constant Reader*).—We have kept Brahmas ever since they were first known. We do not find they are more prone to be broody than other breeds. We should be very sorry to cure them of it. If you want fowls that do not sit you have plenty to choose from—Spanish, Hamburgs, Creve-Coeurs, Houdans, and La Fleche. No fowl desires to sit till it has laid its eggs. We have hundreds of Brahmas, and go for weeks (to our cost) in the early spring without a broody hen.

PIGEONS (*Fan*).—The varieties you name are alike in hardness. If you refer to our present number you will see an advertisement from Mr. Fulton, Union Terrace, Brockley Road, Upper New Cross, London; or you may apply to Mr. Yardley, Market Hall, Birmingham.

DIVIDING STOCK BEES—DRIVING (*H. Alsop*).—We do not think you can safely make two hives out of No. 1 this autumn by dividing it as you propose. The super is too shallow to make a hive of, and the wood rim which you put to the lower part of the main hive could not be taken away without rendering the comb in it useless, as it would have to be cut away, and would fall in. Much better remove the super and keep it for another year, if there is too little honey in it to tempt you to plunder it. So also let the hive remain with the rim on; it will make a splendid stock for another year. Do not plunder No. 2, you will gain but little from it; keep it for another year.

As to No. 3, why not drive the bees into an empty hive, then catch the queen, and add them to one of the swarms? Do it towards sunset, when the bees are mostly at home, and let them march straight up into the swarm's hive, first dashing them out of the empty hive on the ground. You must put the swarm near it.

COVERING FOR A HIVE (*L. M. H.*).—Cover your hive with a large Duchess slate, putting a couple of bricks at top. You can make it incline forwards or backwards to carry off drip, by resting one end of it on a bit of wood. We fear your bees are in a bad way if you can see no honey at the windows. If this continues you must feed them without loss of time. We fear the honey season has been bad with you as with others.

YELLOW-BANDED BEES—DRONES (*W. G.*).—No. 1 of the specimens sent is undoubtedly a hybrid, the offspring of a black queen and a Ligurian drone. Your young queen must have met with a drone of the latter variety, although you say that no Liguirians are kept in your vicinity. The other bees sent are rather doubtful, the colour of the rings having probably become less distinctly marked since death. We must compliment you on the admirable method adopted by you in mounting and packing the specimens, which arrived in a condition very different from the smashed messes we are often asked to give our opinion upon. We do not think there is much advantage in the cross with a black queen and Ligurian drone, though there undoubtedly is with respect to the opposite cross. Drones are often bred in a swarm of the current year. Drone egg-laying is usually, in such circumstances, a precursor of a maiden swarm being thrown off. It is not usual for drones to make their first appearance so late in the season.

METEOROLOGICAL OBSERVATIONS,

CAMDEN SQUARE, LONDON.

Lat. 51° 32' 40" N.; Long. 0° 8' 0" W.; Altitude 111 feet.

DATE.	9 A.M.				IN THE DAY.				Rain.	
	Baromet. at 32° and sea level.	Hygromet.		Direction of Wind.	Temp. of Soil at 1 ft.	Shade Temperature.		Radiation Temperature.		
		Dry.	Wet.			Max.	Min.	In sun.		On grass.
1873.	Inches.	deg.	deg.		deg.	deg.	deg.	deg.	deg.	In.
Aug.				S.W.						
We. 13	29.801	68.0	63.3	S.W.	63.3	73.3	60.7	13.65	69.2	—
Th. 14	30.086	64.8	69.1	W.	62.5	75.3	56.0	13.27	53.0	0.107
Fri. 15	30.091	65.4	62.2	W.	63.1	76.4	58.7	1.81	56.5	3.010
Sat. 16	30.016	66.4	63.0	S.W.	63.4	84.8	59.8	127.6	56.1	—
Sun. 17	30.201	61.2	55.4	W.	63.0	75.3	48.2	123.0	45.6	—
Mo. 18	29.851	60.7	55.3	S.	62.4	68.4	54.4	119.4	50.4	0.460
Tu. 19	29.604	60.4	57.0	W.	61.2	71.5	51.9	123.2	48.5	—
Means	19.963	63.4	59.3		62.7	75.2	55.7	122.1	52.9	0.577

REMARKS.

- 13th.—Rain early, fine by 8 A.M., and beautifully so the remainder of the day and the night.
- 14th.—Very fine day throughout.
- 15th.—Wet early, but fine before noon, continuing so with a starlight night.
- 16th.—Dull early, fine forenoon, and till 6 P.M., then very dark and stormlike, with a few large drops of rain, but fine afterwards.
- 17th.—Fine, dry, bright, cool day.
- 18th.—Rather dull morning, a little sun before noon, rain soon after, and continuing more or less all day and night.
- 19th.—Slight rain early, and again at 1 P.M., rest of the day fine. Temperature very similar to previous weeks, but slightly declining. Rapid fall of barometer between 17th and 19th.—G. J. SYMONS.

COVENT GARDEN MARKET.—August 20.

RETAIL trade falling off. Supplies well kept up, both homegrown and continental.

FRUIT.

	s.	d.	s. d.		s.	d.	s. d.
Apples.....	½ sieve	1	6 to 0	Mulberries.....	½ lb.	0	6 to 0
Apricots.....	doz.	2	0	Nectarines.....	doz.	6	0 to 12
Cherries.....	½ lb.	0	6	Oranges.....	½ 100	6	0 to 16
Chestnuts.....	bushel	0	0	Peaches.....	doz.	12	0 to 20
Currants.....	½ sieve	2	0	Pears, kitchen.....	doz.	0	0 to 0
Black.....	do.	2	0	dessert.....	doz.	2	0 to 0
Figs.....	doz.	2	0	Pine Apples.....	lb.	3	0 to 0
Fibers.....	lb.	1	0	Pums.....	½ sieve	4	0 to 0
Cobs.....	lb.	0	0	Quinces.....	doz.	0	0 to 0
Gooseberries.....	quart	0	3	Raspberries.....	lb.	0	4 to 1
Grapes, both house.....	lb.	2	5	Strawberries.....	½ lb.	0	0 to 0
Lemons.....	½ 100	8	14	Walnuts.....	bushel	8	0 to 12
Melons.....	each	2	0	ditto.....	½ 100	2	0 to 2

VEGETABLES.

	s.	d.	s. d.		s.	d.	s. d.
Artichokes.....	doz.	3	0 to 6	Mushrooms.....	pottle	2	0 to 4
Asparagus.....	½ 100	3	0	Mustard & Cress.....	punnet	0	2 to 0
French.....	0	0	0	Onions.....	bushel	3	0 to 0
Beans, Kidney.....	½ sieve	1	0	Pickling.....	doz.	0	0 to 0
Beet, Red.....	doz.	0	0	Parsley per doz.....	bunches	0	0 to 4
Broccoli.....	bundle	0	1	Parsnips.....	doz.	0	0 to 1
Cabbage.....	doz.	1	0	Peas.....	quart	0	8 to 1
Capsicums.....	½ 100	0	0	Potatoes.....	bushel	6	0 to 0
Carrots.....	bunch	0	0	Kidney.....	do.	0	0 to 0
Cauliflower.....	doz.	3	0	Round.....	do.	0	0 to 0
Celery.....	bundle	1	6	Radishes.....	doz. bunches	1	0 to 1
Coleworts.....	doz. bunches	2	6	Rhubarb.....	bundle	0	6 to 0
Cucumbers.....	each	3	0	Salsify.....	bundle	1	0 to 1
pickling.....	doz.	0	0	Savoy.....	doz.	0	0 to 0
Endive.....	doz.	2	0	Scorzenera.....	bundle	1	0 to 0
Fennel.....	bunch	0	3	Sea-kale.....	basket	0	0 to 0
Garlic.....	lb.	6	0	Shallots.....	lb.	0	3 to 0
Herbs.....	bunch	0	3	Spinach.....	bushel	2	0 to 3
Horseradish.....	bundle	3	4	Tomatoes.....	doz.	2	0 to 3
Leeks.....	bunch	0	6	Turnips.....	bunch	0	3 to 0
Lettuce.....	doz.	1	0	Vegetable Marrows.....	0	1	0 to 3

WEEKLY CALENDAR.

Day of Month	Day of Week	AUG. 28—SEPT. 3, 1873.	Average Tempera- ture near London, 43 years.			Sun Rises		Sun Sets.		Moon Rises.		Moon Sets.		Moon's Age.	Clock before Sun.	Day of Year.				
			Day.	Night.	Mean.	Days.	m.	h.	m.	h.	m.	h.	m.				h.			
28	Th		72.7	49.7	61.2	19	8	af	5	54	af	6	45	10	45	8	5	1	1	250
29	F	Bishop Auckland Horticultural Show.	71.2	47.6	59.4	16	10	5		52	6		59	11	1	9	6	0	13	241
30	S		74.5	48.2	61.3	11	11	5		50	6	after.	24	9		7	0	25	242	
31	SEN	12 SUNDAY AFTER TRINITY.	71.5	47.4	59.4	17	13	5		47	6	33	2	55	9	0	0	7	243	
1	M	Partridge shooting begins.	71.1	47.5	59.3	21	14	5		45	6	46	3	40	10	9		after	244	
2	Tu		71.0	47.6	59.3	19	16	5		43	6	49	4	42	11	10	0	31	245	
3	W	Royal Horticultural Society, Fruit, Floral, and General Meeting.	71.8	47.7	59.2	19	18	5		41	6	39	5	noon.	11	0	50	246		

From observations taken near London during forty-three years, the average day temperature of the week is 71.9; and its night temperature 47.9°. The greatest heat was 85°, on the 1st, 1843; and the lowest cold 32°, on the 2th, 1870. The greatest fall of rain was 1.50 inch.

BELGIAN HORTICULTURE.—No. 5.

M. VERSCHAFFELT'S, GHEENT.



IT is nearly a year since I spent three enjoyable hours in this renowned horticultural establishment, but intervening circumstances have prevented my sending a notice of a place well worthy of note in current garden literature. I remember noticing "Verschaffeltii" ticked on a plant label when I was little or no taller than my father's spade, and screwing my jaws into all sorts of forms to get it into my mouth. As to what it meant even the "under gardener" could not divine, and I had come to regard him as about the cleverest man alive, being fully converted by him into the belief that he knew a great deal more than the "gaffer"—very presumptuous evidence, however, offered only by presumptuous know-alls, and only fitted for children's ears.

Verschaffelt is an old and universally-known name, and is associated with many horticultural triumphs. The representative of it, M. Jean Verschaffelt, is now in the sere and yellow leaf, and his hair is silvered by the lapse of years. He does little more than enjoy himself by little cultural fancies, the practical management of the establishment being relegated to his nephew, M. Jean Nuytens. To any English gardener making a pilgrimage to the Belgian plant emporiums, and especially if he knows little beyond his mother tongue, I say, Do not omit a visit to this not extensive but interesting place, and he will find in M. Nuytens a gentleman who is certain to give him a cordial welcome, and converse in his mother tongue as well as he. I know what it is to hear a houseful of children all crying together, and a bothyful of aspiring Paganinnis learning to fiddle, but I never remember experiencing such a surfeit of sound as the daily din of French, Dutch, and Flemish which violated my restricted sense of hearing and understanding. I could get away from the children and fiddling, but a stranger in a strange country cannot get away from the babel of tongues which surrounds him, and to fall in with such perfect anglicised Belgians as MM. Nuytens and Van Houtte, jun., is in itself a "find" of the first order, and at once compels an appreciation of the English language in a way not understood before. M. Verschaffelt's is in the Faubourg de Bruxelles, and within ten minutes' walk of Van Houtte's great place, so that both may be seen under one visit, and the heads of each will willingly direct to the other.

The Verschaffelt Nursery is about the only one I visited which shows any sort of effect or symmetry in the matter of laying or planning-out. Its limited size, in comparison with some others, brings a great portion of it in the scope of vision at once; but we cannot see at anything like a glance the multitudes of good things—old, new, and rare—with which the establishment teems. The nursery may be said to be a parallelogram, with an irregular offshoot to the left, and divided from the garden proper by a public road. A broad walk runs down the centre

of the grounds, and at the time I saw it formed the site of an ornamental avenue of standard Bays, in front of which were lines of specimen Agaves, Yuccas, Buonaparteanas, &c. The Bays were splendid examples in their way: they were the very perfection of health, and as round as an orange. Many were sold at prices varying from twenty to fifty guineas per pair. The sides of the other walks were lined by fine plants, in various stages, of Araucarias, planted in baskets for safe removal, and in luxuriant health and free growth. The plant houses are grouped together near the packing-sheds and dwelling-house. They are long plain structures, devoid of ornament, but admirably adapted for their purpose, as is evidenced by the remarkably healthy condition of the occupants. Ferns, Palms, Orchids, and the whole paraphernalia of plants seem to grow like weeds, and are as clean as if every leaf had been sponged the day previous. Importations of plants are continually arriving; a lot of new Cycads and monstrous trunks of Dicksonias were just being potted. A great proportion of these must die; indeed, how they live is a wonder, but that they do live the many giant stems with green spreading crowns plainly attest. But the dead trunks, I observed, were turned to account by the tops being scooped out, and having Ferns and other things planted in them.

This place is rich in tree Ferns, the match pairs of Alsophilas and Dicksonias being both magnificent and numerous, and the demand, somewhere, is equal to the supply. Orchids are well represented in number and variety; they are not grown large, but are mainly confined to handy portable specimens. The curious forms of the vegetable world have also in this place numerous representatives, amongst which are noticeable Testudinaria elephantipes and a fine batch of the Old Man plant, Pilocereus senilis, in striking resemblance to the hoary head of a hale octogenarian. Contiguous is a lot, only a degree less singular, of Pilocereus Hoppenstedtii in strange garb and spiny.

There are Palms, too—yes, Palms by the thousand, or, as I think "D., Deal," once put it, "Palms for the million." There is only one question more puzzling than the impromptu one of Whence come they? and that is, Whither go they? Yet they are ever moving onwards in their decorative course from tiny seedlings to splendid spreading specimens in all the best old and all the rare new varieties. Well may Linnæus attempt to obscure the rest of the order of monocotyledons, to which they belong, by styling them "princes of the vegetable kingdom." Few things are more imposing than choice and well-managed collections of Palms. They are plants which one may look and look again at, and ever to admire. They have a history, too, and a use which cannot be ignored. How graphically Melville, in his "South Sea Adventures," describes the uses of the Cocoa-nut Palm, Cocos nucifera. The passage is worth reproducing here. He says, "The blessings this Palm confers are incalculable. Year after year the islander reposes beneath its shade, both eating and drinking of its fruit: he thatches his hut with its boughs, and weaves them into baskets to

carry his food; he cools himself with a fan plaited from the young leaflets, and shields his head from the sun by a bonnet of its leaves. Sometimes he clothes himself with the cloth-like substance which wraps round the base of the stalks. The nuts, thinned and polished, furnish him with a beautiful goblet; the dry husks kindle his fires; the fibres are twisted into fish lines and cords for his canoes. He heals his wounds with a balsam compounded from the juice of the nut, and with the oil extracted from it embalms the bodies of the dead. Sawed into posts, the trunks uphold his dwelling, and converted into charcoal it cooks his food. He impels his canoe through the water with a paddle made from its wood, and goes to battle with clubs and spears of the same hard material." After this, feeling my incapacity of description, I will say no more about Palms at present.

Besides the above, M. Verschaffelt's establishment contains a fine collection of stove plants of every type. Marantas and Dracenas are numerous and fine, a lot of specimens of *D. reginae* in high colour standing out effectively. They are strong, too, in the Gesneriaceae; *Eucodonia*, *Nagelias*, &c., being provided in great variety, while some fine types of new flowering *Begonias* made their presence felt; but of these, perhaps the finest collection in the world is located at Van Houtte's, to be noticed hereafter.

M. Verschaffelt had also an excellent and extensive lot of Camellias and Azaleas; all the best plants of the former were purchased in my presence by one of our great English nurserymen. Many fine sorts of Azaleas had their origin here, and amongst the rest the beautiful and free *Souvenir du Prince Albert*. Perhaps, however, I may be prejudiced in favour of this variety, but I have a reason, and when I tell it Messrs. Verschaffelt and Van Houtte will both hold me excusable, whether anyone else does or not. What appeared also distinct speciality of M. Nuyten's were *Yuccas* and *Agaves*. The latter were especially fine. What a fine and distinct type of plants we have here. There is something intrinsically good about them, and their attractions do not wear out in a season. They are being increased as fast as possible with a confidence that the future will recognise their merits. A more free use of these stately yet graceful and ornamental plants would add a pleasing and diversified feature to many gardens where they are not; but when beauty of form and substance become as fully appreciated as beauty of mere colour, then will such things be sought after and popularised as they deserve to be. Having just glanced at the outline features of this compact and interesting place, I will add no more beyond a desire to see it and the able and affable manager M. Nuyten's once again on some—it may be long—future day.—J. WRIGHT.

A YORKSHIRE FLOWER SHOW.

We are in the midst of a perfect shower of horticultural exhibitions in the West Riding. Nearly every day for the last fortnight there has been an exhibition of flowers and fruits; and villages, which from all appearances you would consider most unsuitable for affairs of this kind, astonish you by their energy and the excellence of their shows. Such an exhibition has recently been held at Elland, a large manufacturing village in the heart of the West Riding, and it occurred to me that a few notes respecting it might be acceptable to you. Staying here as I am for some weeks, I thought I would try how *Roses* would travel in one of Chapman's cases, and so I entered for the *Rose* prize; but although a friend saw my *Roses* safely delivered to the Great Northern Railway the day before the show, they have not yet arrived! So I went partly as a visitor and partly as an assistant to my brother, who staged a dozen remarkably fine blooms—*i.e.*, fine considering the time of year and the smoke-laden air which his trees have to breathe.

This part of the country is the very antipodes to the west of England. The rich people here are the labouring classes, the poor ones as a rule the masters. The colliers round here can earn £1 a-week, and the factory hands 30s. to £2. They live on the fat of the land, and do not hesitate to buy the most expensive luxuries. Early in the year a collier ordered of one fishmonger 80 lbs. of salmon for a small supper which he and his friends were going to have; and as another instance of their wealth and extravagance I can relate the following true anecdote. At a large fruiterer's shop in Bradford early in the season a gentleman inquired the price of a Fine Apple. "Thirty shillings," was the answer. "Oh, that is too much for me; my purse cannot stand that." A collier was looking in at the window, and when the gentleman withdrew he entered and

asked, "What didst thee say t' price of that ere were?" "Thirty shillings," said the shopman. "Here, lap it up, then, lad; it will do for our Sal. Here's t' brass." I expected great things, therefore, from a population like this, and I was not disappointed. The Show was excellent, the arrangements very good, and the attendance enormous.

This little Society has a subscription list of £110, and at the last year's show £113 was received at the gates, the greater portion of which sum was derived from *6d.* entrances. I wonder what the managers of our west-of-England shows will say to this. Elland had a balance this year, after five exhibitions, of £150; Cleckheaton, another village near here, £650. Indeed, wherever a flower show is held the receipts are enormous; and although this Society gives wretchedly poor prizes, yet the entries are most numerous, and the Show of August 19th would compare favourably with any but the largest exhibitions held in the south. Think of the band of the Royal Horse Guards (Blue) being engaged at an expense of nearly £80 to perform at an out-of-the-way place like Elland, besides two small country bands which played when the Guards were silent.

As to the Show itself: As I have said, it was very good, and, considering our climate, remarkably so. There were three entries for ten stove and greenhouse plants; and some magnificent specimens of *Allamanda Hendersoni*, *Ixora*, *Vinca alba*, *Vinca rosea*, &c., were staged by Messrs. W. Pontey, of Huddersfield. The *Liliums* also were magnificent. I saw one pot plant of *Lilium lancifolium* roseum with forty blooms on. *Lilium aratum*, too, was very finely shown; and *Caladiums*, *Lycopodiums*, *Campanulas*, and exotic Ferns were really very fine. The crowd was enormous—I should say at least eight thousand people visited the Show; and although they were a little rough they were always good-tempered, and were the most critical people on the subject of flowers and music I have ever met.

There was an immense competition in the cottagers' class for vegetables. Some former inhabitants of Elland who had taken up their abode in America sent over a silver cup to be given for the best collection of vegetables, and, as you may imagine, most cottagers had a try for it. The Committee had to take the greatest care to prevent unfair practices. They saw the vegetables dug up and put in baskets, which were then sealed, and any basket which was open on the morning of the Show was disallowed; and, indeed, this precaution is very necessary, for we Yorkshiremen (I am one), are rather too sharp sometimes. The cottagers think nothing of buying, or borrowing, or begging—I won't say stealing—blooms and vegetables. A man came to my brother and calmly said, "William — wants to know if you will give him some *Roses* to show at Elland." "What number of trees has he to show from? has he many?" I asked. "Nay," said the man, "he's nobbut one." And yet this fellow was calmly going to exhibit twelve and six blooms! It is almost impossible to prevent this sort of thing, but if it go on very much longer it will be a question whether it would not be better to give up horticultural shows rather than let them become a mere market place for all kinds of cheating and larceny. Mr. William Paul has most nobly exposed this system before, and all persons interested in horticulture will feel that in some way or other it must be put an end to.

There are only two things which, in my opinion, this and other societies in this neighbourhood should change. They should give better prizes and have better judges. Seven pounds for ten stove and greenhouse plants (the best prize given), is not much for a society so prosperous as this one to give, while 10s. for a collection of twelve *Roses* is simply ridiculous. As to the judging yesterday, the least said about it the better. I never saw such judging. I inquired who the judges were, and found them to be local nobodies, gardeners to gentlemen in the neighbourhood. I do not think it can be too strongly urged on committees that liberality in procuring first-class judges is as important for the interests of the show as procuring a first-class military band. I think I never saw a greater miscarriage of justice than in the ten stove and greenhouse plants and in the *Roses*. In the west of England the first thing we look to is to have good judges. Mr. Charles Turner, "*D., Deal*," Mr. Peach, and other great florists are always secured, and the exhibitors know that their flowers will be judged on their merits by persons in whose judgment they have the greatest confidence, and I think it will be well if the north take a lesson from the west in this respect. But with these two exceptions no fault can be found with the manager of the

Elland Flower Show, which was one of the most successful exhibitions I have ever seen.—JOHN B. M. CAMM, *Brighouse*.

FLOWERS FOR OUR BORDERS.—No. 15.

OXALIS ELEGANS.—ELEGANT WOOD-SORREL.

In common with most of its congeners, it is produced from a bulb of small dimensions, and appears likely to prove nearly, if not quite, hardy. The leaflets are bluntly triangular, generally of a pale green beneath, but, in some plants, of a bright reddish purple. Judging from our own specimen, we should infer that both varieties of foliage may be found on the same plant. The leaves are less numerous than in the *O. cernua* and some others; but in the case of full-sized bulbs, are much larger than in many of the species. The flower scape is about twice the size of the petiole, supporting a truss of from six to ten blossoms of a purple colour, the eye of the flower being of a very intense shade.

The sepals, or divisions of the calyx, are remarkable for four minute linear orange-coloured glands at their tips, which, although too small to be readily detected by the unassisted



Oxalis elegans.

eye, are easily perceptible under a microscope of low power, such as the Stanhope or Coltrington lens. These glands form an excellent mark of distinction. As in all the species, the petals are twisted in the bud, and form, when expanded, a flat-limbed corolla. It is a native of the Andes of Peru.

In the case of many species of this genus the new tubers annually formed require to be dug up after flowering, as they are produced at such a distance from the surface that, unless this precaution is adopted, they will eventually be lost. In the case of *O. Bowiei* and other autumn-flowering nearly hardy species, it is advisable to defer the removal of the tubers until spring, as in severe winters they would be safer at a depth of some inches; and from the late period at which the blossoms are produced, the young tubers would suffer from being disturbed in their immature state. As they do not commence their growth until the following summer, the month of April will be sufficiently early to replant them.

The bulbs of the *Oxalis elegans* do not penetrate the soil so deeply as some of the other species; but they should, notwithstanding, be replanted every autumn, after the decay of the leaves. The soil best suited to this and most of the *Oxalises*,

is a light sandy loam, with an admixture of peat or leaf mould. A dry sunny situation should be chosen, for the blossoms expand only under sunshine.

Oxalis elegans is a very free flowerer, even the small bulbs will generally produce several umbels. The trusses will need the support of a small rod to prevent them from being dashed to the ground by heavy rains; and for this purpose nothing is better than the top of a slender unpeeled osier. These supports are commonly employed by professional florists, but they are not so generally in use among amateurs as they deserve to be. Their pale bark renders them very inconspicuous, and their freedom from knots or roughness, and tapering form, makes them, in our opinion, far more desirable than the brittle hazel rods or painted sticks ordinarily used for these purposes.

The hardness of the present species has already been adverted to. It will be prudent, however, to afford the roots some protection in very severe weather; but the covering should not be suffered to remain too long, or the bulbs would be forced into premature growth.

All the *Oxalises* may be cultivated in pots; and when thus treated, they can easily be preserved through the winter in a dormant state. Considering the great interest attaching to this pretty genus, and the showy character of their blossoms, we are really surprised that they are not more frequently met with. A bed of mixed species, planted in clumps of eight or ten bulbs each, forms in sunny weather one of the most attractive objects imaginable. All the half-hardy species which flower in summer and autumn may be thus grown, and their tubers may be dug up after the leaves are withered, and preserved in dry sand. Among the most desirable species, whether for the open borders or pots, are *arborea*, yellow; *spectabilis*, pink; *violacea*, violet; *caprina*, flesh; *crenata*, yellow; *cuprea*, copper-coloured; *lobata*, yellow; *hisiopetala*, pink; *geniculata*, yellow; and *variabilis*, with its varieties *grandiflora* and *Simsii*, with white flowers.—(*Thompson's English Flower Garden, Revised by the Author.*)

POTATO DISEASE DURING WINTER.

SOME of the points suggested by Mr. Bréchant's communication on this subject were illustrated by experiences of my own, also in the island of Guernsey, during last winter; and although these have been already published in detail in the *Gardeners' Chronicle and Agricultural Gazette* of 22nd March, yet as many horticulturists may not have the means of referring to them there, a brief abstract of the results may possibly be of service in the discussion now proceeding in your columns.

On August 19th, September 7th, and September 20th, Rivers's Ashleaf and Mona's Pride were planted out of doors in a sound dry loam, moderately manured with cow manure only. Disease showed itself on the leaves and stems of all at successive periods from 1st of November to 15th of December, when the tubers were about the size of walnuts. The growth was entirely arrested, but the disease seemed not seriously to attack the young tubers—in fact these, and even the old set, in the case of the first-planted lot, showed a tendency to throw up new stems after the first growth had been killed to the ground. Over a portion of the last-planted lot glass lights were placed in the beginning of November; this delayed the appearances of the disease, but it ultimately appeared and pursued its regular course.

A further lot of the same and other kinds were planted in an orchard house of about one-eighth of an acre in extent towards the end of October. Disease appeared on these about the end of December, affecting first some that were under a drip off the glass, but ultimately spreading to the whole. No water was given artificially during the period of growth. The crop proved extremely scanty, but the few tubers produced were of fair size, and hardly affected by disease. The weather during the whole winter was very dull and damp, but mild till the end of January, afterwards cold, though not frosty.

The conclusions I drew were that the disease is not caused solely either by the season of the year, the wetness of the soil, heat or electricity (though no doubt all or any of these influences may enhance the liability or augment the virulence of the disease), but that it originates in ill-elaborated sap forming a favourable nidus to the well-known fungus. This imperfect elaboration of the juices occurs chiefly, of course, in the more tender varieties, and in summer may arise from too much grossness or luxuriance, in winter from absence of sunshine. I would recommend the experiment of passing a heavy

roller over any stems that at this period of the year appear too succulent, before the disease shows itself upon them, having observed some favourable indications from a partial experiment of this nature.—B. K., *Guernsey*.

BROWN'S WONDER STRAWBERRY.

I ENTIRELY agree with Mr. Powell's opinion of this variety; it was sown here—in fact, a weed compared with many of our fine established varieties. I had grown a stock of it, but destroyed it instead of inserting it in our list.

While writing about Strawberries, how is it we never meet with Dr. Roden's gems, so temptingly described in your last number? They are never met with in good gardens, on the exhibition table, or in any catalogue.—CHARLES TURNER.

BLUE PETER AND LITTLE GEM PEAS.

DR. RODEN, in your issue on the 14th inst., has described Blue Peter as superior to Little Gem; here it was very inferior to it. My opinion is, that Little Gem will remain a favourite long after Blue Peter is forgotten. Emperor of the Marrows is also highly spoken of; I hope, however, this will not induce any of your readers to grow it.—THE INTRODUCER OF LITTLE GEM.

POTATOES AS THEY ARE.

WOODSTOCK, OXFORDSHIRE.—After thirty-seven years of trials, and of crosses and gropings in the dark, I may say for a good third part of the first series, it really appears to me now that I have arrived at the climax. For both garden and field cultivation I have singled-out from my newest 316 seedlings, which I informed you of at the beginning of the season, about one hundred varieties for future observation and "weeding-out," and from which I hope in about another three years to hand down to posterity something still better than is known at present of my productions excepting by myself. It should take seven years to properly test a new Potato and get it ready to "send out;" so I suppose, for the reason given at the commencement of this paper, I must be cautious how I speak of a future seven years. If I be spared to enter into future crosses, I shall leave no mystery about where and how I leave off, and there will be left others better than myself to carry on the enterprise—yes, enterprise is the word—for experimentalising for the further improvement of the noble tuber will be found no joke, and I speak feelingly.

Well, since I was set to pick up a certain quantity of the old Early Shaws in my uncle's garden at Sicklesmere, before I was taken by my father to witness my first play at the theatre, Bury St. Edmunds, I have never seen better crops of Potatoes than I do hereabouts this year, and they are generally free from disease. I have also had an opportunity to a wide extent in this and other counties of inspecting the Potato and other crops, and excepting some breadths I lately saw in full blossom in Middlesex, which upon inquiry I found to be "foreigners," I should say our late English sorts will bear out their destiny; notwithstanding they are spotted more or less in the leaves, the haulms remain green and upright—a pretty good criterion to go by as regards freedom from disease in the tubers. Early and second early sorts are mostly already secured in good condition.

I have, nevertheless, seen and heard of a few diseased tubers making their appearance amongst the later sorts, notably with my own, amongst Yorkshire Hero and the old Cobbler's Lapstone, the only two "strangers" which I grew this year for comparison besides my graft hybrid Yorkshire Hero in Onwards, for carrying out the purpose of testing what difference exists between the latter and the former, which I find to be this: The hybrid is 6 inches shorter in the haulm, and ripens fully three weeks before Yorkshire Hero. When taken-up last week no person viewing the sorts as they lay upon the ground in their bulk side by side—let them be never such novices in Potato judgment, could fail to perceive a general refinement in the tubers of the hybrid as compared to those of Yorkshire Hero, and I may include also those of the old Lapstone, which, by-the-by, with Yorkshire Hero, were in their growth of haulm throughout, and in appearance of tubers, as "like as two peas" of the same sort.

There has lately sprung up a contention as to who was the raiser of Yorkshire Hero. The Rev. W. F. Radclyffe sent me the Yorkshire Hero, some years ago, as being a graft hybrid of Mr. Thomas Almond's. I very much doubted at the time if it was possible to graft one Potato into another kind and achieve a change in the sort; but the evidence I received in writing was so strongly in favour, that I determined to try for myself; and time and many trials convince me it can be done after a manner of dwarfing and refining, both in top and tuber, a strong-growing variety when it is grafted into a kind of medium growth, and that in nine cases out of ten it will utterly spoil

the grafter. I find this subject coming on the *tapis* again in another phase, but it is scarcely worth while now for me to enter into the subject in these pages, seeing that I have done so very often, without, however, being able to convince the sceptics. It may prove useful and interesting just now if you will reprint the following:—

"Bramham, near Tadcaster, May 22nd, 1866.

"These Kidney Potatoes were propagated by Major Hague, but they were raised by his son Joseph, the particulars of which are as follows:—

"I, Joseph Hague, in the year 1827, then residing at Thorne, near Leeds, planted two pecks of Potatoes, which I had sent me from Clap Gate, near Harewood. Those Potatoes produced an extraordinary quantity of fine berries, which induced me to try to raise seedlings from them. In that I succeeded, and selecting the two best from among the quantity, I again planted the seedling tubers, but subsequently removed to Bramham, where I now reside. Having no garden connected with the house I then occupied, I took my seedlings over to Bardsey, and they were planted in my father's garden; and as he was the first to propagate them, the general impression was, and is now, and is with many people to this day, that he raised them himself, but he never at any period of his life attempted to raise seedling Potatoes. I have five brothers who can all testify to the accuracy of the above statement. Mr. Fuller, florist, &c., Headingley, near Leeds, but at the time gardener to G. Lane Fox, Esq., of Bramham Park, gave the Lapstone Kidney its name.—JOSEPH HAGUE."

There are a great many Lapstone Kidneys now under as many aliases, and I had at least twenty varieties of them on trial in a field near here a few years ago, and some wags removed my numbered pegs, and for the life of me, as I had not numbered the rows in my book, I could not tell which was which of the majority of them, and so my comparative experiment came abruptly to an end. Fortunately I had presented the old Lapstone breed to Mr. Radclyffe some years ago, and this circumstance enabled me, through his kindness, to get my old variety again this spring.

Well, neighbours call in to see me with bulging pockets, to become gradually emptied as they formally and lovingly distribute along the ground fine samples of Mona's Pride, &c.—a decoy for envy. Only a wine merchant, as he hands out a sample of his choicest brand, could assume a greater air of superiority. I instinctively turn to my ridges, but, no, the proper amenities would not allow me to discover finer tubers than those of my friends, and I exclaim, "Astonishing! Why, they are equal to take a prize anywhere," and, indeed, I was not far from the truth. Again, a connoisseur of the Potato walks proudly in, holding out a plate nicely covered over with a clean cloth. "Apricots, I hope!" No, a plate of my Onwards seedling Potato, which he swears by. But his is a small town garden, which just suits the Onwards, as the ground has been enriched within the last few years, sufficiently even to grow exotic plants, merely by the application of his house sewage and the contents of a dry-earth closet, which he also swears by. I will only say I am of the same opinion, as this garden has had no other manure for the last twenty-five years, except leaves and other refuse of the premises, than the contents of the rectory-house sewage tanks and the dry-earth closets, the first, I believe, that England possessed, and no household could have been healthier than this for the last quarter of a century, notwithstanding the theory that have lately gone abroad condemnatory of such manure. I can speak, and have spoken pretty often in this and other periodicals, decidedly in favour of it, and if I were a person inclined to feel ever so little conceited, I would advise Her Majesty's Sanitary Commissioners to send down a special inspector to interview these premises, as I consider our sanitary arrangements in connection with our water tanks and supply to have worked out all the aims that the generality of people seem to be wishing for. At any rate, if Mr. Smee's letters were to receive heedless credence it would be a national misfortune. From long experience with house sewage and the contents of dry-earth closets, I can confidently say they afford the best and the most innocuous manures that can be applied to the soil; but the land should be allowed time to analyse, and the plants to digest them or any other manures, before the produce is eaten by either man or beast. A three-course system is what I adopt as nearly as I can for garden ground, but it would be more completely adapted to farmwork. Say, deluge a third, field by field alternately, under green crops, such as Turnips or Rye-grass, then take Potatoes or pulse crops; and for a third course take grain with a dressing of lime, or some such practice, which will prevent the land being continually under sewage which it cannot profitably make away with.—ROBERT FENN, *Rectory, Woodstock*.

TORTWORTH, GLOUCESTERSHIRE.—Up to the present time no diseased tubers have been observed among our early crops, which are excellent and clean-skinned. As a rule, garden crops are the first to suffer, particularly on close moist soil, and the evil is no doubt accelerated by too high feeding. Curative remedies without number have been offered us, but they have to a great extent proved of little value. Nothing is so certain as the selection of early varieties and spring planting, so as to insure maturation by the end of July or beginning of August. The disease has made its appearance among our field crops, but as yet to a limited extent; and should the present favourable weather continue, I believe this will be a more prosperous year

for the Potato than many previous seasons.—ALEXANDER CRAMP, *Tortworth*.

OXFORD FITZPAINE, DORSET.—The Potatoes here are very sound—hardly a diseased tuber. I hear the coarse-growing, deep-eyed, late-ripening Potatoes are spearing-out. I dug-up twelve plants of Prince of Wales a few days ago; the new tubers were like porcupines and not half ripe. I shall finish digging all Potatoes to-day (August 23rd, or on Monday, the 25th). I have heard no complaints of unsoundness from my neighbours.—W. F. RADCLIFFE, *Oxford Fitzpaine, Shillington*.

P.S.—All my Potatoes are up to-day (August 25th), and in a quarter of an acre there are not enough diseased ones to fill a small handkerchief.

SANDRINGHAM, NORFOLK.—I am glad to say as yet our Potatoes are but slightly affected. I found a Danish Potato here that took the disease very much, all our English varieties only partially.—CHARLES PENNY, *The Gardens, Sandringham, King's Lynn*.

KNUTSFORD, CHESHIRE.—On Saturday last I lifted a quantity of Paterson's Victoria, a fine splendid crop, but much affected. The various species of Kidney, Old and Royal Ashleaf, Gloucestershire, and Mona's Pride similarly attacked. From the tubers failing after being lifted, I thought a washing might arrest the progress of the disease, consequently I have taken the trouble for these last two years to wash those sorts which were of most value, then spreading them on a dry boarded floor. This process is not labour lost; when the tubers are thoroughly dry they may remain, if convenient, or be removed to the pit.—JOSEPH BURGESS.

WYCOMBE, BUCKS.—At the present time the Potato crop in this vicinity, both on the hills and in the valleys, is most satisfactory. Many of the earliest varieties are already lifted, and with the best results both as regards quantity and quality, and with scarcely any disease; in fact, none worthy of mention. The haulm of the later kinds, which are not yet ripe, show in some places indications of disease, but the tubers are not yet affected.—GEO. THOS. MILES, *Wycombe Abbey Gardens*.

CHISWICK, MIDDLESEX.—The present season has been exceptionally favourable for the growth of the Potato. On the 20th of May the tops of a great portion of the earlier-planted varieties were much injured by frost, and some bore traces of this all through the season. The greater portion, however, soon recovered and grew with great strength and vigour. The first appearance of the disease I noticed July 20th, on Early Goodrich, Red Emperor, and some Dutch sorts. A few days later the Lapstones were attacked, and the disease gradually spread over most of the varieties. Although the tops have been so far attacked that in some cases all the foliage has been destroyed, there are but few of the tubers affected. The season has been on the whole dry, the Potato crop is large, and the quality excellent.—A. F. BARRON.

LEDBURY, HEREFORDSHIRE.—The Potato crop in this district is the heaviest that has been known for some years, and the tubers are unusually fine and clean. Disease—as is generally the case when the atmosphere is heavily charged with electricity, as it was in June and July—made its appearance earlier than usual, affecting some kinds more than others. Lapstone Kidney, one of the best Potatoes in cultivation, has suffered most; and although slightly touched, Paterson's Victoria is least affected. Of early kinds, Veitch's Early Ashleaf and Stratton's Seedling have yielded fine crops free from disease. The red American kinds are extensively grown in this neighbourhood, and are gaining in favour; the season having suited them, they cook drier than in former years.—W. COLEMAN, *Eastnor Castle, Ledbury*.

BOWOOD, WILTSHIRE.—I am pleased to be able to give a favourable account of the Potato crops in this neighbourhood, which are very good—much better than I have known them for several years past. The disease, which has made its appearance in the haulm since the first week of the present month, has not shown itself very much in the tuber up to the present time. I find that where the crops are surrounded by trees, which prevents their being fully exposed to the sun and air, the disease has affected them most, the haulm having almost disappeared. In such places a few diseased Potatoes are to be found.—WILLIAM SCAMMELL, *Bowood*.

CHILWELL, NOTTINGHAMSHIRE.—I think the Potato crop is very good here. The first and second earlies have turned out well, and almost free from disease. I hear from everyone their late sorts are a more promising crop than usual, and there is, I think, little amiss with them at present. We have a great deal of wet and many thunderstorms just now, so people are beginning to fear for their late Potatoes.—J. R. PEARSON, *Chilwell*.

EAST LOTHIAN.—The Potato crop in the East Lothian up to this date may be said to be free from disease. I have heard of tubers having been found in several places which had the disease, but it has nowhere appeared on the foliage that I am aware of—certainly not in the higher districts of the county. The last week's weather, however, has been in every way likely to induce dis-

ease—continuous rains and foggy, and the wind in the east and south-east; so that I should not be surprised to see it any day make its appearance on the stems and leaves. In all parts of the county the crop will be a large one. A large breadth has been planted, and it will be a sad loss should the disease come now when the crops are all looking so well.—ALEX. SHEARER, *Foster Gardens, Haddington*.

HINDLEF HALL, WORCESTERSHIRE.—Potatoes grown in the gardens here were harvested three weeks ago; a fine crop, first-rate in quality, about thirty tubers diseased. Early varieties in fields and gardens in this neighbourhood are good in every way: very little disease. Late kinds are more promising than they have been for many years past, and a wonderful contrast from last season. My Potatoes for the last eighteen years have virtually been free from disease.—A. MOFFAT.

BUNTED, SUSSEX.—The yield of all kinds of Potatoes is excellent, and the crop is being housed in capital condition. Traces of disease have been found in the late sorts, but it prevails generally in a very mild form, the only bad exception being Bresee's Prolific, which has quite half its fine tubers affected. Symptoms of sprouting, or that second growth which leads to super-tuberating, were discovered early in the month. The kinds affected were, however, so forward that they were lifted before any serious harm was done. On the 13th inst. and following three days a large breadth of Paterson's Victoria and Flukes were lifted and taken to the storehouse. These crops were very fine; they are now stored thinly under a slight covering of mats and straw, and being housed during the prevalence of fine sunny weather, they are as dry and sound as could be wished. The quality of Victoria is as usual most excellent. It may be interesting to note, that these late-keeping Potatoes were sufficiently ripe for lifting within twenty weeks from the time of planting.—EDWARD LUCKYRST, *Old Lands, Buncted*.

APPLETON-LE-STREET, YORKSHIRE.—I have heard of no disease amongst the Potatoes in this neighbourhood this year, nor have I seen a single diseased Potato. The crop promises to be a heavy one. I have tried several sorts of kidneys—Ashleaf, Royal Ashleaf, Gloucestershire Kidney, Ashtop Fluke, &c., and hitherto the Ashtop Fluke has been far superior to any other—in fact, I do not remember to have ever eaten a better Potato. A very fair crop, not very heavy, but good; the tubers very clean in their skins, and when steamed in their jackets they peel firm but mealy, without any hard ends, which both the Milky White, Gloucestershire Kidney, and Royal Ashleaf have been inclined to have. From inquiries I have made at different provincial shows, and the samples of Potatoes shown, I think we may fairly reckon upon a sound and heavy crop in this portion of the North Riding.—C. P. PEACH.

WINCHESTER, HAMPSHIRE.—As regards the Potato crops in this locality, the result of my own observation and experience is in every respect most satisfactory; in fact I have not seen a single diseased Potato this season. Owing to the fine dry weather in July and August, our own crop is safely up and housed, being spread about 1 foot to 15 inches in depth in a good dry Potato house, with the exception of a few Red-skinned Flourball, which we may possibly leave in the ground until the end of September, or even later, as a test to see how far they may become diseased, so much having been said about this variety not being liable to the disease.

Our main crop is the Dalmahoy, which ripens early. Ours were all up and housed by the last week in July, and a beautiful sample they are. Some years ago we had them all up by the 19th of July, but last year (1872) we lost nearly one-third of our crop on account of not being able from one cause and another to take them up until later, and the wet weather had also something to do with it. We plant early, and take up early, and the ground is all again cropped with Turnips, Celery, and other things. Of course we change the crops as much as we can.

Now for hearsay. In Winchester and its immediate vicinity I have not heard any complaint of disease as yet; but possibly it may occur in low damp situations, though not at present noticed by the owners. I have heard it is bad about Hursley and Romsey.—THOMAS WEAVER.

LINCOLN.—Up to the present date (August 25th) the Potato crops in Lincolnshire are sound. The time, however, is critical, and what a few days may bring forth it is impossible to anticipate. Last night, or rather early this morning, the weather has been quite of a Potato-disease type, the lightning being one complete and almost unbroken blaze, and the thunder one incessant and continued roll, while the rain has come down in torrents—nearly an inch in six hours. The storm travelled from south-east to north-west, and it is therefore in the highest degree probable that it would reach the great Potter district in the Isle of Axholme. If we have a week of dull drizzly days with evaporation and transpiration nil, and at the same time a mean day and night temperature of 65 to 70°, disease is almost certain to follow; but with brisk winds and cool nights, notwithstanding the high electric state of the atmosphere and heavy downpour, the crop would probably escape serious injury. The

risk is certainly greater by the storm coming when the ground was already moist from a still heavier rain last week— $1\frac{1}{2}$ inch in twelve hours, with much lightning. In this case, however, drying winds and sun followed immediately, and no disease was engendered. Hope lies in easterly or northerly winds continuing, as they are generally cool. When I say "no disease," I speak generally and according to ordinary acceptance, for little patches in low wet places are spoken of, but so limited as to be hardly worth mentioning.

As to the crop, the earlies are up and have been very productive and excellent in quality; and the general crop of late kinds, by their healthy vigour, give promise of an abundant yield, supposing they withstand the ordeal through which they are now passing. For years past the crop has not looked so really well. A fine March was favourable for planting, and the only check to after-growth was a touch of frost on April 26th. May was showery, inducing a sturdy growth, and June and July fine and dry for perfecting the earlies. The second week in August the late crop was in jeopardy by excessive heat and drought; but on the 18th, just at an opportune moment, before the skin was set, relief came, and the drooping stems became erect at once, and the tubers commenced swelling rapidly.

Regents are more scarce than usual by last year's devastation, and Rocks may be said to be the staple field kind. Victorias, however, are tolerably plentiful, and Red-skin Flourballs are finding their way into most farms and gardens. Besides these, owing to scarcity of seed, many tons of imported Dutch and Belgian kinds were purchased in the markets and planted. Some came up weakly, a few not at all, but the great bulk promise remarkably well, and are looked forward to with special interest. The table quality of all kinds which have ripened show to advantage under the heat and drought. American varieties are better than they have ever been before, the Early Rose being quite mealy and really good. But the best of all as a second early that has been judged here by discriminating Potato palates is undoubtedly Carter's Ashtop Fluke. It is quite first-rate, and with plenty of room is productive, but grown too closely together is a weed. Unless untoward weather overtake the crop, the Lincolnshire yield of Potatoes can hardly fail to prove itself amongst the best of past years.—J. WRIGHT.

ILFORD, ESSEX.—The Potato crop is only moderate this year, owing, principally, to the bad state of the ground and a severe frost which cut down the plants shortly after they came through. I have heard of large crops, but on investigation it is found an approximate calculation only had been made. On the farm at Loxford they are digging about one acre per day, which on the average yields about six and half tons per acre, four tons of which consist of "ware," one and half ton of "middlings," and the rest "pig chats." No disease has been seen as yet, but symptoms of it were observed for the first time yesterday; these symptoms consist of a number of white dots scattered over the Potato, and I am assured these are the certain forerunners of disease. The atmosphere is at present overcharged with electricity.—J. DOUGLAS, Loxford Hall Gardens.

BICTON, DEVONSHIRE.—Having read about the advantages of rolling Potato fields on the recurrence of disease, it may be worth notice that the experiment has been tried here with the most satisfactory results. Potato disease made its appearance with us on the 14th of July, when a most promising field of over three acres, then in full flower, was thoroughly rolled up, down, and across with a heavy one-horse roller, firming the ground and bruising Potato-stalks as much as possible. From careful examination it soon became evident that the plague was greatly checked, if not stamped out, no extension of it having been observed since the operation. Potatoes go on ripening with healthy foliage, a few lateral shoots only having grown out from their stems. The field under notice was planted about the middle of March in rows 2 feet 6 inches apart, and with medium-sized tubers 1 foot from each other.

Early varieties are now stored, and have turned out an excellent crop, with scarcely any disease amongst them; the quality is also all that could be desired. Late sorts also promise to be an abundant crop, of good size, and with no trace of disease in them at present. The exposure is open, and the manure used consisted of well-rotted leaves from Pine-pit linings, to which were added a little bone dust, coal and turf ashes, wood ashes, and soot, well mixed and sown in the drills. In a Potato plot a few yards off the field, where rolling the ground was not resorted to, Potato stalks have nearly disappeared by disease. From this statement the inference may be fairly drawn that if rolling Potatoes at the proper time—which is on the very first appearance of spot on the leaves, not days after, as that would be labour lost—if not preventive, is palliative, and I strongly recommend Potato-growers to give the practice a fair trial and publish the result.—R. BEGIE, Bicton Gardens.

GARDEN NETTING.—Permit me to bring to your notice the fact of there being another victim of garden-netting advertisers.

I ordered 45 yards of two-yard-wide netting, and had sent me a quantity of mended-up rubbish, which when stretched did not measure 3 feet. This netting was advertised as new and 2 yards wide, price 1d. a square yard. "*Experientia docet stultos*," and it will teach me to be more careful in avoiding these rogues in future.—EMSWORTH.

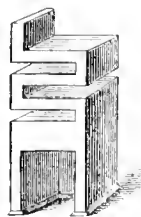
THE ROYAL HORTICULTURAL SOCIETY'S COMMITTEES AND ARRANGEMENTS.

An idle rumour has got about that the Council of the Royal Horticultural Society has decided to discontinue the fortnightly meetings of the Fruit and Floral Committees in 1874. We assure our readers that there is not the shadow of a foundation for such a thing. At a meeting between the Committee of Council and the Committee of exhibitors held last week, the greatest solicitude was shown on the part of the Council to preserve, and even to extend, the true horticultural character of the Society, without which it would be no Horticultural Society at all.

As I have often launched my spear at the arrangements of the Royal Horticultural Society, I hope I may be allowed to add my congratulations on the change which has come over the face of things at South Kensington. The curtailment of the number of shows must be a relief to exhibitors, who have been worried by their frequency, while it will somewhat save the credit of the Society with the general public, who, having paid half-a-crown to see an exhibition of which they have said continually, "Is this all?" feel generally disappointed. Moreover it will, we would hope, tend to reduce the expenses for bands, &c., which form so considerable an item in the Society's expenditure. Nothing could be better devised than the plan of forming a joint committee to decide upon the schedule for next year; and I feel quite confident that when the names of the gentlemen selected shall have been made known, it will inspire the horticultural public with confidence in the honest intentions of the Council to make the Society a real representative of the horticultural interests of the kingdom. We have, let us hope, seen an end of two things always injurious to any society—the spirit of exclusiveness, and the ruling by cliques. A seat on the Council will no longer be coveted as an *entrée* into society, but as a place where work is to be done for the good of horticulture; and notwithstanding the incubus of the Commissioners, which, like an old man of the mountain, hampers the Council, they will, if they act in this spirit, be so supported by the good feeling of the great body of the Fellows, that they will be enabled to steer clear of the difficulties which surround them.—D., Deal.

UTILISATION OF HEAT.

HAVING read in your paper on several occasions articles and letters upon heating power, which plainly showed me a good part of heat was lost in the present system of heating conservatories, &c., I set myself to utilise this lost heat with the following results. A small gas boiler was made as follows:—



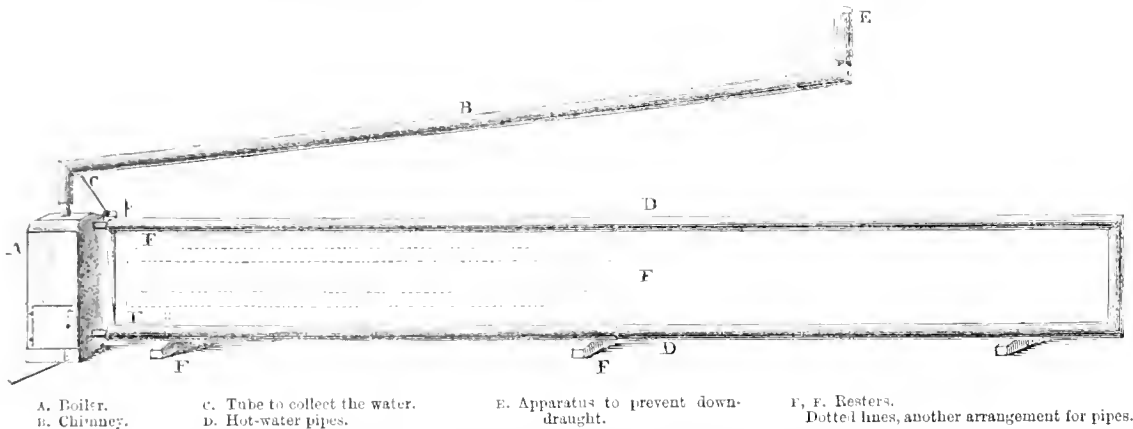
A chamber of copper $3\frac{1}{2}$ inches square and 5 inches high, with a zigzag funnel rising from it $4\frac{1}{2}$ inches, with a hole $3\frac{1}{2}$ inches long and five-eighths of an inch wide, which was enclosed in a case of good galvanised iron, 4 inches square and $9\frac{1}{2}$ inches high. This arrangement allows only a little space between the encased chamber, with funnel and the outer case, for water to circulate in. This chamber and funnel are connected to the outer case by means of flanges. The flow-pipe is on the right-hand side, at the top of the boiler thus formed, and the return pipe underneath it at the bottom. Pieces were cut out of the sides to gain admission to the chamber; the opening thus made serves as a door. Beneath the boiler is placed a piece of perforated metal, which serves as a stand, and regulates the supply of air to the gas when burning. Surmounting the boiler is a cap, from which rises the chimney.

The latter is about 10 feet long, running obliquely and rising 1 foot in 10 feet. To this small boiler I have attached 30 feet of $1\frac{1}{2}$ -inch ordinary malleable iron pipe filled with water. The gas is applied in the chamber through a burner made partly on Bunsen's principle, and regulated by an ordinary gas-burner, allowing 3 feet to pass hourly. The heat generated

by this small amount of gas is nearly exhausted in the chamber (which absorbs the radiated heat) and the zigzag funnel, and heats the water in the 30 feet of piping to boiling in about two hours. The whole of the heat, however, is not yet exhausted, for there rises steam (which is the product of perfect combustion, and not smoke), from the burning gas through the funnel, which is of about the same temperature as the water in the boiler (212°). This passes into the chimney, and the chimney being in an oblique position does not allow the steam (which is so finely divided when it leaves the funnel that it cannot be seen, but may be felt by placing the hand over it), to pass freely into the air; while it is detained in the chimney the heat is spent upon the pipe, making it a good heat; the steam at the same time is condensed into water, and the water thus formed runs down on the inside till it reaches the bottom, where it is caught by a small tube which conveys it to the return pipe of the boiler. The water thus obtained is a never-failing supply, and is more than sufficient to maintain the waste continually going on in the boiler and pipes. When boiling point has been attained, one-third of the gas may be turned off, the remaining gas being sufficient to keep up a good heat in the 40 feet of pipes, an extent which, I believe, has not been heated by such a small power until now.

come to see and be seen, who think the band of the Guards far beyond the loveliest banks of flowers ever seen; and here, too, the real lovers of flowers, who delight in the opportunity of meeting their brethren, and of having a chat over their favourites, be they Orchids, Roses, or any of the fair denizens of Flora's kingdom. But here I am bound to say the likeness ceases. There is no muddle; there is the utmost consideration shown to all; exhibitors are regarded, not as those who are making a good thing out of the Society, but as being the main causes of its success. There may be disappointment; some have not sent who promised, yet no malediction is hurled at them but "We can do without them," the philosophical commentary on their failure. Judges are treated with the courtesy due to men who have an onerous but honourable task to fulfil; I can never call it a thankless one, for in the provinces, at least, we receive thanks in abundance. Secretaries and Committee are of one mind, and all goes smoothly "as a marriage bell." Such has been my experience this year of Leeds and York, and now of Taunton, and I dare to say, from former experience, will be of Manchester.

The Exhibition this year at Taunton was in many respects a great improvement on that of last year. Prizes of £20, £15, £5, and £3 had been offered for twelve stove and greenhouse plants, and brought together a goodly array of fine plants, the first prize being awarded to Mr. Cypher, of Cheltenham, and



A. Boiler. C. Tube to collect the water. E. Apparatus to prevent down-draught. F, F. Resters.
B. Chimney. D. Hot-water pipes. F. F. Resters. Dotted lines, another arrangement for pipes.

From the experiments I have indulged in I gather that if greater heating surface—in the above small boiler there are nearly 200 square inches—were given in boilers, more hot water could be obtained than in the present systems of heating. If properly managed, the heat which passes up the chimney can be utilised; and, moreover, in gas-boilers the steam produced by burning gas can be made use of when condensed by the process described. One other difficulty I surmounted in my experiments—I invented a small and simple apparatus to fix on the top of the chimney, which simply makes it impossible for wind to get into the chimney from above to blow out the gas, and at the same time it does not interfere with the up draught. Of this invention I do not now intend to say much, as it has just passed into the hands of a chimney-pot manufacturer, who intends to bring it out as a chimney-pot which will prevent any rain, hail, or wind getting down a chimney. This invention gave me great satisfaction, for I know many habitations will be benefited which are troubled with rain, hail, and wind being driven down the chimney.—Geo. SMITH, 9, Caroline Street, Kendal.

P.S.—Would you kindly inform me if water or steam from burnt gas has been made use of in any other heating apparatus?

TAUNTON DEANE HORTICULTURAL AND FLORICULTURAL SOCIETY.

AGAIN it has been my pleasant privilege to assist at one of those provincial shows which so fully evidence the horticultural tastes of our people, and form so pleasant a means of bringing together both gentle and simple. How one sees human nature is ever the same, whether in town or country; here, as well as in London, the same groups of anxious exhibitors and still more anxious gardeners; here to be seen, too, the man who, like the inevitable dog on the Derby-day, must ever appear on the scene, hot and angry because his pet productions have not received the award he at least thought they deserved; here the same groups who care not a doil about the flowers, but who

the second to J. B. Saunders, Esq.; in this the competition was open to all, while in the amateurs' class some excellent plants were also shown. Ferns were exhibited in admirable condition, and I have rarely seen finer masses of Lycopods than those exhibited on this occasion. When I say that Messrs. Kelway & Son exhibited Gladioli, it will be at once seen that there was something worth looking at. Mr. Dobree, an amateur, and a very successful one, exhibited some fine stands. There were also some excellent stands of Asters, both French and German, exhibited by Messrs. Kelway & Son, Dobree, and others—stands that would not be out of place at any exhibition. There was, as is usual on the occasion of provincial shows, an excellent display of vegetables and fruit. Among the former were some very beautiful Kidney Potatoes exhibited by Mr. Millar, of Sherborne, called Lady Paget, a very clean, well-shaped tuber, and which I was assured was equally good for use.

It would be needless to particularise all the excellent things exhibited, and although it may be invidious to single out of so many good things those that were not up to the mark, I must yet say a word about the table decorations. Good prizes were offered, but they only brought out one competitor, and the table was so poor and mean that the Judges were obliged to withhold the first prize, and had grave doubts whether they ought to give even a second. When I recollect that Miss Hassard has exhibited at a previous show, it cannot be from ignorance of what is correct that this table was set up, and I hope another year may bring a keener contest and a more correct taste.

The day was evidently regarded as the holiday of the year; the town was *en fête*, shops were closed, and all classes seemed to thoroughly enter into the spirit of the holiday. As in most of these cases, success is mainly owing to the exertions of a good and indefatigable secretary; and in Mr. Saunders the Society possess one who combines courtesy with zeal, and in endeavouring to gratify the wishes of all concerned, he does not forget that firmness is necessary to keep things straight.—D., Deal.

FLOWERS IN MEXICO.—One thing which strikes one pleasantly in Mexico is the wonderful abundance of flowers. All the year round crowds of Indians sit at the street corners in the

early morning making, and selling for a real, bouquets which in London or New York could not be got for a guinea. Roses, Verbenas, Heliotropes, and Carnations grow like weeds; and, besides the made-up bouquets, the Indians from the mountains bring down packs on their backs of the "Flor de San Juan" (Bouvardia), a flower like an immense white Jasmine, and for a "quartilla" (1½d.) you can buy an armful of it, which will scent a whole house for a week. Our rooms were always fragrant with the bouquets which came in every two or three days, and sometimes round the hanging baskets in the windows a lovely humming bird would hover like a living emerald, and dip his long bill into the flowers for honey.—(*Good Words*.)

A FEW NOTES ON STRAWBERRIES.

I HAVE read with interest the various communications on Strawberries, and am rather surprised not to see any mention made of two sorts of which I am in possession—namely, *Souvenir de Kieff* and *James Veitch*. The former I have grown for several years, and have found it an excellent Strawberry, an abundant cropper, of good flavour, and a good traveller, which is a great point in its favour; it also remains a long time in bearing, ripening-off the latter part of the crop nearly equal in size to the first. I was induced to grow it by seeing Dr. Hogg's commendation of it in *THE JOURNAL OF HORTICULTURE* some years ago. *James Veitch* is another Strawberry I hope to retain in my collection, as it is one of the finest-flavoured Strawberries that has come under my notice for years, and will, no doubt, become a favourite when better known. It will succeed to a certainty on light soil as well as heavy. A gentleman, whom I know to be a good judge of fruit, paid me a visit during the Strawberry season, and after tasting *Lucas*, the Amateur, Sir J. Paxton, and several others, pronounced it the best flavoured of them all. The plant is hardy and very prolific, and the fruit firm when ripe, and will bear packing and travelling well.

I am glad to see that Dr. Roden has obtained these properties in some of his new varieties, as such are most essential for market purposes. I am sorry to find *La Constante* deficient in the above good qualities, particularly in wet seasons; the fruit is then so very soft that it will not bear a touch, pack it how you may. I am in favour of Mr. Luckhurst's system of Strawberry-culture, which is the same as that which I have adopted for years, and I always found that whatever I planted after Strawberries gave a good return.—W. GRAVES, *Market Gardener*.

NOTES AT SOUTH KENSINGTON.

WEDNESDAY, August 20th, was the show of Gladioli and Hollyhocks, and these two elegant and noble autumn flowers have seldom been seen to better advantage. The Hollyhock has been long grown, and one would almost suppose that very little improvement could take place in the build of the individual flowers and the formation of the spikes, but the fact that Lord Hawke obtained six first-class certificates from the Floral Committee in one season shows the falsity of any such reasoning. Not only has he improved the flowers, but he has obtained new colours as well; his *Vanguard* and *Lilac Queen* are quite distinct.

The Gladiolus has also been vastly improved within the last six or seven years. Mr. Kelway has made a speciality of this flower, and is rapidly improving it, but there is much need still for variety in colour. We want a few more dark varieties. *Jupiter*, one of M. Souchet's new sorts sent out last year, is a move in the right direction; it is a maroon crimson, but is a very delicate sort, and the flowers are too far apart on the spike. The new ones sent out by the foreign growers this year are in no way remarkable. One variety which I exhibited at South Kensington named *Octavie* seems to be the best. *Addison* is distinct, a sort of elaret colour, and the spike is good.

There is much grumbling amongst the growers about the degeneration of their roots. Well, I fancy a good deal of it is their own fault. If you overfeed anything that has life, be it animal or plant, the result will be a disarrangement of the system. The Gladiolus is grown year after year in ground highly manured, and this is not enough—it is supplied with as much manure water as the roots will take up, and the result is death in many cases, and in others grand spikes for one year; but as far as my experience has yet gone, the same roots will not stand driving another season. As to the disease,

which has been so much written about, I do not think we can say anything about the nature of it. I have many spikes which change to yellow prematurely. I believe everybody who has grown the Gladiolus for one year will have seen it. Mr. Dombain says it is the disease, but on pulling such plants up in the collection at Loxford not a root is spotted; but as our collection is very large, we can afford to destroy all such, and thus the unhealthy roots are reduced to a minimum.

I have just looked over your announcement of the arrangements of the meetings of the Royal Horticultural Society for next year. I do think it a wise step to reduce the number of shows, but I do not at all like the first week in September for the autumn show; if the Gladiolus is to be introduced, the best blooms will be over. If it could be held one or two weeks earlier it would be better for the Gladiolus, and I fancy if the *Dahlia* and *Hollyhock* exhibitors were consulted, it would be found to answer equally well for them.

There were also exhibited at this meeting three specimens of a remarkable Cockscomb from Mr. McLachlan, of Glasgow. The dimensions were given in last week's number. I have seen very good Cockscombs exhibited at different provincial shows; I have grown and exhibited some very good ones myself, and have taken first prizes with them; but anything to equal the Glasgow specimens I have never seen. There was considerable discussion amongst the fraternity, whether it was a new variety, or whether such excellent examples were only the result of good cultivation. The Committee evidently held to the latter opinion. Mr. McLachlan says it is a cross between a variety he received from America and the old Scotch variety. He says the difference is quite perceptible when they have been staged for competition at Glasgow. I think it would be well if the Royal Horticultural Society would give a prize for Cockscombs. They are grown by several people in the neighbourhood of London. A bank of well-grown specimens would form a novel feature at the September show.—J. DOUGLAS.

TRICKS OF TRADE.

THERE are few persons who engage in the interesting pursuit of attempting to improve flowers and fruits who are not encouraged as much by the love of fame as by the hope of pecuniary reward. There are some few, indeed, who never wish to make money by their seedlings, and many who may be actuated by a mixture of motives who fail to do so. A man who raises a single seedling may raise a fine variety, but he who intends to be a successful raiser knows that number is an important element in his calculations. There is a fascination in the employment which resembles that which gamblers appear to feel, though without the injurious moral effects of their pursuit. To raise a new and good flower or fruit, not by mere chance, but as the result of careful breeding, appears almost like a creation, and I believe the raiser has a keener enjoyment than falls to the lot of the man who is only a cultivator. But this, like every other pleasure, has its drawbacks. The small number of prizes to the multitude of blanks is a serious consideration; and if he has been successful in the past, the difficulty of making further improvements often appears an increasing one. Thus to keep up the same rate of improvement we are annually tempted to greater exertions. Now, if the raiser is important to horticulture, he ought not to be robbed of half his reward—that is to say, of his fame, when he happens to be successful.

These remarks will not appear uncalled for to any person who has been a successful raiser of any fruit, flower, or vegetable. How often do we find our pets renamed, or sent out in such a way that others have the credit of their production. Raisers, like artists, are said to be a vain race, and perhaps only raisers know how vexing these things are.

I have been induced to make these remarks by a perusal of Mr. Cannell's catalogue, seventeenth edition, just received, which I think appears as unfairly compiled as any ever published. It is known to many of your readers that one of my hobbies has been the raising of bedding Geraniums, and that I have grown thousands per year to pick out a dozen, but the public is often ignorant of the fact that a favourite sort came from Chilwell. This is inevitable, because in naming a plant it is impossible to always name the raiser; but the case to which I call attention is quite another affair. The facts are these: In 1871, having been unusually successful in raising sorts that appeared worth cultivation, I sent out twenty-four varieties in 1872; and that no one might be dissatisfied in case all were not equally good, I not only charged a low sum for

them—50s. including package, but to persons in trade like Mr. Cannell sent extra plants gratis. These were the kinds so splendidly shown by Mr. Brise and Mr. Catlin lately at Kensington. Now, page 56 in Mr. Cannell's catalogue there is a list of "Mr. Pearson's new varieties of 1872," which contains eighteen kinds (one of these being a sort sent out the year before); and on referring to other parts of the list will be found the following names—Corsair, page 53; Col. Holden, Rev. C. P. Peach, Lawrence Heywood, page 54; Florence Durand, Rose Bradwardine, Mrs. F. Burnaby, Anaranth, Amy Rebsart, Mrs. R. Hole, page 55; the cream of this collection of 1872, without one single word to indicate that they were raised by me, or that they formed part of the collection of 1872 received from me!

When Mr. Cannell and others showed at Kensington my varieties for the prize offered by the Royal Horticultural Society for new bedding Geraniums, without any remark to indicate they were not their own productions, I thought it bad enough; but to advertise the cream of my collection as though he were the raiser, and put my name to what may be considered as the skimmed milk, is rather more than one is called upon, I think, to bear.

Then, again, on page 58, there is another list headed, "Highly recommended, and sent out by Mr. Pearson," without any date. Would any person doubt these were sorts just sent out by me, instead of kinds put in commerce in 1870, which is the fact? Mr. Cannell will find this sort of thing will not do; a bear robbed of her young is a savage animal, so is a raiser robbed of his honour.—J. R. PEARSON, *Chilwell*.

SPURIOUS CHERRIES.

I THINK many persons have reason to thank your correspondent, who wrote at page 63 about spurious May Duke Cherries, for drawing attention to the subject. I trust our gardeners will be alive about it, and try to preserve some of the real stock before it become extinct. I have been a victim to the present state of things for years, and could fill a folio, I think, with histories of my disappointments in May Duke especially, and I might add other Cherries also, but I will not inflict so much on you; suffice it to say that I gave up one of my best positions on a good south-east wall to a young May Duke, as I supposed, some ten years ago. This being a high situation, what with bad seasons and one thing or other, the fruit that we picked from the tree was always small, poor, and tasteless. This year it is, if possible, though abundant, worse than usual, so that I concluded it must have been a delusion of my youthful days (like Dickens's treacle tarts) that May Duke Cherries were so delicious, and I had resolved to take up the tree and dedicate its place to a Beurré Bose Pear. Your correspondent's letter has, however, opened my eyes at last. I wish he would add to our obligation to him by hinting where a really good May Duke could be obtained next planting season. My May Dukes (so called) this year might well have passed for small, poor, early Morellos.—C. H.

I saw a letter published last week, asking if it is true that a Blackberry grafted on a Dewberry (what is a Dewberry?) produces a splendid fruit, like a bunch of Grapes. I cannot credit this, can you?

[The Dewberry, *Rubus cæsius*, belongs to the same genus as the Blackberry. It is a small trailing Bramble, common in our hedges. There is no truth in the statement.—Eus.]

EXPERIMENTS IN THE CULTURE OF FIGS IN CALIFORNIA.

EXCESSIVE quantities of fruit are now put up in tin cans in this State; and you will be surprised, perhaps, as I was the other day, to hear of an orchard of Peach and Apricot trees, which bears this year its first full crop, and for one hundred acres of which the owners have received \$10,000 cash—gold, selling the fruit on the trees, without risk of ripening or trouble of picking. Yet Peaches and Apricots are not the most profitable fruits in this State, for the Cherry—the most delicious Cherries in the world grow here—is worth even more; and I suspect that the few farmers who have orchards of Plums, and carefully dry the fruit, make as much money as the Cherry-owners. There has sprung up a very lively demand for Californian dried Plums. They bring from twenty to twenty-two cents per pound at wholesale in San Francisco, and even as high as thirty cents for the best quality; and I

am told that last season a considerable quantity was shipped eastward, and sold at a handsome profit in New York. The Plum bears heavily and constantly north of Sacramento, and does not suffer from the curculio; and the dried fruit is delicious and wholesome. Some day the farmers, who are now experimenting with Figs, will, I do not doubt, produce also a marketable dried Fig. The tree flourishes in almost all parts of the State. Usually it bears two and often three crops a-year; and it grows into a noble and stately tree. So far, the preparation of dried Figs has not been successful here. In the fruit stores you see abundance of Figs, but they are generally brown or black in colour, and not tempting to the sight, though palatable enough. I am told that when Smyrna Figs sell for twenty to thirty cents per pound, Californian Figs bring but from five to ten cents. The tree comes into full bearing, where its location is favourable, in its third or fourth year; and ought to yield then about 60 lbs. of dried Figs, I am told. I suspect the cost of labour will control the drying of Figs, for they must be picked by hand. If they fall to the ground they are easily bruised, and the bruised part turns sour. They are dried in the shade, and on straw, which lets the air get to every part. Irrigation is not good after the tree bears, as the Figs do not dry so readily. Birds and ants are fond of the fruit; and in one place I was told the birds took almost the whole of the first crop. There are many varieties of the Fig grown in this State, but the White Smyrna is, I believe, thought to be the best for market. There are no large plantations of this tree in the State, but it is found on almost every farm and country place, and is a very wholesome fruit when eaten green.

When the farmers of the Sacramento Valley become tired of sowing Wheat, and when the land comes into the hands of small farmers, as it is now doing to some extent, it will be discovered that fruit trees are surer and more profitable than grain. This spring I hear a considerable emigration is coming into California, and I advise everyone who goes there to farm to lose no time before planting an orchard. Trees grow very rapidly, and it will be many years before such fruits as the Cherry, Plum, Apricot, or the raisin Grape are too abundant to yield to their owners exceptionally large profits.—(*New York Tribune*.)

GARDENING IN THE WEST.—No. 7.

TORTWORTH COURT, THE SEAT OF THE EARL OF DUCIE.

OVERLOOKING the picturesque vale of Berkeley, and commanding views of hill, wood, and water, stands Tortworth Court, the noble mansion of the Earl of Ducie, and of which the gardens and pleasure grounds are of high renown, both for their beauty and the skill with which they are managed by Mr. Cramb, whose reputation as a gardener is so well established, that it is almost superfluous to remark that what he does is well done, and that many a useful lesson may be derived from his practice. Tortworth is about three miles from the Charfield station of the Midland line from Birmingham to Bristol, and is easily reached from either of these towns, as well as from Bath; but from London the route is more roundabout, and it makes very little difference whether one travels *via* Stonehouse, Bath, or Bristol.

Tortworth is the Tortworth of Domesday Book; and passing over the Alwold, Turstin, Kingston, Le Veel, Matthews, Throckmorton, and Webb, who were successively lords of the manor, we find it recorded that the last named sold it in 1610 to Sir Robert Ducie, Bart., of whose descendants it has continued in possession. In 1661 Sir William Ducie had a license from the Crown to enclose Tortworth Park.

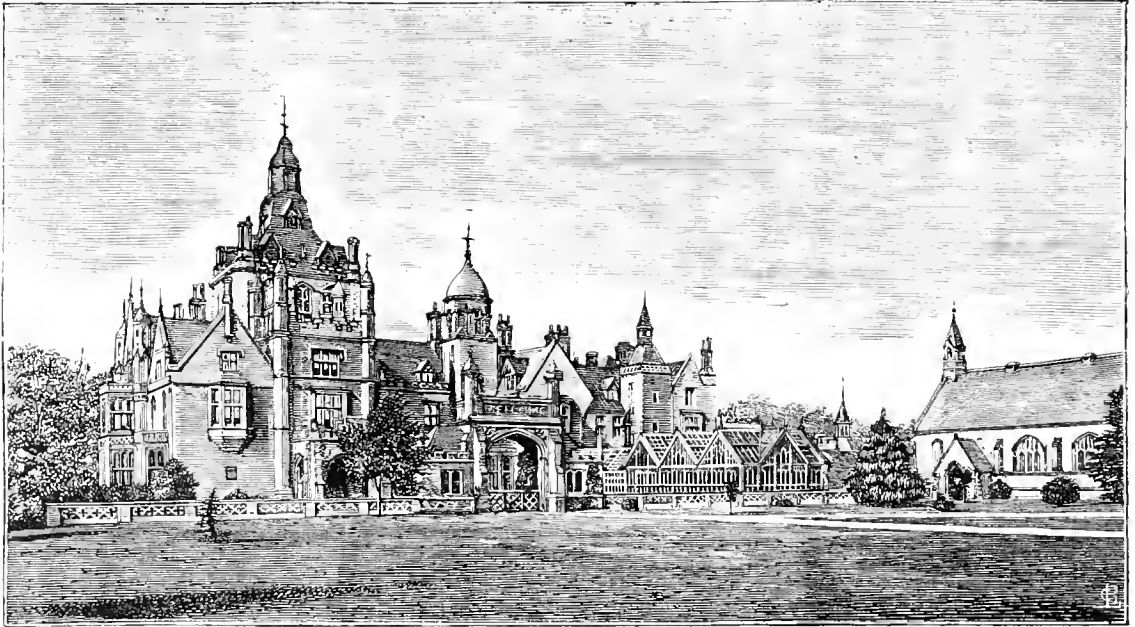
The mansion, of which we give a representation from a photograph by Messrs. Dutton, of Henrietta Villas, Bath, is in the Tudor-Gothic style, and was erected only a few years ago, the old house, situated near the church and the famous old Chestnut, having been pulled down all but some of the walls, which have been left as an Ivy-mantled ruin. The church, too, has been rebuilt, its God's acre added to, cottages built, with large gardens attached, which are let on the most liberal terms, and a co-operative store established, which proves a great boon to the cottagers, who are far from any good market.

The principal entrance to the mansion faces the east, and it will give an idea of the dimensions of the pile of buildings when we state that the central tower, which forms a conspicuous object in our engraving, is 130 feet high. The chapel on the right is now being pulled down; and although not strictly a gardening matter, we may remark that in one of the

rooms there is a very extensive geological collection, with many antiquities as well. The glass houses which are seen in our illustration consist of a corridor connecting the mansion with a stove originally intended for the culture of tropical fruits, but now containing grand specimens of *Latanias* and other Palms, and noble Ferns, of which *Cibotium Schiedeii* and *princeps* are particularly noteworthy, the fronds of the latter extending over a space of 20 feet in diameter. Flowering plants are introduced to give life and colour to the scene, and in winter the corridor is gay with *Camellias* and forced flowers of various kinds. It may be interesting here to note, that the Indian *Rhododendron Falconeri* had been fertilised with a deep scarlet hardy variety, and was seeding at the time of our visit. There is thus a prospect of a new race of this splendid shrub being either directly produced, or obtained indirectly by subsequent breeding. Outside, on one of the walls, is *Vitis polymorpha*, which forms a dense covering, and in autumn the leaves change to a glowing crimson. On the south side of the house is a geometric garden, in which the beds are filled with Savin, Ivy, Yew, *Cotoneaster microphylla*, and other subjects calculated to produce a dressed appearance at all seasons of the year. A blaze of colour is not desired, but bedding plants

are not neglected, as there is an ample display of them on the terrace. There is, be it said, a quietness and repose in the whole arrangement quite in keeping with the beautiful natural scenery which meets the eye in this direction where the lake is seen winding between two steep hills densely clothed with trees to the water's edge, presenting a landscape such as is to be equalled at few places in this country.

But before quitting the vicinity of the mansion for the lake side we will remark, that the park at Tortworth exceeds 1600 acres in extent, and that in the pleasure grounds surrounding the house, as well as in the park, are numerous fine Conifers, besides trees of other descriptions. The geological formation is somewhat varied, and Mr. Cramb, who has paid great attention to this subject and the effect of these variations on the growth of the trees, has made many interesting observations which it is to be hoped he will some day make public. He finds that all the Coniferæ succeed well on the red sandstone, but not on the lime; on this, however, the Deodar does well, so do the Elm and the Beech, whilst the Chestnut thrives best on the lias, and *Picea bracteata* and *Araucaria imbricata* luxuriate on the new red sandstone—one of the latter is 40 feet high. Of *Wellingtonia gigantea* we noticed several fine speci-



TORTWORTH COURT.

mens, one of them measuring 46 feet high, and what is remarkable, there was a fine tree planted in a depth of soil—limestone brash—not exceeding 10 or 12 inches. The Austrian Pine is here used to a considerable extent for shelter, and Mr. Cramb justly, we think, considers that perhaps no other tree is so well adapted for the purpose. It may be interesting to note, that in crossing the pleasure grounds a plant of *Acer rubrum* was pointed out to us, and on this the Mistletoe had established itself and was growing vigorously. There are several clumps of Thorns in the grounds, and no doubt when in flower these of themselves are a charming feature, for at the time they were planted every known species that could be had was obtained, and one of them (we regret to say we did not note its name), we were told, had flowered as early as February 1st. Before passing on to the lake we must add, that the pleasure grounds are not only diversified with clumps of shrubs, but with single specimens of Conifers, and that by constant attention to pruning these the individuality of each is carefully preserved.

We will now pass along the side of the lake—a piece of water covering some twenty-five acres, but long, and winding in the gorge between two steep hills, clad with a natural vegetation of Beech and Ash, and the sides broken with perpendicular and jutting rocks. On one side there is just the site for a charming *Rhododendron* garden, but by no means the soil, for it is limestone, and yet farther on there is a piece of ground of

quite a different formation, thrown up by some convulsion of Nature. Pursuing our way, with a Ferny bank on one side, the still lake on the other, we come to the remains of an old vineyard, with stone terrace walls still in tolerably good preservation, but the culture was given up owing to some dispute about tithes, and although the situation is high, yet as it faces south, and is well sheltered on the north, there can be no doubt that Grapes would ripen well in such a place, and quite well enough in any year for wine-making. Leaving the lake we pass to a place rejoicing in the suggestive but not inviting name of Bloody Acre, which is said to have been a place of fight between the Danes and Saxons, and as the position is good and there are remains of earthworks, it is not at all impossible that the Romans figured there as well; now, however, it is peaceful enough, and there are planted trees which Roman, nor Dane, nor Saxon ever saw, but which are the introductions of the race springing from all three (but mainly the last), from the old world and the then-undreamt-of new hemisphere. There the Deodar is luxuriating, *Cupressus torulosa* does fairly, but not so well as on the sandstone, and there are many others which are well represented; but the limestone, which forms the staple of the soil, as already remarked, does not appear to be favourable to Conifers.

Emerging from this place of former strife, and skirting the park, we overlook the farm, formerly in the occupation of the Editor of the *Agricultural Gazette*, but now in that of Mr. Cob-

ham, a Scotch gardener originally—a farm of 250 acres without a tree or hedge, and though such a state of things may be eminently unpicturesque, it must also be admitted it is eminently practical, and in this age of dear food and dear labour every inch of ground must be made productive, and man and horse power must be economised to the utmost. The day is coming when much of the labour of our farms will be done by steam, and for the profitable application of this fields will have to be made larger, hedgerows and pollards fewer. We should be sorry to see our picturesque winding country lanes give place to hard straight lines and wire fences, but there is many a straggling division between fields, choked with weeds and brambles, and useful neither as a fence nor shelter, which will have to be improved off the face of the earth. We omitted to mention in connection with the Conifers in the park that the largest *Pinus insignis* is 45 feet high; this escaped the severe frosts of the winter of 1860-61, but seventy-five trees of the same species were killed.

The old Chestnut to which we have already referred still exists, and though it has thrown-up a number of offshoots, it is, as may readily be supposed from its great age, in a very dilapidated condition. We were informed that there are his-

torical records of it as early as the middle of the eighth century, and Gilpin says that tradition relates that it was a boundary tree even as long since as the reign of King Stephen—that is, in the first half of the twelfth century, and if so, it must have been old even then, for saplings are not selected as boundary marks. When Gilpin saw it in 1808, Lord Ducie had lately released it from the garden-wall which pressed upon it, and enveloped it by the application of fresh earth to its roots. Even as late as 1788 it had produced great quantities of Chestnuts, small, but sweet and well-flavoured. Large as is this tree, it is far inferior in size to that upon Mount Etna, called the "Castagna de Cento Cavalli," or "The Chestnut tree of a hundred horses." It was 204 feet in girth, whilst that at Tortworth is not recorded to have exceeded 60 feet. Atkins, historian of Gloucestershire, writing in 1721, says there is a remarkable Chestnut tree growing in the garden of the manor-house, which tradition says was there in the reign of King John. In 1721 it was 19 yards in circumference, and seemed to be several trees incorporated, but this is not the fact, with other young growing-up. The ancient manor-house was near the church. Mr. Strutt ("Sylva Britannica"), gives an account of this tree which substantially agrees with the au-



THE TORTWORTH CHESTNUT.

thorities we have quoted, together with an illustration which we reproduce, as it conveys a tolerably accurate idea of the tree at the present day.

The fruit and kitchen garden, including a walled orchard of three acres, covers between nine and ten acres, and is a model of good keeping, while the trees, both on the walls and in the borders, are healthy and fruitful, neither over-luxuriant on the one hand, nor, on the other, presenting those signs of decrepitude and premature old age so frequently seen in gardens of this description. There are about seventy kinds of Apples, dessert and culinary, most of them trained in a bush form, branching at a yard from the ground. Nothing could be better than their appearance and that of the Pear trees, of which the varieties grown are equally numerous. Mr. Cramb has paid great attention to the selection of varieties suitable to the soil and locality, and as soon as it is discovered that any kind, whether new or old, is unsatisfactory, it has to give place to another. The result has been that we have here a choice and well-approved collection. The Pears, Plums, Cherries, and other wall trees, it need hardly be said, are excellently managed. In the open quarters standard Plum trees are also grown in rows between Currants and Gooseberries, whilst the borders by the side of the kitchen garden walks opposite the walls are occupied with bush Pears and Plums. On one of the walls are

a number of Mr. Rivers' new Peaches and Nectarines on trial; and in connection with these Mr. Cramb mentions that for years he had been much troubled with black fly, and that he had found Pooley's tobacco powder the only effectual remedy. The Apricot wall has a south-west aspect, but owing to the excessive rains from the Bristol Channel the crop proved unsatisfactory; a glass coping was then put up, but the result was no better, and now a hundred-foot run has been covered with a glass case 6 feet wide and 14 feet high at back, and a crop has been secured, as well as the certainty of others in the future.

In the two Peach houses and five vineries there are splendid crops. Mr. Cramb has worked Lady Downe's and West's St. Peter's on the Black Hamburgh stock, and finds that thus treated the berries of the former are not so liable to scald as when the Vine is on its own roots. He has likewise similarly worked the Muscat of Alexandria. There are, besides, two Fig houses, an orchard house, Melon and Cucumber houses, a Pine stove, and several plant houses and pits well filled and cared for. Mr. Cramb's house, in front of which is a small geometric flower garden, offers a marked contrast to the small, ill-ventilated dwellings which are still often found squeezed into some obscure corner of the garden, though happily their number is now growing fewer. It is spacious, with large rooms and plenty of them, and provided with every requisite accom-

modation, and an unlimited supply of water both hard and soft. We may remark that an accurate meteorological journal is kept at the gardens, and before closing this notice we will simply add that the pleasure of Mr. Cramb's intelligent converse, and the knowledge to be gained from his long experience which he freely communicates, would alone repay for a visit to Tortworth.

STRAWBERRY CULTURE.

It is altogether superfluous for Mr. Peach to state that he is an unbeliever in recognised theories, when the whole of the paragraphs preceding this statement plainly show that not only is he so, but that he has theories of his own which are totally at variance with the teachings of one's experience, and which are calculated to mislead those who are ignorant of the real requirements of this useful plant.

My standard of excellence is a high one, and I very strongly question if what Mr. Peach considers to be fine fruit would at all approach it. The statements to which he takes exception are no mere theories, but are deduced from considerable experience, and are therefore thoroughly practical, for I follow no beaten track if I can find a better one, and, like Mr. Peach, have tried old Strawberry beds side by side with new ones, always getting a plentiful supply of fruit, but with very few really fine berries, and that is why the term paltry is applied to it; for when the pristine vigour of a plant becomes so exhausted that its produce deteriorates in size if not in quality, it cannot fairly be said to continue in full bearing. Considering that the mode of culture requisite to produce Strawberries of the highest excellence is so simple, it is surprising enough that old and exhausted beds are still so prevalent, but it is far more extraordinary that anyone should be found to advocate such a state of things.

All Strawberry plants make fresh growth immediately after the fruiting season, whether manure is applied or not, and the ripening of the crowns follows this growth and does not precede it. It appears to me, therefore, that the best time to apply manure must be when growth is in full activity, and by forking the manure into the surface soil a store of rich nutriment is in readiness for the young roots, which seize upon it with avidity, hence the autumnal growth is so vigorous that the stout robust foliage passes through the severest winter almost unscathed. The application of mulching at so late a period of the year as October or November, confers no immediate benefit upon the plants, and can serve only to enrich the soil for a subsequent period of growth. Let both plans be compared, and I think conviction must follow that the period of active growth is the time to apply manure, and not when the plants are at rest, and I should certainly include such treatment under the category of untimely culture.—EDWARD LUCKHURST.

A MONUMENT OF TREES.

A SKETCH of the history of Thomas Hamilton, Earl of Hadlington, recounts his love of tree-planting, and the fact of the publication of a book "On Forest Trees," composed mainly of letters from his pen to his grandson. He is shown to be one of the most sagacious and enterprising of rural gentlemen, in the improvement of his domain, but loved the pleasure of the hunt too well. His wife took upon herself the fancy that trees could be planted and made to grow, and the author thus recounts the way she came to carry out her will:

"When I came," he says, "to live here (Tynninghame), there were not above fourteen acres set with trees. I believe that it was a received notion that no tree would grow here on account of the sea air and the north-east wind; so that the rest of our family, who had lived here, either believed the common opinion or did not delight in planting. I had no pleasure in planting, but delighted in horses and dogs and the sports of the fields; but my wife did what she could to engage me to it, but in vain. At last she asked leave to go about it herself, which she did, and I was much pleased with some little things which were well laid out and executed. These attracted my notice, and the Earl of Mar, the Marquis of Tweedale and others, admired the beauty of the work and the enterprise of the lady."

After her ladyship had succeeded in rearing several ornamental clumps, she proposed to enclose and plant the moor of Tynninghame, a waste common of about three hundred Scotch acres. The Earl agreed to her making the experiment, and, to the surprise of everyone, the moor was speedily covered with a thriving plantation, that received the name of Binningwood.

His lordship was tempted, by the success of these trials, to enter himself with great eagerness into the plan of sheltering and enriching the family estate by plantations. He planted several other pieces of waste land, enclosed and divided his cultivated fields with strips of wood, and even made a tract along the seashore called the East Links, which had always been regarded as a barren sand, productive of the finest Firs.

"And thus," says Mr. McWilliam, in his ingenious and useful "Essay on the Dry Rot and Cultivation of Forest Trees," "did her ladyship, to the honour of her sex and benefit of her lord and her country, overcome the prejudices of the sea and the barren moor being pernicious, and of horses and dogs being the best amusement for a nobleman; converting a dashing son of Nimrod into an industrious planter, a thoughtless spendthrift into a frugal patriot."

Thus can good wives in ev'ry station
On man work miracles of reformation;
And were such wives more common, their husbands would endure it;
However great the malady, a living wife can cure it.
And much their aid is wanted; we hope they'll use it fairish,
While barren ground, where wood should be, appears in every parish.

—(Horticulturist).

ARALIA SPINOSA.

UNINVITING as this tree assuredly is in winter, there are few who look upon it when well clothed with foliage but are impressed with its beauty and remarkable appearance. The extraordinary length of its finely-pinnated leaves, which are produced in sufficient number to give the tree a light, airy, and yet graceful appearance, seldom fails to attract attention; added to which are fine heads of bloom, frequently at a time when comparatively few trees present us with such a sight. The tree is also very hardy, and I do not think it at all particular as to the ground it is planted in; only, in consequence of the extreme size of its foliage, shelter from the highest winds seems advisable, for we occasionally find branches broken in summer from this cause, the wood being very brittle and the growth somewhat loose and straggling.

The tree would not be much of a favourite were it not for its magnificent foliage. A specimen we have been growing on a site not at all favoured, and which I have frequently measured, has foliage exceeding 5 feet in length up the stalk and leaflets together, and upwards of 4 feet in breadth, while the individual leaflets are not much larger than those of the common Ash. The leaf-stem is furnished with prickles here and there, which tend to protect it, for, unlike those on the woody stem, which are thickly set and stand out straight at right angles to the branch they are inserted on, those on the leafstalk are hooked inversely, but the latter are not very numerous, and present no impediments to the handling of the leaf by anyone exercising ordinary care. A full-grown leaf is generally admired by all to whom remarkable foliage has a charm, and having some slight resemblance to the fronds of some of our largest Ferns, it covers the greater portion of a good-sized table when spread out upon it. In general contour it is also flat, or rather with a graceful bend in the main leafstalk only; when laid down upon a flat surface its outlines are seen at a moment. The flower-heads form an irregular umbel of considerable dimensions, and are also elegant, usually making their appearance at the end of August or in September.

Taken as a whole, the tree is well worthy of a place in some sheltered corner, where its foliage has a chance of being fully developed. I believe the tree will withstand any amount of frost, but the wood is brittle, and the merest twig as thick as the human thumb. As it has but few branches, the tree when denuded of its foliage in autumn has not an inviting appearance; in summer, however, it cannot fail to please. I believe it is sometimes called *Aralia japonica*, a name by-the-by occasionally also bestowed on *A. Sieboldii*, which bears no resemblance whatever to the tree in question; but as they both come from Japan, the misapplication of the name is easily accounted for. Amongst deciduous trees having ornamental foliage *Aralia spinosa* may take a prominent place, and where a suitable position exists, the planter who wishes for novelty cannot well find anything more likely to fit his purpose, and I heartily recommend it.—J. RONSON.

PROTECTION OF POLLEN.

DR. A. KERNER reprints from the "Proceedings of the Medical and Scientific Society of Innsbruck" an interesting memoir on this subject. Pollen is of two kinds, powdery and

coherent. The former kind is found almost exclusively in those plants whose fertilisation is effected by the agency of the wind. The quantity of pollen is in these cases enormous; the anthers are frequently attached very slightly to the end of elongated filaments, so that the pollen is shaken out of them by the least breath of wind; the flowers grow on the most exposed parts of the plants, frequently appearing before the leaves, so as to give greater facility for the dispersion of the pollen, and are not provided with a brightly-coloured corolla, powerful scent, or nectar, for the purpose of attracting insects. Plants, on the other hand, whose pollen is coherent, are dependent on insect agency for its dispersion and transport to the stigma. It is therefore absolutely essential in these cases that some means should be provided for its protection from moisture, whether rain or dew, which would immediately destroy its efficacy, until such time as it may be carried away by insects. A variety of contrivances is actually found in nature for effecting this end, which may be classified under the following heads:—

1. Protection by portions of the pistil or stamens themselves, as in the petaloid stigmas of Iris.
2. By portions of the calyx and corolla; this occurs in an immense variety of forms.
3. By sheaths, bracts, or foliage leaves.
4. By periodic movements of the leaves of the perianth, as in the closing of flowers at night or in rainy weather.
5. By curvature of the axis, as in those numerous flowers the opening of which is always turned towards the ground at the period when fertilisation takes place.

From the examples adduced Kerner draws the general conclusion that the protection of the pollen against the injurious effect of premature moisture is the more perfect the smaller the number of flowers and of pollen grains in the individual, the greater their degree of coherence, and the more exclusively the flower is fertilised by insect agency. In those plants where the flowering extends over a great space of time, where the anthers in the same flower vary in the period of their dehiscence to allow the escape of the pollen, and where the number of flowers in an inflorescence is very large, the protection of the pollen against the influence of the weather is reduced to a minimum, as in Umbelliferae and many species of Cruciferae and Saxifraga.

Finally, Kerner draws the conclusion that those plants whose coherent pollen renders insect agency necessary for their fertilisation can only have existed in very recent geological periods; and those new species or varieties must necessarily have the advantage, and tend to become perpetuated, which possess superior advantages, in respect to the climate in which they grow, for the protection of their pollen from all injurious influences. The plants, the remains of which are found in the oldest geological formations, are generally of that class which do not require insect agency for their fertilisation.

NOTES AND GLEANINGS.

THERE is a very long account of the PINE APPLE NURSERY, Maida Vale, in a recent number of the *Morning Post*. The Nursery, it is stated, was originally founded for Pine Apple culture, but gradually included all kinds of nurserymen's and florists' produce. It is now in the hands of a company, who are carrying out extensive improvements.

— WE understand that the SNOW OF THE METROPOLITAN FLORAL SOCIETY at the Surrey Gardens has been abandoned, in consequence of a stipulated contribution of £100 towards the expenses not being forthcoming.

— THE increased consumption of FOREIGN POTATOES is remarkable. In the last seven months the value was £1,829,153, against £353,005 in the same period last year.

— THE GRAPE HARVEST IN FRANCE promises to be unusually fine this year. How large a share the vineyards take in the produce of the country, and to what an extent they form the wealth of all classes, we may judge from the fact that there are 2,300,000 vineyard proprietors in the Republic. In all the sunny land of France there are only eleven departments which do not grow the Vine; twenty cultivate the Grape for home consumption, and fifty-eight for export. Most of the fruit is intended for the wine presses; but the best dessert Grapes also come from France. The famous Chasselas of Fontainebleau, Royal Muscadine are grown in the two little townships of Thomery and Champagne, both in the neighbourhood of Fontainebleau. The vineyards there produce an annual crop of about 2,000,000 lbs., of which the capital consumes about 800,000 kilogrammes, while the rest is exported

to England, Austria, and even Russia. The trade in Grapes, foreign and home grown, amounts in value to several million francs a-year. This, of course, does not include Grapes used for wine.—(*Globe*.)

— PEACH CULTURE ON THE DELAWARE PENINSULA has developed with such rapidity in five years that it is unequalled in magnitude by any of the fruit sections of the world. The number of Peach trees now on the peninsula, as gathered from last reports, is 5,000,000—representing fifty thousand acres. The value of land devoted to Peach orchards averages \$50 per acre, and the average annual income does not exceed \$50, although in many cases \$200 or \$300 per acre are realised. Estimates from most reliable sources indicate that the Peach crop of 1873 will be about 2,500,000 baskets; half of the trees of Delaware, in the northern half of the State, have had their buds entirely killed the past winter. Were the entire number of trees on the peninsula to bear a full crop once, it would be fairly enormous. We sincerely hope these enthusiastic Peach-growers may have a most abundant crop, and then, after it is all over, sit down and reflect: Does Peach culture pay when everybody is going into it? We have felt so for several years, that too many trees were being planted, and Peach-growing for the next five years would not be even as profitable as devoting the same ground to Potatoes. The Peach crop also effectually spoils the sale of other fruits which ripen at the same time—so much so that growers of other fruits often wish there never was a Peach. It seems as if the Peach-growers did not make much money themselves, and did not allow others to make any also. Peach culture in Delaware is effectually overdone.—(*American Horticulturist*.)

— A GERMAN florist, in a high state of irritation, related his troubles in this way. He said:—"I have so much trouble not de ladies, ven dey come to buy mine rose dey vants him: hardy, dey vants doubles, dey vants him fragrant, dey vants him nice colour, dey vants him abery dings in von rose. I hopes I am not vat you calls von uncalled man, but I have sometimes to say to dat ladies, Madame, I never often see the ladies dat vas beautiful, dat vas rich, dat vas good temper, dat vas youngs, dat vas clever, dat vas perfection in one ladies. I see her much not!"

— AMERICAN newspapers have been discussing the question, Which of the earth's products employs the greatest amount of capital? The *New York Journal of Commerce* thinks the inquiry may be limited to three products—hay, cotton, and tea. The *Philadelphia Ledger*, not admitting this limitation, maintains that if it be just, hay, or rather grass, is the most important product. Cotton and tea are grown only in a few countries, but grass is universal. According to the census, the value of the farms in the United States in 1870 was, in round numbers, \$9,263,000,000; of the live stock on farms, \$1,525,000,000; of farm implements, \$337,000,000; the year's wages, \$310,000,000; making in all \$11,135,000,000 capital employed in agriculture. Now, how much of this is devoted to the grass crop? The hay crop of 1870 is reported at over twenty-seven million tons; and this, at half the selling price in the large cities, would be worth more than four hundred million dollars, a far greater sum than the aggregate home value of the cotton or any other crop. But a large portion of the grass crop is used on the ground. Live stock of the value of above 1500 million dollars were fed from it in that year, and, averaging their lives at five years, we have one-fifth of that sum as representing the grass fed to them in the year; the value of the animals slaughtered for food in the year was four hundred million dollars; the butter crop of 1870 was over five hundred million pounds, which at twenty-five cents amounted to 128 million dollars; 235 million gallons of milk, at only ten cents a gallon, add twenty-five million dollars to the value of the grass crop; one hundred million pounds of wool, at twenty-five cents, add twenty-five million dollars more; and fifty-three million pounds of cheese, at ten cents, over five million dollars more. We have thus a grand total of nearly 1300 million dollars for the hay crop and the products of grass consumed on the ground in 1870. But, as the animals producing the meat, butter, milk, cheese, and wool consumed other food besides grass and hay, the entire value of the "corn" and oats crop of 1870, estimated at 270 million dollars, is deducted; and this leaves one thousand million dollars to be credited to the hay and grass in that year, in which the reported aggregate of all farm products was \$2,167,538,658, this last sum being probably too high, as it includes additions to stock, "betterments," &c. According

to this estimate the value of the grass crop was two-fifths of the aggregate value of all farm products. It is inferred that two-fifths of the capital invested in agricultural pursuits was devoted to the grass crop. The *Lodger* says, "If any other of the earth's products can make a better show we do not know where to find it."

WORK FOR THE WEEK.

KITCHEN GARDEN.

At the earliest opportunity earth-up the Broccolis, Savoys, and all other crops that require it. Remove Peas that are mildewed immediately they are done with. Destroy caterpillars that infest the Brassica tribe before they do much mischief. Cut down the flower stems of *Artichokes*, and remove the dead leaves from the old plantations. Those made last season will probably now produce a few heads. Continue to plant-out *Cabbages* for Coleworts at every favourable opportunity. Prick-out the young plants intended for the main spring crop. The *Cucumbers* intended for house culture should now be potted into their fruiting-pots; the soil for the purpose should be composed of equal parts of loam, rotten dung, and leaf mould. A good drainage should be given, the health of the plants depending in a great measure on this point. Allow one or two shoots to grow to the fullest extent of the house before being stopped. Give *Kidney Beans* an abundant supply of water when they are in bloom if the weather is dry and hot, or most of it will drop off prematurely. Plant-out the thinnings of *Leeks* from the seed-bed as soon as the weather is favourable. This is a very useful culinary vegetable during the winter, particularly where soup is made for the poor during an inclement season. We have lately seen the Tripoli *Onion* of an amazing size from a sowing last autumn; it has done better than any other sort, of which there were several sown and planted-out at the same time. We, therefore, strongly recommend it to be sown immediately. The last sowing of *Turnips* for the season should be sown; as the weather is favourable for the purpose, thin the advancing crops. Keep the *Vegetable Marrow* plants well supplied with water during dry weather; cover the ground about them with short grass, or litter of any kind if that cannot be procured.

FRUIT GARDEN.

Proceed with making fresh plantations of Strawberries, choosing well-rooted runners or such as have been taken up and pricked-out in beds previously. It matters little whether they have been planted in beds or in rows, provided the plants have a sufficiency of room. The ground should be well trenched and manured, and if the soil is of a stiff nature the addition of a considerable quantity of gritty matter will be of advantage in keeping the ground open, as no spade ought to be inserted among them until they are finally dug down. For general purposes no sorts are preferable to Keens' and the Elton Pine, and by planting on different aspects they will furnish a very early and a very late supply. Some of the new sorts I have not seen, and of others, such as Myatt's British Queen, I as well as others have a spurious kind. Other sorts that I have under my notice are not comparable to the above two sorts when both flavour and productiveness are taken into consideration. Rows of beds intended to produce next season should have their runners removed and the plants thinned-out, that the buds left may be fully matured. By adopting the latter practice and surface-manuring, one planting will produce plentifully for a series of years; though this is not generally desirable, as it would interfere with the rotation of cropping. As Peaches and Nectarines now begin to ripen, it will be necessary to fix nets or mats to catch the falling fruit. A double row of stakes 3 feet long should be driven into the ground 1 foot at about 3 feet apart, one row close to the wall, and the other about 2 feet from it. To the tops of the stakes should be tied lightly the nets or mats, so loosely as to form an open bag; in this may be laid a little hay, straw, moss, or any other soft material. It must be supposed that I advise this plan to save gathering. The fruit is at all times best gathered by the hand, but by the strictest attention some will fall, and if no means be used to catch it, it will be inevitably bruised and spoiled. Gather Apples and Pears as they ripen.

FLOWER GARDEN.

Before the propagation of plants for turning-out is proceeded with to any material extent, it is as well that a proper arrangement be made as to what number of plants are required another season. To keep up the interest of a garden, especially if planted on the grouping system, requires some considerable skill and forethought to vary the scene in each successive year, so as to prevent the arrangement becoming monotonous. Thus, if warm colours prevail to any material extent this season, it would be as well to introduce a majority of cold colours next season, and to edge each bed of the latter with its complementary warm colour; indeed, the system of edging beds with contrasting colours imparts highly interesting features to the flower garden, and more especially to such beds as may be distributed over the lawn without any methodical arrangement. For these

reasons no plants are so well adapted as those which have variegated foliage, and for that reason a large stock of Pelargoniums should be provided. The best of these is Mangles's Variegated, the common and Golden-variegated, and the different varieties of the variegated Ivy-leaved Pelargoniums. The Rose-scented variegated is an interesting variety, as is also a very small-leaved variety called Dandy. This variety makes the neatest edging for a small bed of any plant that I am acquainted with. Of the Oak-leaved kinds, Moore's Victory is very neat. Rollisson's Unique also makes a fine bed, and the old Fair Ellen is not without interest. Attend particularly to the regulating of over-growths, especially in Petunias and strong-growing Verbenas. Keep them well cut-in, so as to form neat beds, and yet do not let there be any appearance of their having been cut. Mow, sweep, roll, and keep all neat and clean, and if there be any wormcasts on the walks, water them with lime water.

GREENHOUSE AND CONSERVATORY.

Pelargoniums that have been struck from cuttings early last March, and planted in the reserve garden early in June, should now be fine plants for flowering late in the autumn. Their first attempt at blooming in the open air has been checked, of course, and now, as their second flowering-buds are well formed, they may be taken up carefully and repotted. Some people commit a great error at this stage in putting such plants into heat at once. This should never be done. The grand point is to keep the leaves as free from excitement as possible until the roots get hold of the new soil. A cool close frame covered with canvas is the best place for them. Chrysanthemums and all other plants that are planted out for a summer's growth—a very excellent plan, should be treated in this way, and should not be allowed to remain in the ground too late. Keep the conservatory dry from this time, and little air is required, except for keeping down sun heat now that the growth of most plants is nearly over.

PITS AND FRAMES.

There are many of the new Verbenas that will force admirably through the winter with little heat; this is the time to get a supply for this purpose. The new *Veronica speciosa* forces well for early spring, and although nearly a hardy plant, will stand as much heat as an *Ixora*. The old *Luculia* is as much sought after as if it were a plant of recent introduction, a proof that it is not a long-liver under cultivation. It flowers freely in loam, but for pot cultivation, and in the hands of beginners, hardly any loam should be used; equal quantities of peat, leaf mould, and sand will keep it in good condition for years.—W. KEANE.

DOINGS OF THE LAST WEEK.

The season so far has been exceedingly favourable for out-of-doors work, still in many places work is not in a forward state. This can readily be accounted for by the fact that work could not be brought up in the spring owing to bad weather and the wet condition of the ground, and when work falls in arrear early in the season there is little chance of bringing it up again. Whenever work falls behind, and things in the garden are not in a satisfactory condition, the wise gardener will make a strenuous effort to get everything in proper order, instead of grumbling at every difficulty that comes in the way. It has been truly said that grumblers are seldom good at anything else, and young gardeners sometimes require to be reminded that if a little pressure requires to be put on in the summer months, there are also times in winter when days are short and things seldom require to be done in a hurried manner; also that it is for their credit as well as that of the head gardener that everything should be kept in the best order.

FRUIT AND KITCHEN GARDEN.

We have been preparing ground for sowing Onions. It is deeply dug and well manured, and will be in good condition to receive the seeds the first or second week of September. We mix with it a small quantity of Cauliflower seeds, the plants from which are planted out in hand-lights early in October.

We have been earthing-up Celery plants, and with us this is a matter requiring much care, as this useful vegetable keeps very badly in our soil. We tried cocoa-nut fibre refuse, thinking it would preserve the plants better, but this was worse—the rows where the fibre was used containing the smallest number of sound plants. After clearing away the small offsets round the bases of the plants a strip of bast was used to tie the leaves together at the top, and some dry soil placed round the stem with the hand, taking care that none of it rolled into the centre of the plant.

We have gathered the early Apples—such sorts as Irish Peach, Devonshire Quarrenden, Early Harvest, and Kerry Pippin. Red Astrachan and Early Margaret are now over. We are using two sorts of Pears from our young pyramids—viz., Jargonelle and Beurré Giffard. The first is well known as not only one of the best flavoured early Pears, but the most certain bearer. The latter is not so well known; it is, nevertheless, a

very fine variety. It is later by a week than Jargonelle; it bears freely on the Quince; the fruit is larger than that of the Jargonelle, more rounded, and though not quite so highly flavoured, it is quite distinct in this respect, and is a good sort for small gardens, not being a robust grower.

Many of the pyramid Apple, Pear, and Plum trees require to have the young wood thinned and cut back. We shall do this at our earliest convenience.

We have just finished planting out the Strawberry plants. It is late, but they were sorts that we could not get runners from earlier in the season, being seedlings and new varieties. We like to have them planted out by the second week in August at the latest. The earliest-planted sorts have had the runners cut from them, and are growing freely.

ORCHARD HOUSE.

We are now enjoying the fruits of our labours here. Most of the fruit are approaching ripeness; much has been gathered, and some of the latest sorts, such as Lady Palmerston and Salway Peaches and Victoria Nectarines, are quite green and hard. Bellegarde Peach is just in; Violette Hative is also in. This is certainly distinct from Bellegarde, being paler in colour, but in respect to quality one is as good as the other, and at the season when they ripen no other Peach that I know can equal them. We have also picked the American Peach Exquisite; this is the best yellow-fleshed Peach of its season, but is a shy bearer, and will cause disappointment if the blossoms are not set by using a camel-hair brush or shaking the trees twice a-day when in flower.

As the fruit is cleared off the pot trees, those requiring re-potting are attended to at once. The sooner the trees can be repotted after the fruit is gathered, the better certainty of a crop the following season. The potting should be performed in a careful manner, and the pots used should only be a size larger than those employed for the previous potting. The roots are considerably reduced, so that the trees have a tendency to flag, and would both do so and shed their leaves if they were not attended to by being syringed two or three times a-day.

FLOWER GARDEN.

We have devoted much attention to this department. The flower beds and borders had become considerably crowded, and the "ribbons" had grown into each other. The shoots out of place have been cut away, dead and decaying flower trusses have been removed, and everything made as tidy as possible. The flower beds are often neglected at this season, but it is as well to keep them as neat as possible, and remove decayed flowers and leaves periodically.

Bedding Plants.—We have put in all our cuttings of Pelargoniums; it is rather late for the more tender sorts, such as the Golden Variegated and Golden Tricolors, so instead of placing the boxes out of doors, as was done with the green-leaved sorts, we placed them in a small airy house by themselves, where the cuttings will strike root more readily. We shall not put in cuttings of Verbenas, Ageratum, or any similar plants until the second or third week of September. Centaurea candidissima we have put in, one or two cuttings in 60-sized pots, and the pots were placed in cold frames where the lights can be kept rather close for a few days, and the cuttings be shaded from bright sunshine. We seldom lose any cuttings, treating them in this way.

We have sown some Hollyhock seeds to produce flowering plants next year. We save our own seeds from the best sorts, and the batch of seedlings which we flower every year are much admired. Very few of them are in any way inferior to the parents, and they are not so much trouble as propagating named sorts from cuttings. The young plants are grown in boxes and kept in a cold frame all the winter, or they may be pricked out in the open ground and covered with hand-lights or a glass frame.

Lobelias.—Saved seeds of *Lobelia speciosa*, and sowed in shallow pans or boxes. To have an early and good display of this useful little bedding plant the seeds should be sown at once, and when the plants are old enough to handle prick them out in boxes about an inch apart. It is best to mark one or two of the best plants and those most suitable for the purposes for which they are grown, and save the seeds wholly from them; by these means a selected and improved strain is obtained.

Last night, Sunday, we had a terrific thunderstorm; the flashes of lightning were incessant, and the rain for more than an hour fell in torrents. The rain was gauged this morning, and 1.20 inch was found in the receiver. The atmosphere is close and hazy to-day. I hope it will not affect the Potatoes; no diseased ones have been found as yet in our neighbourhood.—J. DOUGLAS.

TRADE CATALOGUES RECEIVED.

W. Cutbush & Son, Hightgate, London, N.—*Bulb Catalogue*.
Dickson, Brown, & Tait, 43 and 45, Corporation Street, Manchester.—*Autumn Catalogue of Dutch and French Flowering Bulbs*.

Downie, Laird, & Laing, Stanstead Park, Forest Hill, London, S.E., and 17, South Frederick Street, Edinburgh.—*Descriptive Catalogue of Dutch Flower Roots*.

H. Cannell, Station Road, Woolwich.—*Autumn Catalogue of Florists' Flowers, Bedding Plants, &c., for 1873*.

Alfred Legerton, 5, Aldgate, London, E.—*Wholesale Catalogue of Dutch and other Flower Roots*.

William Paul, Waltham Cross, London, N.—*Bulb Catalogue*.
H. Curtis & Co., Devon Rosery, Torquay.—*Descriptive Catalogue of Selected Roses, &c., 1873-74*.

B. S. Williams, Victoria and Paradise Nursery, Upper Holloway, London, N.—*General Bulb Catalogue—Catalogue of Fruit Trees, Roses, &c.*

F. & A. Dickson & Sons, 106, Eastgate Street, Chester.—*Catalogue of Dutch Flower Roots, &c.—Catalogue of Select Roses, &c.*

Sutton & Sons, Reading.—*Autumn Catalogue of Bulbous Flower Roots, Plants, Seeds, &c.*

John Matthews, Royal Pottery, Weston-super-Mare.—*Illustrated Catalogue of Pottery, &c.*

Lawson Seed and Nursery Company (Limited), 1, George IV. Bridge, Edinburgh, and Southwark Street, London, S.E.—*Catalogue of Dutch Flower Roots, &c.*

TO CORRESPONDENTS.

* * We request that no one will write privately to any of the correspondents of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed *solely* to *The Editors of the Journal of Horticulture, &c., 171, Fleet Street, London, E.C.*

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

N.B.—Many questions must remain unanswered until next week.

BOOKS (J. W. C.).—Sowerby's "British Plants" is a very high-priced book. We do not know where you can obtain a copy. (B. T. G.).—"Plans of Flower Gardens, &c." may be had post free for 5s. 4d., and "Sanders on the Vine" for 5s. 4d.

PARIS NURSERIES (G. Bouché).—Call on Messrs. Vilmorin, Andrieux, and Co., Quai de la Magisserie, and they will give you introductions.

FRUIT-TREE RENOVATING (Old Subscriber, B. E. House).—In reply to your query as to the old gardener being rewarded by publishing his mode of treatment in a pamphlet, we reply, as did our neighbour "Punch," on an equally precarious proposal—"Don't." If his mode is written and sent to us we will write to him or to you, and state truthfully whether we think it novel, or, if worth publishing, what we would give for the MS. to publish in this Journal. If we thought deprecatingly of it we would return the MS., and we need not add we hope, though we do, that we should not make any use of the communication. A pamphlet is too low-priced to pay for advertising, and without advertising there would be no sale.

CENTHALOTUS FOLLICULARIS (An Old Subscriber).—It is a greenhouse plant, therefore may be exhibited in a class for greenhouse plants.

TUBERS ON POTATO STEMS (W. W.).—They often are so produced. The cause, probably, is the blossoming, or production of tubers by the roots, being checked.

TIME FOR TRANSPLANTING ROSES (C. W.).—The third or last week in October is to be preferred, but they may be removed earlier if the roots are dug-up with care, if kept watered in dry weather, and the shoots not too much shortened.

SWAINSONIA SEEDLING (Flora).—We see no difference from the parent species.

PEAS (E. J., Lincoln).—We cannot undertake to name Peas from the pod alone.

ASPECT FOR GREENHOUSE (M. S.).—The best aspect for a greenhouse is south; the wall against which it is placed and forming its back must have the ends east and west. An east or west aspect would do for plants, but the south is far preferable, and as you have Vines in view, indispensable.

PROPAGATING ALYSSUM VARIEGATUM, GAZANIA SPLENDENS, AND AGERATUM (Alpha).—All are propagated by cuttings, which should be taken off now. Select short stubby shoots of young growth 2 or 3 inches long, cut them below the lowest joint, and insert them about an inch apart in pans or pots. The leaves should be removed from the lower part of the cutting for about two-thirds their length, that is, the depth they are to be inserted in the soil. The pots or pans may be prepared for the cuttings as follows:—Fill them a quarter their depth with drainage, over that place an inch-layer of the siftings of two parts fibrous light loam, and one part leaf soil, and to the sifted soil add a fourth of sand; mix and fill rather firmly to within three-quarters of an inch of the rim. Cover with half an inch thick of silver sand, water gently, and stand on one side for two or three hours before inserting the cuttings. After insertion water gently, and when dry place in a cold frame on ashes, and keep close and shaded from sun. They will root slowly but surely. After the beginning of September they will need to be placed in a mild, sweet hotbed, but from August up to September, and even the early part of the latter month, they root well in a cold frame, and are the sturdiest plants. They may be struck up to the middle of October in heat.

NOTED IN GREENHOUSE (The Anonymous).—It would no doubt, be a great help to the Pelargoniums and Fuchsias in spring to give them the benefit of a hotbed after potting. It would encourage free rooting and the breaking,

but we should only place them in heat for a time, and withdraw the pots from it as they advance. If you put in the tan in February, plunge the pots in it early in March. We should, after getting the plants rooted in their final pots, gradually withdraw them in May, and so that they might not experience a check. In winter it would not be of any benefit to the plants to have them plunged in a bed of warm tan, though it would not injure the Tricloris and other Pelargoniums, only keep the soil no more than moist. The Fuchsias would be worse of bottom heat in winter. The pots should not be sunk in the tan more than a quarter their depth, when it is 80 at 1 foot deep, half when it is 75, and fully when it is 65 to 70. It is beneficial to Pelargoniums in winter to be near the glass at all times, but they should be sheltered from powerful sun.

POLYPODIUM ITALICUM AND HOLLY FERN CULTURE (Edis).—The first-named we do not know. The Holly Fern (*Polystichum Lonchitis*) is difficult of cultivation, and does not thrive well under artificial treatment. It is a rock fern, and as such should have at least one-third of freestone mixed with equal proportions of sandy peat and yellow loam, the freestone in pieces from the size of a pea to that of a walnut. Good drainage should be given, and the plant placed rather high in the centre of a pot, and supported with pieces of freestone. Water freely when growing, keeping moist at all times, and place it in an airy place, shielded from bright sun, or a sheltered position on rock-work out-doors. It is found to do best in damp but slightly elevated situations.

CUCUMBERS NOT FRUITING (G. M. W.).—We are not able to account for the plants not showing fruit as much as those of your neighbour, but there must be something different either in the temperature, soil, or treatment. The preparation of the border seems right, also the temperature (65 to 70 at night, 70 to 75 by day without sun, 80 to 90 with sun and abundance of air), and we can only conclude you do not stop the shoots so as to induce fresh or bearing shoots. Stop when the shoots reach the wires. If the shoots resulting from the stopping do not show fruit before the sixth joint stop them, and so on at every sixth joint, or a joint beyond the fruit.

VERATRUM NIGRUM SOIL (H. H.).—It requires deep rich loam enriched with leaf soil, and to be moist and slightly shaded from sun.

KEEPING VEGETABLE MARROWS (E. W.).—We do not think they can be so kept that in winter they may be eaten as fresh vegetables. If there is such a method we should be glad to hear of it.

VARIOUS (P. T. B.).—The Libston Pippin Apple tree will not need any more pruning than that you have given it—viz., thinning-out the centre; all you require is to keep the branches from being too much crowded. The roots ought not to be interfered with; and if vigorous do not manure, but if weak top-dress with manure. You may increase your stock by grafting next March on the Crab stock if for standards, or the Paradise if for dwarfs. The stocks may be had of a size fit for grafting of most nurserymen. The Briar stocks you have budded should remain where they are another year, and then in November twelvemonths plant them in their permanent positions, or you may move them during the coming November, only they will be poor the first season. The ground should be trenched, and a liberal dressing of manure applied. We should take out the soil from the circles two spits deep; take the bottom spit away, and mix with the other some strong turfy loam and a quarter of leaf soil, and well-rotted manure and refuse, mixing and returning to the hole, raising it about 9 inches above the surrounding ground to allow for settling. The flower stems of the Peaches should be cut down after flowering close to the growth at the root, just above the young shoots. The distance from the stem at which to cut off the roots in root-pruning trees depends on the age and size of the trees. If they are old and large they should have a space of 4 to 6 feet left undisturbed, calculating from the trunk of the tree. On low walls and young trees 3 feet from the stem is a suitable distance. Your fruit trees on a stiff clay will need but little manure. We should add to it as much of the burnt earth, old lime rubbish, and refuse as you can spare, digging it into the soil, but not disturbing the roots. It is not desirable to cut away the roots of Gooseberry or Currant bushes, but it is well to remove the soil 2 feet from the stem all round to the roots, not disturbing them, and after a fortnight's exposure fill-in with manure, placing a little fresh soil on the roots. Apricots and Plums, which are the same as regards their roots, may have these laid bare, the space being filled up with fresh soil and manure. It would no doubt much invigorate them if weak, but we should not leave the roots exposed longer than could be helped. Gooseberries of large size are, red—London, Dan's Mistake, Conquering Hero; yellow—Levellor, Catherine, and Drill; green—Stockwell, Shiner, and Telegraph; white—Antagonist, Snowdrop, and Careless. Trench the ground two spits deep, and mix with it plenty of leaf soil, burnt earth, and refuse. The tank will be very useful, at least its contents, for applying to most kinds of vegetable crops, pouring it between the roots or alongside. There is no crop in a garden but when growing freely it will benefit. In case of the liquid being in its pure state, it ought to be diluted before use with six times its volume of water. When rain falls it will not need to be diluted. You must exercise judgment in this matter. It is better to apply it weak than strong. Do not fail to give the Asparagus as much as you can—a good soaking every ten days or a fortnight from June to the middle of September.

SEEDLING ORANGE CULTURE (Norvic).—The orange tree, if from a pip sown this year, will not require more than a 4-inch pot, and if not in one of that size we should shift into such at once, using a compost of light fibrous loam three parts, one part leaf soil or well-rotted manure, and a sixth of sharp sand. Drain the pot well, and water only when the soil is dry, then give a good supply. It requires a temperature in winter of 40 to 45, and in summer of 55 to 60 at night, 70 to 75 by day, and 80, 85, or 90 with sun and abundance of air. It will be many a year ere it fruit, unless it be grafted, and then it may be a fruitful plant in three or four years.

ANNUALS FOR SPRING BEDDING (Auntour).—Late in spring these do not flower sufficiently early to be off before the time of planting summer bedding plants. We name a few, with the colours of the flowers and usual height:—*Asperula azurea setosa*, blue, 1 foot; *Campanula pentagonica*, blue, three-quarters of a foot, and its white variety of the same height; *Candytuft*, crimson, lilac, white, all 1 foot; *Collinsia bartisifolia*, purple, and its variety alba, white, 1 foot each; *C. bicolor*, purple and white, 1 foot; *C. grandiflora*, purple, 1 foot; *C. candidissima*, white, 1 foot; *C. verna*, blue and white, 1 foot; *C. violacea*, violet and white, 1 foot; *Erysimum arkansanum*, yellow, 1 foot; *Euchiaridium grandiflorum*, red, and variety alba, both 1 foot; *Limnanthes Douglasii*, white and yellow, trailing, 3 inches; *Nemophila insignis*, pink, 6 inches; *Platystemon californicus*, yellow, 1 foot; *Silene penstula*, blue; *S. ruberrima*, rose, 9 inches; *S. alba*, white, 1 foot. They should be sown out-doors in the second or third week of September, and in October be pricked-out in light soil in a sheltered border, and moved to the beds in March. We prefer bulbs and spring-flowering plants to annuals. It is now too late to sow the spring-flowering plants.

PEAR MISFORMED (P. P.).—We have seen the same malformation. It is a multiplication of the calyx remaining permanently as a portion of the fruit's rind.

PARASITES OF CURRANT LEAF (J. W. Cobb).—The parasites on Currant leaves are the eggs of *Chrysopa abbreviata*, or some closely allied insect.—M. J. B.

INSECTS ON MELON PLANT ROOTS (S. W. S.).—The insects you have sent, found on the roots and stems of your drooping and dying Melon plants, do not appear to us to have been the causes of the mischief. We have found in the phal nine specimens of *Chelifer caucroides*, a species generally supposed to feed upon mites and other small insects, and one specimen of the little Beetle *Anthicus antherinus*, a still more harmless insect.—I. O. W.

CATERPILLAR ON APPLE TREE (Idem).—The smashed caterpillar found on the stem of your Apple tree is that of the Wood Leopard Moth full grown; it burrows into the wood of the tree, and is therefore injurious, especially if the tree is young. It also attacks other trees.—I. O. W.

BURNING CLAY (A. M.).—As you have tried in every conceivable way to burn clay and failed, we quote that given in the "Gardener's Assistant," as practised by Mr. Mechi. "The mode of raising and burning is this:—A strip of land is broken up in very dry weather with Ransome's Y L plough, drawn by three strong horses abreast a Scotch equilibrium whittle tree. So great is the resistance that it requires two men to hold the handles of the plough to counteract the leverage of the horses. The earth is thus broken, or I may say torn up in immense rough masses or clods, as much as a man can carry, which are admirably adapted to form walls and supports for the mass of fire. By this means heaps of nearly two hundred solid yards may be readily burned. The earth being ploughed-up the fires are formed on the spot, the workmen placing a certain quantity of dried stumps of wood of sufficient solidity to maintain a body of heat, and enclosing the mass with large clods. These are carried by hand; subsequently, as they get more distant from the fire, a barrow is used, and beyond that a one-horse cart. It is important to have the sides of the heap as upright as possible, not conical, because the heat always makes for the highest place. An important point in burning is to supply the fire sufficiently fast to prevent its burning through, and yet avoid overlying it, which might exclude all air, and put it out. Practice will indicate the medium. When the fire shows a tendency to break through, the outside of the burning mass is raked down and more earth added. If the ground is very dry, and no rain falls, the men are obliged to feed the fire almost constantly night and day; but when there is moisture it may be left for five or six hours, but seldom longer. Something depends on the current of air. A strong wind would blow the fire from one side and on at the other. This is guarded against by placing hurdles interlaced with straw as a guard to windward. The size of the heap is limited by the height to which a man can throw up the soil, and, of course, the diameter must be proportioned to the height to prevent its slipping down." Full particulars are also given for burning clay as practised by Mr. D. Thomson, when gardener at Archerfield, in *THE JOURNAL OF HORTICULTURE*, Vol. XXII, New Series, page 235; also the mode of burning clay at page 310 of the fifth volume of our first series.

CLETHRA ARBOREA CULTURE (Idem).—It is a greenhouse plant requiring to be grown in sandy fibrous peat three parts, and half a part each leaf soil and fibrous loam, with a sixth of silver sand. Afford good drainage, abundance of water when growing, and moisture at all times, but keep drier when at rest than in growth. A light airy position should be afforded.

PRICKLY-SEEDED STINACH (W. C. E. S.).—Any one of the principal seedsmen who advertise in our columns could supply to you the Flanders variety.

GRAPES WITHERED (Sussex, and C. E. B.).—They are severely "shanked," as gardeners term this mode of failure. The stalks are dead, consequently no sap is supplied to the berries. The usual cause is that the roots are kept either too cold or too dry; not knowing any of the circumstances we cannot give a further opinion.

TRANSPLANTING CEDRUS DEODARA (Peter Bridgford).—The *Cedrus Deodara* that is 7 feet high may be safely removed any time in November, or sooner if necessary. Lift it carefully from its present position, retaining a compact ball of earth of about 2 feet in diameter about the roots, wrap the ball securely in a garden mat, and then pack it in a basket or box with moss. Secure the branches with string and a mat. In replanting lift the position of the tree be raised somewhat above the surface of the surrounding soil, so that when the roots are covered it may appear to be standing upon a slight mound; water it thoroughly, covering the surface with some litter. Fasten the tree securely with wire attached to the stem, and to three stout stumps driven into the ground, equidistant, in the form of a triangle. See that it does not suffer from drought. Your rich light soil will answer admirably for it.

HEATING A GREENHOUSE (Idem).—Four rows, or about 130 feet of 4-inch piping, will suffice to keep frost out of a span-roofed greenhouse that is 32 feet long, 13 feet wide, and about 9 feet to the ridge.

FORMING A PINE WOOD (Sunny).—Finnis Lariole would, doubtless, answer well for planting three acres of ground on the side of a hill between two other woods of mixed deciduous trees, but as you require a dark thick wood we recommend *Pinus austriaca*. It grows to a large size, is very robust and hardy, and its numerous branches are densely clothed with dark green glossy foliage, so that a large mass of it has a rich and striking appearance. In planting such a wood, future thinning ought certainly to be contemplated, and to render such profitable we would plant the *Pinuses* 9 feet apart, fill the whole intermediate space with Larch 3 feet apart, the Larch to be gradually removed as the *Pinuses* required space; and we should certainly contemplate the removal of quite half the *Pinuses* in time. Thus much of the formation of a Pine wood. We cannot speak decidedly as to its future appearance, because the aspect of the surrounding features must very much influence this. If you fear that so large a mass of dark foliage will appear sombre, heavy, and monotonous, as it very likely will do in some degree, you might introduce some bold clumps of Scarlet Oak, Birch, Scarlet Maple, Norway Maple, Purple Beech, Fern-leaved Beech, and Aracia. A few clumps of such Conifers as *Abies Douglasii* and *Picea pectinata*, by their lofty growth, and distinct and elegant appearance, also answer admirably to impart a pleasing relief. We prefer November for planting, but you may safely venture to plant any time in October. Let all of the holes be made before the trees arrive, and the position of every tree should be decided upon, in order that no time may be lost in planting.

CLEMATIS JACKMANNI FLOWERLESS (Idem).—Your Clematises which have been planted two years, growing vigorously but failing to produce any flowers, are, doubtless, gifted with nutriment. Cease using manure water, and you

may yet obtain some flowers this autumn. You will not regret your failure next season, when you will probably have a profusion of fine flowers.

TREATMENT OF SEEDLING PEACHES (*Inquirer*).—Seedling peaches will bear fruit when three years old if grown in pots in the orchard house. They would be about two years longer if grown out of doors on a wall. Your trees will require to be cut back in the spring to within a foot of the ground; you will then train one leading shoot and two side shoots, and if the trees are grown on a system of summer-pinchling they will bear all the sooner.

COPING FOR KITCHEN GARDEN WALL (*Kamalia*).—Stone slabs are the best for this purpose. Ours are an inch thick, and project 3 inches over the wall.

FRUIT TREES FOR GARDEN WALLS AND ESPALIERS (*In Old Contributor*).—You ought to be a little more explicit in your questions, and should have told us what sort of fruit you prefer. We advise you to plant the espalier with Apples. The best sorts for your purpose would be Early Harvest, Cox's Orange Pippin, Kerry Pippin, Seckel Nonpareil, Reinette du Canada, Dumelow's Seedling, and New Hawthornden. On the west wall we would plant Pears. The following will be suitable—Beurre d'Amalnis, Madame Freyve, Beurre Superfin, Marie Louise, Doyenne du Comice, Brockworth Park, Gansell's Bergamot, Easter Beurre, Glou Morcean, and Bergamotte Esperen. On the east wall plant Apricots and Plums. Of the former Moorpark and Peach are the best. Plums—Green Gage, Kirke's, Cox's Golden Drop, Jefferson, Victoria, and Reine Claude Rouge. On the north wall Morello Cherries and Red Currants will be the only suitable trees.

MULBERRY TREE UNSUCCESSFUL (*H. N. O.*).—Old Mulberry trees bear most freely. Your tree seems to grow too strongly. Root-pruning would have a tendency to check this luxuriant growth, as the Mulberry bears freely when restricted to pot culture. Even young trees will do so. Do not prune the tree except to thin out the wood where it is too thick. We advise you to try root-pruning. Cut a trench round the tree at about 3 feet from the stem, and cut away all roots to the depth of 2 feet. You may also with a fork work under the ball and cut away any downward roots.

PELARGONIUMS FAILING (*Fidget*).—It is very difficult to judge what may be your cause of want of success from inspecting the leaves sent. Our impression is that, though the house is shaded, it has been kept too close and dry, and that the plants have not had sufficient moisture either at the roots or in the air. Neither of the sorts sent—Lass of Gowrie and Sir Joseph Paxton, is inclined to have large leaves; but still, Tricolor Geraniums under pot culture require liberal treatment, and during the summer months should be kept as cool and moist as possible without too much shade. There is no better way of growing Geraniums than in a cool frame with lights facing north, the glass slightly dulled with whitening and milk, and tilted so as to admit plenty of air, removing the lights altogether on dull days, but keeping the lights as protection against too much sun or heavy showers. The bicolor shoots on Mrs. J. Clifton, Italia Unita, &c., are merely spots without any of the green colouring matter, just as one occasionally sees perfectly white shoots on Alma, Byron, Miss Kingsbury, &c. You may syringe and water overhead as much as you like, provided the water is clean and pure. If overhead-watering were injurious to Tricolors, what would become of them when bedded-out? There is no time at which Tricolors have such beautiful colour as in the moist nights of early summer and again in the autumn.

LITTLE HEATH MELON.—Mr. Gall, Bradford Gardens, Dorchester, writes to say that he has cut three fruits of this variety, weighing respectively 7 lbs., 7 lbs. 2 ozs., and 7½ lbs., and that the vines are still in good health.

TRANSPLANTING RHODODENDRONS AND AMERICAN FIRS (*Quatt*).—Rhododendrons and all kinds of evergreen trees and shrubs are best moved in September, or from the beginning of October to the middle of November; but if they have been grown very closely together, and are on that account tender, no time is so good for moving them as the early part of April. They do not then experience the loss of the shelter close planting secures, and they have time to become established in their position before a return of cold weather, whereas if planted early in autumn they suffer very much if the winter be at all severe. Early-autumn planting we advise for subjects grown singly or thinly, and for those grown thickly plant in moist warm weather in spring. Rhododendrons lift well at all seasons, but it is advisable not to remove them when flowering and making fresh growths. The American Firs should be planted in February.

OLD PLANTS OF STRAWBERRIES OR RUNNERS (*Idem*).—If you take up old Strawberry plants, divide and plant them, they will not do any good. Runners only should be planted, taking them from plants that have borne fruit this season, or the fruitfulness of which is known. It does not answer to plant the runners of unfruitful plants.

MELONS GROWN (*J. W. L.*).—The hollows we should attribute to their having had too much water overhead, and too little at the roots. They have been kept too moist and cold. Give more heat and less water. Beaton's Indian Yellow has long been known and extensively used as a bedder. Mrs. William Paul is a good rose pink, but is not a good bedder; as a pink, Mrs. Upton is better, also Master Christine.

OLEANDER DROPPING ITS FLOWER BUDS (*J. B.*).—When growing and flowering this plant can hardly have too much water, three-parts of a pint being by far too little to give a plant with four blooms. It would only moisten the upper part of the soil, whereas all watering should be so given in quantity that the water reach the whole and moisten it throughout, showing itself at the drainage. On the other hand, the plant should give evidence of needing water before any is applied, and then a thorough supply ought to be afforded. Watering at stated times without taking into consideration the condition of the soil is bad.

SUCCESSFUL EMPLOYMENT OF SEWAGE (*J. Smythe*).—Practice and science agree in testifying that sewage is a most profitable manure. On light-soiled four hundred acres of mere rabbit-warren, at Mansfield, the Duke of Portland now grows most abundant crops of grass. If you write to his manager there he would give you full information; as will W. Hope, Esq., Irrigation Farm, Brompton, where crops of all kinds, horticultural and agricultural, are grown. There is also a large grass farm at Croydon, part of which is clayey, manured solely with sewage. At all those places the crops are very large and most probably grown. The sewage at all is applied in a liquid raw state by means of open channels. We know that no offensive odours or injuries arise from the employment of sewage, for the earth is one of the most effectual, as it is the most profitable, of deodorisers. The idea that sewage-manured grass causes disease to the animals fed upon it is baseless.

VINES ATTACKED BY RED SPIDER (*W. B. B. and A. F.*).—This is the most voracious and insidious enemy of the Vine, and they will always be attacked by it. The Vines when in a dormant state should be painted with a

mixture of tobacco liquor, sulphur, and soft soap; and if they are properly treated, red spider does not generally appear until the Grapes show signs of colouring, unless the pest has been introduced by plants growing in the house. It can be kept in subjection by syringing, but, as "A. F." complains, this destroys the bloom. We never syringe our Vines after the buds are started an inch, and we keep the red spider under by painting the hot-water pipes with flowers of sulphur, after the house is shut-up in the afternoon. The pipes should be so hot that it feels uncomfortable to place the hand upon them. "A. F." asks if syringing his Grapes until they began to colour caused the bloom to disappear, and also injured the white Grapes? No doubt it was the cause.

CARNATIONS AND PICOTEES (*A. Ledward*).—We must refer you to the reports of the Royal Horticultural Society's Shows, pages 44 and 57.

POTATO REFUSE FOR MANURE (*M. C.*).—When decayed it may be applied to any of your flower beds with equal advantage.

NAME OF FRUIT (*T. B.*).—The Apple is Red Astrachan. The Fuchsia is *F. splendens*.

NAMES OF PLANTS (*R. E. A.*).—We cannot name a Fern from a portion of a barren frond. (*North Rock*).—*Lonicera involucrata*. (*A. Z.*).—The herbaceous plant is *Galega orientalis*. 1, *Doodia lanulata*; 2, *Monstrum form of Athyrium Filix-foemina*; 3, *Aspidium aculeatum*; 4, *Nephrodium Filix-mas*; 5, *Polypodium vulgare*. (*D. G. Gurnsey*).—The "New Zealand Linsced" is *Linum monogynum*, the other is *Solanum Capsicastrum*. (*J. G.*).—Specimens unsatisfactory. The red-flowered one is *Physalis capensis*, that with a spike of white flowers is *Francoa ramosa*. (*Alida*).—1, *Hypericum hircinum*; 2, *Eucyonium japonicum variegatum*. (*B. F. W.*).—1, *Adiantum hispidulum*; 3, *Pteris serrulata*; 2, *Pteris serrulata cristata*.

POULTRY, BEE, AND PIGEON CHRONICLE.

BIRMINGHAM POULTRY SHOW.

The prize lists for the next Exhibition, which is fixed to be held on November 26th and the first four days of December, have been recently issued. The revision of the poultry schedule has not resulted in alterations more extensive than the introduction of Selling classes for Coloured (other than Silver-Grey) Dorking cocks of any age, the prices of which must not exceed £1 10s. each; for the same description of Dorking hens or pullets, the prices of which must not exceed £2 2s. per pair; for Dark Brahma cocks of any age, the price not to exceed £1 10s.; and for Dark Brahma hens or pullets, price not to exceed £2 2s. per pair. We are informed, however, that since this schedule was printed a silver cup, value £3 3s., has been promised for each of the four classes of Pouter Pigeons—one by Mr. F. Graham, Birkenhead, for the Blues; one for the Reds or Yellows by Mr. W. H. Mitchell, Moseley; and the others by a few subscribers.

The entries in all departments close on Saturday, November 1st.

DURHAM POULTRY SHOW.

The Durham County Agricultural Meeting took place on the 22nd inst. Fothergill's pens were used, and were neatly erected in single tiers. No member of the Committee exhibited, and in consequence some of the classes (notably the Cochins) were poor. *Brahmas* were good, the first adult birds, and the second chickens. *Dorkings* were a grand class, all the pens being good, but some of them out of feather. *Spanish* were poor; also the *Polands*, with the exception of the first-prize Silver. *Game* were really good throughout, the winners being Brown Red, while the highly commended pens were Piles and Black Reds. The Spangled *Hamburghs* in both classes were bad, but in Pencils there were some capital birds, the Gold-pencilled cock in the first-prize pen being as nearly perfect as possible. In *Game Bantams* the winners were Black Reds, the first a grand old pen, and the second excellent chickens of that variety, Piles being highly commended. In the Variety class of Bantams, Blacks were first and Whites second, and a pretty little pair of Nankins was very highly commended; in the next class, which was for any variety of large poultry, Houdans were first and Black *Hamburghs* second.

The class for *Rouen Ducks* was such as will not be easily surpassed at this time of year, and the winners were very large and good in all points, the Aylesburys being a good second to the above class.

COCHINS.—1, A. M. Bahner, Bishop Auckland. 2, D. & J. Abison, Whitby. *he*, T. H. Redman, Whitby; F. Horseman, York. *c*, W. J. Thompson, Woodhorn, Morpeth.

BRAHMA POULTRY.—1 and 2, R. Moore, East Rainton. *he*, F. Horseman.

DORKINGS.—1, W. J. Thomson. 2, J. White, Warkley, Northallerton. *c*, A. Buglass, Carville, Durham; W. Bearpark, Amlerby Steeple; C. Wulhas, Howden, Darlington (2).

SPANISH.—1, E. Moore. 2, A. Buglass. *he*, R. Elliott, Fence Houses; H. Dale, Northallerton.

POLANDS.—1, A. Buglass. 2, W. Bearpark.

GAME.—1, J. Fletcher, Stonehouse. 2, T. & J. Robson, Bishop Auckland. *he*, A. Buglass; J. Nelson, Coekshaw, Hexham; T. & J. Robson.

HAMBURGERS.—*Golden-spangled*.—1, A. Buglass. 2, W. Bearpark. *he*, R. Keenleyside, Bishop Auckland. *Silver-spangled*.—1, R. Moore. 2, G. Russell, South Hydon. *c*, G. Turnbull, Morpeth.

HAMBURGERS.—*Golden-pencilled*.—1, W. Atkinson, Bishop Auckland. 2, W. Bearpark. *he*, D. Cheyne, Morpeth; G. & J. Buckworth, Church. *c*, T. H. H. Robson.

GAME BANTAMS.—1, J. Nelson. 2, T. & J. Robson. *he*, J. Nelson; R. E. Ducker, North-rye, Kirtou Layby.

BANTAMS.—*Except Game*.—1, J. Nelson. 2, T. & J. Robson. *etc.* Rev. J. G. Milner, Bishop Auckland. *hc.* A. G. Mitchell.

ANY OTHER VARIETY.—1, Rev. J. G. Milner. 2, W. J. Thompson. *hc.* G. A. Tate, South Shields; R. Moore. c, T. H. Redman.

DUCKS.—*Rouen*.—1, J. Nelson. 2, C. Graham, Alnborough, Boroughbridge. *vic.* W. Simpson, Frosterly. *hc.* J. Nelson; W. Swann, Redington. c, Miss Jordan, Driffield; J. B. Errathwaite; A. M. Bahner. *Aylesbury*.—1, T. F. Carver, Langthorpe, Boroughbridge. 2, O. A. Young, Driffield. *hc.* Rev. J. G. Milner; C. Venables, Castle Eden. c, C. Venables.

JUDGE.—Mr. E. Hutton, Pudsey, Leeds.

HUNSLET POULTRY SHOW.

This Show was held on the 18th and 19th inst. in a large marquee. The use of Turner's pens was certainly the greatest improvement that has taken place since the establishment of the Show. There was, however, a mistake to which we would draw attention—viz., the filthy state of the birds on the second day, owing to the large quantity of sticky dough corn and water on the bottoms of the pens, and which might have been easily prevented by the engagement of an experienced poultry manager, and of such there are plenty in the locality.

The entries were very poor, many of the classes only having sufficient birds to carry off the prizes. *Dorkings* and *Spanish* were extremely good, and a pair of really good Buffs carried off the first prize in the *Cochin* class, the second going to very forward White chickens. In *Red Game* the winners were of the Brown variety, but not in good feather, and in the next class good Piles won. In *Hamburgs* the birds were good. The winners in *Bantams*, Black or White, were both of the former variety, though a capital pair of White was unnoticed. In *Game Bantams*, Duckwings were first, and Black Red chickens second. *Brahmas* were a fair class in both number and quality, but the *Turkeys* only moderate, while there were some good *Geese* of the Toulouse variety, but they having eaten their prize cards could not make out the winners. *Aylesbury Ducks* were pretty fair, and the *Rouen* very good, though in the moult.

Pigeons were a very small entry, but some of the winners were good specimens, notably the *Barbs* and *Pouters*. In the Variety class *Ice Pigeons* were first, and *Spots* second.

The *Rabbits* were poor in all respects, which is not surprising, as only 5s. and 2s. 6d. in two classes were offered for competition.

DORKINGS.—1, H. Beldon, Goitstock, Bingley. 2, J. E. Maude, Middleton Lodge.

SPANISH.—1, H. Beldon. 2, J. Powell, Bradford.

COCHIN-CHINA.—1 and 2, H. Beldon.

GAME.—*Black-breasted or other Reds*.—1, H. Beldon. 2, E. Ackroyd, Ecclehill, Leeds. *White or Piles*.—1 and 2, R. Walker, Gomersall.

HAMBURGS.—*Gold-pencilled*.—1 and 2, H. Beldon. *Silver-pencils*.—1 and 2, H. Beldon. *Gold-spangled*.—1, H. Beldon. 2, J. Newton, Silsden. *Silver-spangled*.—1 and 2, H. Beldon.

POLANDS.—1 and 2, H. Beldon.

BANTAMS.—*Black or White*.—1, J. Waddington, Gaisley. 2, H. Beldon.

GAME.—1 and 2, W. F. Entwistle, Westfield, Bradford.

BRAHMA POOTRAS.—1 and 2, H. Beldon.

TURKEYS.—1, Lady F. Hawkes, Womersley Park, Pontefract. 2, J. Andrews, Rothwell Ham.

GEESE.—1, H. Kellett, Hunslet.

DUCKS.—*Aylesbury*.—1, J. B. Britton. 2, W. North, Leeds. *Rouen*.—1 and 2, J. Newton.

PIGEONS.

CARRIERS.—1 and 2, E. Horner, Harwood.

ANTWERS.—1, E. Horner. 2, G. Crann, Leeds.

OWLS.—1, J. Thresh, Bradford. 2, E. Horner.

TURBITS.—1 and 2, E. Horner.

BARBS.—1 and 2, E. Horner.

TUMBLERS.—1, E. Horner.

FANTAILS.—1, J. F. Lovelandside, Newark. 2, E. Horner.

POUTERS.—1 and 2, E. Horner.

NUNS.—1 and 2, E. Horner.

JACOBS.—1 and 2, E. Horner.

DOVES.—1 and 2, J. Bower, Hunslet.

ANY OTHER VARIETY.—1, J. Thresh. 2, J. Taylor, Leeds.

RABBIT.—*Long-eared*.—2, J. Armstrong, Leeds. *Any other variety*.—1, G. S. Burton. 2, G. A. Bowker, Hunslet.

JUDGE.—*Poultry, Pigeons, and Rabbits*: Mr. J. Dixon, North Park, Clayton, Bradford.

CHORLEY POULTRY SHOW.

The Royal North Lancashire Agricultural Society held their meeting last week at Chorley, and the poultry then exhibited proved a very great success. The inhabitants generally had taken every pains to add to the popularity of the Show, and had decorated most profusely all the principal streets with flags and banners; three triumphal arches made of wood, but artistically painted to resemble granite, formed a conspicuous feature, having the appearance of long-erected structures. Evergreens and flowers in abundance met the eyes of all visitors, and as the day proved enjoyable, the attendance of holiday-seekers by extension trains was beyond precedent. The poultry Show consisted of three divisions—viz., for old birds, for chickens of 1873, and for residents only of the Chorley district. The latter portion may justly be pronounced a failure, as the competition was very poor indeed as a whole, and in fact one-half the classes could not boast of a single entry. We can only hope, now that the inhabitants of Chorley have seen the fine collection of domestic poultry sent from all parts of the kingdom in the

other portions of the Show, it may stimulate them to personal exertions in poultry culture, whether viewed only as a recreation or as a profitable pursuit. The show of adults, though abounding in first-class fowls, necessarily lost much of its interest from the generality being heavily in moult. *Grand Dorkings*—both *White* and *Grey*, *Brahmas*—the best in the kingdom, and *Spanish* and *Game* fowls of equal note were abundant. Excellent classes of *Hamburgs*, more especially the *Black*, deserve notice. The *Geese*, both old and young, were of unusual size, and well shown; the *Rouen Ducklings* being no less noteworthy. The *Variety Duck* class proved a remarkably good one, among them being entered no less than three pens of *Whistling Ducks* and two pens of *Kasarks*, all of them in exquisite feather. The public thronged in front of this class during the whole of the time the Show was open.

The second division of the Show, exclusively for chickens, was a triumphant success, and the winners in every instance secured their laurels only under a very heavy competition. Where all were so thoroughly good it appears almost invidious to particularise, but perhaps the most noteworthy were the *Buff Cochins* of Messrs. Robinson and Sidgwick, and Mr. Brierley's *Brown Red Game* fowls. The *Waterfowl* shown in this division were extraordinarily fine.

DORKINGS.—*Grey*.—1, J. Stott, Healey, Rochdale. 2 and *hc.* J. Robinson, Garstang. *White*.—1 and 2, J. Robinson. *Any colour*.—*Cock*.—Prize, J. Robinson.

BRAHMA POOTRA.—1 and 2, T. F. Ansdell, Cowley Mount, St. Helen's.

SPANISH.—1, J. Leeming, Broughton, Preston. 2, H. Wilkinson, Earby, Skipton. *hc.* G. Pickering & J. Dugdaley, Driffield.

GAME.—1 and 2, C. W. Brierley, Middleton, Manchester. *Cock*.—1 and 2, C. W. Brierley.

COCHIN-CHINA.—1, Aspden & Newton, Church. 2, T. F. Ansdell.

HAMBURGS.—*Golden-pencilled*.—1, J. Bowness, Newchurch. 2, J. Robinson. *Silver-pencilled*.—1, J. Robinson. 2, J. Bowness. *Golden-spangled*.—1 and *hc.* J. Robinson. 2, J. Bowness. *Silver-spangled*.—1 and 2, J. Robinson. *Black*.—1 and 2, C. Sidgwick, Keighley. *hc.* J. Robinson; J. Bowness.

BANTAMS.—1, H. B. Smith, Brooklands, Broughton, Preston. 2, T. Barker, Hill End, Burnley. c, J. R. Robinson, Sunderland.

POLANDS.—1, G. W. Hibbert, Godley, Hyde, Manchester. 2, J. Arshworth, Burnley.

ANY OTHER VARIETY.—1 and 2, J. Robinson (*Creve-Coeur* and *Silver-spangled*) Poland. *hc.* J. Harrison, Cottam, Preston.

GEESE.—1, J. Walker, Rochdale. 2, S. H. Stott, Fishergate, Preston. *hc.* J. Grimshaw, Eccleston, Chorley.

DUCKS.—*Aylesbury*.—1 and 2, J. Walker, Rochdale. *hc.* J. Robinson, Garstang. *Rouen*.—1 and 2, T. Wakefield, Golborne, Newton-le-Willows. *hc.* J. Walker; S. H. Stott, Preston. c, J. Harrison; W. Penny, Preston. *Any other variety*.—1 and 2, H. B. Smith (*Whistling* and *Ruddy Shell*). *hc.* H. B. Smith (*Whistling*); J. Walker (*Whistling*); W. Binns, Pudsey, Leeds (*Kasarka*).

TURKEYS.—1, J. Walker. 2, L. Anyon, Whittlefield-Woods, Chorley.

CHICKENS.

DORKINGS.—*Grey*.—1 and 2, T. Statter, Whitefield, Manchester. *hc.* J. J. Walker, Kendal (2); J. Robinson. *White*.—1 and 2, J. Robinson.

GAME.—1, P. P. Lyon, Liverpool. 2, T. Dyson, Halifax. *hc.* W. Parker, Booth, Carnforth; T. Dyson.

COCHIN-CHINA.—1, J. Robinson. 2 and *hc.* C. Sidgwick.

HAMBURGS.—*Golden-pencilled*.—1, E. Clayton, Keighley. 2, J. Robinson. *hc.* J. Bowness, Newchurch. *Silver-pencilled*.—1, J. Robinson. 2, H. Smith. *Golden-spangled*.—1, J. Robinson. 2, No competition. *Silver-spangled*.—1 and 2, J. Robinson.

BANTAMS.—1 and c, T. Sharples. 2, T. Barker, Burnley. *hc.* J. Woods and Son, Accrington.

GEESE.—1 and 2, W. Penny, Preston. *hc.* J. Walker (2); S. H. Stott (2).

DUCKS.—*Aylesbury*.—1, J. Walker, Rochdale. 2, T. P. Carver. *hc.* T. Tomlinson. *Rouen*.—1 and 2, J. Harrison, Cottam, Preston. *Any other variety*.—1, J. Walker. 2, T. Wakefield.

LOCAL CLASSES.

SPANISH.—Prize, J. Whitfield, Chorley.

DORKINGS.—Prize, J. Thom, Birkacre, Chorley. *Chickens*.—Prize, J. Thom.

GAME.—Prize, L. Anyon, Chorley.

HAMBURGS.—*Silver-pencilled*.—*Chickens*.—Prize, T. Wainisley.

BANTAMS.—*Chickens*.—Prize, L. Anyon.

GEESE.—Prize, L. Anyon.

DUCKS.—*Aylesbury*.—Prize, Rev. J. Sparling, Chorley.

TURKEYS.—Prize, L. Anyon.

The Judges were Mr. Edward Hewitt, of Birmingham, and Mr. Joseph Hindson, of Liverpool.

THE RABBITS AT ROCHDALE SHOW.

There was a grand show of Rabbits at Rochdale Show, nearly eighty pens competing, and the awards gave general satisfaction. Mr. Boyle won with a grand buck, measuring over 20 inches by 5 inches, Lop-eared; and Mr. Easton won in does. In Himalayan, as a matter of course, Mr. Whitworth won, but was very closely pressed by Mr. Ball. The cup and first prize in the Angora class were awarded to Mr. Ball. Mr. Boyle won in the Dutch class with a grand buck that ought never to be beaten. Mr. Irving took second with one of Mr. Boyle's breed. For the heaviest Mr. Brown was first with a good Rabbit, weighing over 14 lbs.; E. E. Roys, Esq., second with a most promising heavy Rabbit. The best Rabbit exhibited was shown in the Selling class by E. E. M. Roys, Esq., and it won the cup against seventeen competitors. In its class it must have won as a Silver-Grey. Mr. Boyle won first in Silver-Greys, Mr. Roys being second.

Mr. Ridpath, of Outwood Hall, Handforth, was the Judge.

ISWICH POULTRY SHOW.—The eighth Exhibition is to be held on October 14th and 15th, with increased attractions in the way of Cats, Rabbits, butter, eggs, and dead poultry; the latter we do not think has been so much encouraged as it deserves to be, and we strongly advocate the offering of such prizes. There

are upwards of sixty classes; a silver cup or special prize is offered for almost every class, and the entry fee is reduced to 4s. and 3s. We understand that Mr. Hewitt has been retained as one of the poultry judges, and other competent gentlemen will be engaged according to the number of entries.

NORTHERN COUNTIES COLUMBARIAN SOCIETY.

This Society held their annual competitive Show of young Pigeons at their club room, at the Cathedral Hotel, Manchester, on Monday, the 18th inst. There were upwards of one hundred pairs competing, each exhibitor paying 2s. 6d. for every entry, and the amount of entry in each class was given to the successful exhibitor in one first prize. The Pouters, Carriers, Short-faced Tumblers, and Foreign Owls were not numerous; most of the prizes in these classes going to Mr. Towerson. There was a grand display of Barb's; the first prize went to Mr. Magnall. For Dragons Blue, and Any other colour, the prizes went to Mr. Holland. There was a grand show of English Owls and Fantails, the first prize in each class being awarded to Mr. T. Ridpath. Mr. Roysd won in Jacobins with a splendid pair of Blacks, which must be heard of again. The best Turbits were from Mr. Ridpath, and this was the largest class in the Show. In Long-faced Antwerps Mr. Appleton won with a pair of good birds; in Short-faced Antwerps Mr. Justice won with a beautiful pair. For Baldpates the first place was taken by Mr. Unsworth, and in Any other colour of Tumblers by Mr. Hyde.

Altogether the Show was a great success, and many thanks are due to Mr. Haycroft and the Committee for the very able and perfect arrangements. Mr. Hawley, of Bingley, was the Judge.

PIGEONS AT HITCHIN AND EXETER SHOWS.

Our correspondent justly remarks that it must have surprised more people than himself that his five pens of birds took first and second honours at Hitchin, and Mr. Yardley's were highly commended; but at Exeter, a few days later, the same Judge to the same competing birds reversed nearly exactly his awards. We add our correspondent's remarks upon other matters.

It is well known that dealers are the principal supporters of all shows in the three kingdoms, and are compelled to procure birds at fabulous prices to please the tastes of those gentlemen who are selected as judges, for dealers too well know that advertising prize strains for sale will not deceive fanciers now-a-days, as there are too many good judges amongst amateurs to purchase before seeing the birds, and they prefer birds that have given proof of their quality by winning in good company before they will purchase; and too often have dealers to purchase birds to suit the fancy of certain judges, although well knowing at the time the same bird or birds to be greatly deficient. Still, to please the judge and win the dealer must procure the bird or birds, and in the event of those identical birds being purchased from the dealer for the purpose of being again exhibited, and the same come under the judgment of a man who knows their deficiencies, he, of course, passes them over. Then goes a letter to the dealer from the purchaser, giving him to understand that he has deceived him; and should he not do so, he, doubtless, makes it worse for the dealer by quietly telling his friends that he bought so and so from so and so, and was worsted. Take an example: Had I sold those birds I won with at Hitchin, and the purchaser had shown them at Exeter, and if the purchaser was no judge of the quality of the birds, I wonder what sort of letter I should have received! I am afraid not a very flattering one. Still, such cases have often happened with dealers, and often the dealer thus loses a good customer. So I do hope that secretaries and committee-men will endeavour to ascertain who are the proper men to select to officiate as judges; and I believe the best plan to adopt to satisfy exhibitors and find out the best judges would be to let exhibitors vote for the man they consider the best judge, the most votes to prevail.—ROBERT FULTON.

OXFORD POULTRY AND PIGEON SHOW.—The prize list is largely and liberally increased. There are forty silver cups and pieces of plate, one of them given by Prince Leopold; and the money prizes, three in each class, vary from three guineas to ten shillings. The classes are increased to forty-three for poultry, and to twenty for Pigeons.

SHOW OF HONEY AT BURTON-ON-TRENT.

THE readers of our Journal, I have no doubt, will be glad to see recorded the results of the show of bees and honey at the flower show at Burton-on-Trent. The show was not up to the two last shows in the Bee class. There was one beautiful glass super which would have deserved the first prize had it not been for one comb having some brood. It was, I think, the best class

I saw this season. I am sorry to say the season here (South Lancashire), has been the worst I have known since 1860. Several of my friends have lost many stocks, not thinking they would be dying of starvation in August. I have sixteen stocks in the heather, which are looking well, but if the weather do not improve soon it will be all over for 1873. We are expecting a good show at Manchester, in September, at the Botanic Gardens; and I understand there will be a new design of bee hive, with bees at work, but I am afraid the show of honey will be light.—SOUTH LANCASHIRE BEE-KEEPER.

PRACTICAL BEE HIVE.—1 and 3, G. Cross, Burton. 2.—Young, Horninglow. **SUPER HONEY.**—1, G. Cross (42 lbs.). 2.—Young (21 lbs.). 3.—Sylvester, Barton-under-Needwood.

COTTAGERS' CLASS.

HUMAN BEE HIVE.—1, T. Pegg, Dallow Street. 2.—Smith, Doveridge. 3.—Murdolton, Kepton.

SUPER HONEY.—1 and 4.—Withnall, Rangemore. 2, E. J. Draper, Newton Road. 3.—Smith.

JUDGES.—Mr. Spencer, of Stourbridge; and Mr. Cooke, of Denton, near Manchester.

THE HONEY SEASON, 1873.

I AM very much surprised, at the same time rather pleased, to find that experienced bee-keepers complain of the scanty harvest this season. I say I am rather pleased, because it is a proof to me that my own deficiency does not arise from bad management.

I commenced bee-keeping last year with one hive, which of course I was very careful in feeding, &c. They sent out a fine swarm on the 29th May, almost the only May swarm in this neighbourhood. About a week after sending out the swarm I placed a cheese-box underneath, in which the bees constructed three medium-sized combs. To my deep regret I had disturbed the box, and taken it out from beneath before I discovered the combs. I then placed the combs in an old hive cut down at the top. They appear to have gone on making combs, but to have gathered no honey for filling. The swarm worked exceedingly well, and in a month's time had sealed-up a good deal at the top, and commenced building in one of Pagden's glass supers. They appear to have half filled the latter and begun to seal.

I beg now to ask you what you would recommend me to do. About a mile from my house is an extensive common covered with heath. I am of opinion that my supers should be left on until the end of September in expectation of the bees obtaining a good supply from the heath, and, failing that, allowing them to withdraw what stores they have in the supers, so as to be abundantly supplied for the winter. Do you think the distance too far?—WOLLASTON.

[No. Let them remain untouched till the end of September. Your plan is excellent.—EDS.]

THE BEE SEASON IN SOUTH DEVON.

MR. GEORGE FOX, of Kingsbridge, states, in a letter to me, that his experience this summer has been much the same as my own and that of others who have written on the subject, particularly with respect to the profligate breeding which has been carried on in supers. He writes: "I never had so many swarms from the few stocks with which I started, or had my supers so much bred in. The queens have always been in them when removed. On the whole I have had no cause to complain. Six supers have been worked, mostly square boxes with glass sides and top. The first taken off was full of honey (about 35 lbs.) and brood, and the queen was in it. This I keep as a stock, and it makes a good one. Brood-comb was supplied to the old stock from which a queen was raised. The next super, being much in the same condition, was also kept as a stock. Another super gave 25 lbs. or 30 lbs. of honey; it had a little patch of brood; the queen also being up in it, I caught and returned her to the old stock. I had three or four other supers, some of which are kept as stocks, the others for honey."

Mr. G. Fox also says that the bees of many of his stocks exhibit their descent from his original Egyptian queen presented to him by the late Mr. Woodbury. Though the Egyptian blood has been much "diluted," some of the bees are as well marked as were those of the original stock. They are very quiet, and he has required no bee-dress or gloves in any of his operations this season, even in transferring combs and bees from boxes into observatory hives. This amiable character does not agree with my own experience of the true Egyptians, which were perfect savages; but it must be remembered that Mr. G. Fox is a king or conjuror among his bees, and would seem to bear a charm which enables him to handle them with impunity.—S. BRVAN FOX, *Exeter*.

A GOOD HARVEST DRINK.

LAST summer we attended a field trial of ploughs, and for a drink in the fields we had buckets of cold water with oatmeal stirred in, which we found to be both victuals and drink, and

mighty refreshing. A Scottish medical journal also says of oatmeal, that in its raw state, when it is mixed up with water, it is becoming a favourite dish. The brose of "Auld Scotland" is becoming a favourite dish with the hunters and trappers of the West, who are substituting oatmeal in this form for parched Indian corn. The same brawny fellows have found out that a very acceptable drink is made by putting about two teaspoonfuls of oatmeal to a tumbler of water. This the hunters and trappers aver to be the best drink they can use, and it is at once nourishing, unstimulating, and satisfying.—(Ohio Farmer.)

[The addition of oatmeal to water for quenching thirst may be a discovery which the American hunters have recently made; but it has long been known in this country to the workmen in foundries and other places where men are exposed to fierce heat. Indeed, in some places, there is, or was till recently, a money allowance for the purpose.—Eds.]

CUPS FOR SILVER-GREY DORKINGS.

I HAVE just been informed by the Secretary of the Crystal Palace Poultry Show, that unless a cup for adult Silver-Grey Dorkings be given by private subscription they will be obliged to curtail the classes for this breed. This would be a great pity, and I therefore offer 10s. 6d., if nine other fanciers will give the same sum, to procure a five-guinea cup for the best Silver-Grey Dorking adult, cock or hen. I may also mention that I am collecting for a cup for Nankin Bantams at the same Show, towards which the subscriptions at present given are—Mr. Pigott, 10s. 6d.; Mrs. Cross, 5s.; O. E. Cresswell, 10s. 6d.—O. ERNEST CRESSWELL, *Early Wood, Bagshot, Surrey.*

OUR LETTER BOX.

FEATHERS ON HONDANS' EGGS.—FOWLS FOR TABLE (*An Inquirer*).—Almost all Hondan chickens have the stubs of feathers on their legs. They never grow to feathers. If they did they would be a disqualification, and might raise doubts as to purity. To show that it is immaterial, we may add that the same thing frequently occurs in Dorkings. They must, however, never go beyond being stubs. In that state we view them merely as sports, just as in the same family one man may be hirsute and another smooth-faced. Hondans are a hardy and excellent fowl. They will answer your purpose if you are content to submit to the expense and inconvenience of buying broody hens to enable you to keep up your breed, as the Hondans do not sit. We think Brahmans would suit you as well in other respects, and save you the last particular, being good sitters and mothers.

BRAHMAS—BUCKWHEAT AS POULTRY FOOD (*C. S.*).—We do not think the result of your hatching proves anything about Brahmans in general, but in your case it speaks badly for the strain from which you had your eggs. We should say it is decidedly an impure one. A single comb in a Brahma is a decided disadvantage. We consider buckwheat bad food for fowls. Good honest ground oats or barley slaked with water, with occasional feeds of whole corn or maize, are all that are necessary for good feeding. The new and modern introductions tend only to disease and disappointment.

SOUTHPORT AND ORMSKIRK SHOW (*H. Whibley*).—The Secretary having duly acknowledged receipt of the entry fee, but not having sent the usual printed label, nor answered your inquiry if you might send the birds without a label, will, of course, return the entry money. Write to the Secretary again.

ARTIFICIAL HATCHING (*H. T. K.*).—If we obtain a drawing of Mrs. Cheshire's "artificial mother" we will have it engraved. All experience is against the use of incubators.

NETT'S HIVE (*C. M. D.*).—Write to those who advertise hives in our columns. They all make those hives.

SCARCITY OF HONEY (*Killington*).—You are no doubt correct in your opinion, that the cold weather of the early part of summer had much to do with the scarcity of honey in your neighbourhood, as elsewhere.

VARIOUS (*A Young Apiarian*).—The brood you wish to save would not survive three, or even two days' chill and starvation if in open cells. Remember the voracity of all insect larvae, and the high temperature to which they are accustomed in the hive. A good proportion of the sealed brood would probably survive. We should advise you to transfer your bees, either very early in the morning, or, better still perhaps, after the main work of the day is over. You need not fear annoyance from the bees who are straggling home, especially if you operate upon them at some little distance from the hives. Can any of our readers furnish our correspondent with the number of the *English Mechanic* in which there appear sketches of the various parts of the hive as promised by Mr. Abbott? Your experience of the honey season appears to be similar to that of most apiarians—little honey and few swarms, and these mostly very late.

TRANSFERRING HIVES OF BEES (*A Regular Subscriber*).—Nothing is easier than the removal of wooden hives by rail. Simply screw the hive firmly to the floorboard, nailing with tin tacks pieces of perforated zinc over the entrance way and over the hole or holes for supers at the top of the hive for ventilation. Turn the hive topsy-turvy, and let it travel so; cord it well, and if not too full of bees, and the weather not too hot, they will travel any distance. We should prefer October or November, when the population is reduced in number and the weather is cooler. If your straw hives have wooden rims they can be screwed in the same manner to the floorboard; if not, you must secure the hive to the board in such a manner with stout cord as to prevent all risk of its shifting, and treat otherwise as mentioned above. All the work should be done the evening before they travel.

FEEDING BEES (*B. G.*).—From your use of the words "captured" and "cap" we hardly know whether you mean to imply that you caught a swarm, or placed a cap or super on an already established stock. If the latter, you should remove the cap, and, if the combs are clean, wrap it up and put it by in a safe place till next summer, when it may be again given to the same or some other hive to be filled. But, whatever you meant to convey, the bees in your hive must be fed, being, as you say, very light; for which purpose you must boil 6 lbs. of loaf sugar and 4 lbs. of water by weight, for five minutes. When cold fill a pickle bottle, the some rather coarse muslin or net

over the mouth, and invert the bottle on a piece of perforated zinc placed over the hole in the top of the hive. If there is no suitable zinc you must cut one of about 3 inches in diameter, and fix on a piece of wood having a 2-inch hole to correspond, on which the bottle will stand securely. It must be well covered up to prevent the access of robber bees, and, if possible, the food should be supplied at night and the bottle removed in the morning, when, if the stock is pretty strong, all the food will have been taken down. This board, if large enough and properly clamped at the ends to prevent warping, will also be found available for working a super. Send five stamps to our office and order "Bee-keeping for the Many," in which you will find ample information on feeding, and on many other matters in connection with bee-management.

REMOVING SUPERS (*Bank Villa, Dewsbury*).—On our return home from our usual summer holiday we were distressed to find that your query of July 21st had been overlooked. Accept our sincere apology. We fear any remark of ours is too late to be of service, but we may say generally that, except on the moors, all supers of honey should be now removed, except such as have but little honey in them, which may be stowed away with advantage for another year after the bees have taken down the honey.

PRESERVING KIDNEY BEANS FOR WINTER USE (*The Gardener*).—We published the following receipt last year:—"Put a layer of dry salt, about half an inch thick, in the bottom of a well-glazed earthenware pan, on this a layer of beans about 1 inch thick, another layer of salt, then another layer of beans, and continue in the same order until the pan is full. Keep in a dry cool place. When wanted for use they must be taken out in layers."

METEOROLOGICAL OBSERVATIONS,

CAMDEN SQUARE, LONDON.

Lat. 51° 32' 40" N.; Long. 0° 8' 0" W.; Altitude 111 feet.

DATE.	9 A.M.				IN THE DAY.				Rain.		
	Baromet. ter at 32s and Sea level.	Hygrome- ter.		Direction of Wind.	Temp. of Soil at 1 ft.		Shade Tem- perature.			Radiation Temperature.	
1873.		Dry.	Wet.		Max.	Min.	Max.	Min.	In sun.	On grass	In.
Aug.											
We. 29	29.808	59.7	55.6	S.W.	67.8	48.8	67.8	48.8	122.9	45.2	0.020
Th. 31	29.833	61.0	56.9	S.W.	60.2	52.5	71.5	52.5	126.3	48.2	—
Fri. 32	29.901	64.5	59.1	W.	61.5	53.8	71.4	53.8	125.1	49.2	(0.10)
Sat. 23	29.922	69.5	68.0	N.W.	61.2	59.8	73.8	59.8	113.4	45.7	—
Sun. 24	29.874	68.1	63.6	E.	61.0	55.3	56.3	56.3	116.0	49.8	0.872
Mo. 25	29.914	67.6	63.2	S.W.	62.1	57.8	59.4	57.8	117.8	51.8	—
Tu. 26	29.907	67.4	59.5	S.W.	62.6	57.2	73.5	57.2	119.2	50.9	—
Means	29.878	64.1	59.4		61.0	53.9	73.0	53.9	119.4	49.1	0.992

REMARKS.

- 20th.—Morning fine, but cloudy day; very heavy rain for a few minutes about 8.40 P.M.
- 21st.—Fine morning and till noon; then cloudy, but fine from 4 P.M.
- 22nd.—Fine early, rain at 9.30 A.M.; fine at noon; sunshine and showers all day.
- 23rd.—Fine early, very thick at 8 A.M., fine by noon; lightning at 8.50 P.M.
- 24th.—Dull early, fine by 10 A.M.; cloudy by 4.30 P.M.; very dark at 5.30; very heavy rain at 6 P.M. for about eighteen minutes, measuring during that time 0.66 inch; thunderstorm commencing at 7.30, and continuing more or less till 2 A.M. on 25th, thunder at no time very loud or near. Storm commenced in the S.W., went round to N.W., and back to S.W. in the early morning of 25th.
- 25th.—Fine all the day.
- 26th.—Rather dull at 8 A.M., but fine soon after, and so continued all day. Weather very similar to preceding weeks.—G. J. SYMONS.

COVENT GARDEN MARKET.—AUGUST 27.

SUPPLIES not so large this week. Currants, Raspberries, and Gooseberries are nearly over, but heavy goods are plentiful, remaining at last quotations. Pears and Apples from the Continent, with various kinds of common Plums, find a good sale at auction just now, chiefly for the north.

FRUIT.

	s. d.	s. d.		s. d.	e. d.	e. d.
Apples.....	1	6 to 9	Mulberries.....	1	0 to 0	0
Apricots.....	doz.	2 0 3	Nectarines.....	doz.	8 0	12 0
Cherries.....	1/2 lb.	0 6 1	Oranges.....	1/2	100 6	16 0
Chestnuts.....	bushel	0 0 0	Peaches.....	doz.	12 0	2 0
Currants.....	1/2 sieve	2 0 3	Pears, kitchen.....	doz.	0 0 0	0
Black.....	doz.	2 0 3	dessert.....	doz.	2 0 3	0
Figs.....	doz.	2 0 3	Pine Apples.....	lb.	3 0	6 0
Fibers.....	lb.	1 6 0	Plums.....	1/2 sieve	2 6	5 0
Cobs.....	lb.	1 6 0	Quinces.....	doz.	0 0	0 0
Gooseberries.....	quart	0 3 0	Raspberries.....	doz.	0 0	0 0
Grapes, both ways.....	lb.	2 0 5	Strawberries.....	1/2 lb.	0 0	0 0
Lemons.....	1/2 100	8 0 14	Walnuts.....	bushel	8 0	12 0
Melons.....	each	2 0 5 0	ditto.....	1/2 100	2 0	2 6

VEGETABLES.

	s. d.	s. d.		s. d.	s. d.
Artichokes.....	doz.	3 0 to 6 0	Mushrooms.....	pottle	2 0 to 4 0
Asparagus.....	1/2 100	3 0 6 0	Mustard & Cress.....	gumlet	0 2 0 0
French.....	doz.	0 6 0	Onions.....	bushel	2 0 6 0
Beans, Kidney.....	1/2 sieve	1 0 0	pickling.....	quart	0 6 0 0
Beet, Red.....	doz	1 0 3 0	Parsley per doz. bunches	0 0	4 0
Broccoli.....	bunch	0 9 1 6	Parsnips.....	doz.	0 9 1 0
Cabbage.....	doz.	1 0 1 6	Peas.....	quart	0 8 1 0
Capsicums.....	1/2 100	1 6 0	Potatoes.....	bushel	4 0 6 0
Carrots.....	bunch	0 6 0 0	Rutabaga.....	doz.	0 0 0 0
Cauliflower.....	doz.	3 0 6 0	Round.....	doz.	0 0 0 0
Celery.....	bunch	1 6 2 0	Radishes.....	doz. bunches	1 0 1 0
Coleworts.....	doz.	2 6 0	Rhubarb.....	bunch	0 6 2 0
Cucumbers.....	each	3 0 3 0	Salsify.....	bunch	1 0 1 6
pickling.....	doz.	0 0 0 0	Savoy.....	doz.	0 0 0 0
Endive.....	doz.	2 0 0 0	Scorzenera.....	bunch	1 0 0 0
Fennel.....	bunch	3 0 0 0	Sea-kale.....	basket	0 0 0 0
Garic.....	lb.	0 6 0 0	Shallots.....	lb.	0 3 0 0
Herbs.....	bunch	0 3 0 0	Spinach.....	bushel	2 0 3 0
Horseradish.....	bunch	3 0 4 0	Tomatoes.....	doz.	2 0 2 0
Leeks.....	bunch	0 6 0 0	Turnips.....	bunch	0 3 0 0
Lettuce.....	doz.	1 0 2 0	Vegetable marrow.....	0 1 0 3	

WEEKLY CALENDAR.

Day of Month Week		SEPTEMBER 1-10, 1873.										Average Temperature near London.		Rain in 43 years		Sun Rises		Sun Sets		Moon Rises		Moon Sets		Moon's Age.	Clock after Sun.	Day of Year.	
Day	Day of Month											Day.	Night.	Moey.	Days.	m.	h.	m.	h.	m.	h.	m.	h.	Days	m.	s.	
4	Tu	Length of Day 13h. 19m.										71.0	46.7	58.9	19	10	45	38	46	11	6	2	1	12	1	10	247
5	F											70.4	47.1	58.8	18	21	5	36	6	10	4	33	2	13	1	30	248
6	S	Crystal Palace Autumn Show opens.										70.2	46.8	58.5	20	22	5	34	6	10	4	7	1	14	1	50	249
7	Su	Crystal Palace Autumn Show opens.										70.3	47.5	58.9	19	24	5	32	6	10	7	41	5	15	2	10	250
8	M	Crystal Palace Autumn Show closes.										69.4	48.0	58.7	19	25	5	29	6	11	7	11	7	16	2	31	251
9	Tu											69.1	48.1	58.6	19	27	5	27	6	11	7	40	8	17	2	51	252
10	W	Nottingham Horticultural Show.										69.7	45.5	57.6	21	29	5	25	6	1	8	8	10	18	3	12	253

From observations taken near London during forty-three years, the average day temperature of the week is 70.0°; and its night temperature 47.1°. The greatest heat was 91°, on the 7th, 1868; and the lowest cold 23°, on the 7th, 1856. The greatest fall of rain was 1.27 inch.

HOUSE SEWAGE A SAFE AND MOST VALUABLE FERTILISER.



Many letters have reached us asking so earnestly for our opinion "whether the use of house sewage is likely to produce disease either in man or animal partaking of the crop to which it is applied?" that we insert this answer to all our querists thus prominently.

One correspondent encloses the following extract from *Medical Notes and Queries*:—"Is all the food absorbed by plants digested and assimilated by them? We are afraid to dogmatise even where the facts appear incontrovertible, but we can have little doubt, if any, that in many cases plants, like men, take into their systems much more food than they can digest, and that foul juices may, therefore, exist unchanged within their vessels. A simple illustration will suffice to show this, and we will only refer to the well-known fact that early Rhubarb, unskilfully forced with horse droppings, will often taste strongly of the manure. In the case of pastures, who can doubt that plants so crowded together as the Grass plants are, must be weakly; that their digestion, probably, is so too; and that if their supply of food be not very carefully regulated for them, fluid matter, of whatever kind, that is brought in contact with their absorbing surfaces will be taken up in greater quantity than can be digested, and, consequently, that some of it will remain unassimilated and unchanged within the tissues of the plants? Positive observation, indeed, supports this view. Herr Lefeldt, a civil engineer appointed by the Prussian Government to report upon our sewage systems, found that, for some inches above the roots, the stems of sewage-irrigated grass were filled with unassimilated fecal matters; and that if the irrigation were continued till within two days of mowing, the cows would not eat the grass. Why should not sewage matter existing thus unchanged within the tissues of grass produce the same effect upon the animal that swallows it, as if it were taken directly, without the intervention of the plant? We can see no reason why there should be any difference; and the argument from the observation of Herr Lefeldt, therefore, appears to be a very simple and direct one. It may be stated as a syllogism thus: No one denies that sewage matter, unchanged, will cause typhoid fever; but sewage grass, under certain circumstances, contains sewage matter unchanged; therefore, clearly, sewage grass may, under certain circumstances, transmit the typhoid germs."

Now we assert without any reservation that neither Herr Lefeldt nor any other examinant of the subject ever found any fecal matter in the stem of any growing plant. If the plant was dead or dying, then by mere capillary attraction such matter might pass into the tubes of the stem. Whilst a plant is alive its roots are endowed with a selecting power, and they never absorb anything prejudicial to the plant's health. This was long since demonstrated by special experiment. M. Sausure found

"when various salts were dissolved at once in the same solutions, and plants made to vegetate in them, that different proportions of the salts were absorbed. The following table exhibits the result of these trials, supposing the original weight of each salt to have been 100. Each solution contains 1/50th part of its weight of each salt.

1	Sulphate of soda effloresced	11.7
	Muriate of soda	22.0
	Sulphate of soda effloresced	12.0
2	Muriate of potash	17.0
3	Acetate of lime	8.0
	Muriate of potash	33.0
	Nitrate of lime	4.5
4	Muriate of ammonia	16.5
	Acetate of lime	31.0
5	Sulphate of copper	34.0
	Nitrate of lime	17.0
6	Sulphate of copper	34.0
	Sulphate of soda	6.0
7	Muriate of soda	10.0
	Acetate of lime	0.0
8	Gum	26.0
	Sugar	34.0

"These experiments succeeded nearly equally with other plants, as the *Mentha piperita* and the Scotch Fir. When the roots were cut or removed, the plants absorbed all solutions indiscriminately."

Then that plants do not retain what is noxious, we have this decisive evidence:—

"The experiments of Macaire-Princep have shown that plants made to vegetate with their roots in a weak solution of acetate of lead (Goulard's extract), and then in rain water, yield to the latter all the salt of lead which they had previously absorbed. They return, therefore, to the soil all matters unnecessary to their existence. Again: when a plant, freely exposed to the atmosphere, rain, and sunshine, is sprinkled with a solution of nitrate of strontia, the salt is absorbed; but it is again separated by the roots, and removed further from them by every shower of rain which falls upon the soil; so that at last not a trace of it is to be found in the plant."—*Daubeny.*)

If we refer to the results of extensive practice we have the irresistible evidence of the hundreds of acres of grass produced during many years solely by the aid of house sewage on the Duke of Portland's land near Mansfield. No disease has that grass produced in the cattle that have consumed it. That house sewage put upon a garden near a residence is never offensive we can testify from our own long experience, and certainly the crops produced by its aid never caused typhoid fever, nor any other disease.

We have tried house-sewage as a manure to Potatoes, Peas, Beans, all the Cabbageworts, Asparagus, Rhubarb, Sea-kale, and Grass; and it has yielded us, of all of them, from a light soil resting on chalk, the best crops we have ever grown.

Our mode of applying sewage is to soak with it the ground previously to digging, and growing every crop in rows with wide intervals, to pour the sewage as we deem needful in gutters made with the hoe between the rows.

Mr. Cuthbert Johnson, of Waldronhurst, near Croydon,

employs it chiefly for irrigating grass, and he obtains by its employment four or five heavy mowings annually. This is from a light, sandy soil.

That sterling old gardener, the late Mr. Beaton, used it in the cultivation of his bulbs, and other flowers, with the utmost success; and until we applied it to Roses and Chrysanthemums they refused to excel on a chalky soil. Mr. Beaton wrote to us—"When a crop of anything is in rows, whether they be bedders or for the pot or table, liquid manure of any strength may be applied in the centre between the rows with less risk or danger than in any other way. I have often with my own hands poured down large quantities of the very strongest liquid manure between the rows of plants, one drop of which would be destruction to any one of them if it touched the leaves or roots; but filtering to the roots through a few inches of soil all harm is avoided, which goes to show that a fair porous surface of earth is the best and safest fixer of ammonia and all over-strong matter in the liquid. Every one of my own bulbs, from *Crocus* to *Hesperanthus*, gets it every spring from a place which one would shudder at the idea of, and I never lose a leaf. I quite agree with clarifying liquid manure for pot culture, and in the hands of those who do not know practically what a plant can digest, or what the strength of their liquid is. But to keep a bed or border in good heart for a whole season at the least possible expense, have no recourse to clarifying the goodness out of the stuff, but give it to the plants fresh from the stable, cowhouse, piggery, or where it may be got much stronger, and one good soaking of it will last the whole of that season; the spring is the right time to apply it. Then, in June, if a handful of mould from below the surface is as good as a smelling bottle, you may depend upon a good show of Roses, and most bedding plants, if the beds wanted any assistance that way. The old florists who placed 4 or 5 inches thick of strong dung at the very bottom of their beds, and 2 feet below their plants, were much wiser in their generation than those of us who supply rotten dung on or near the surface. Mr. Rivers has been recommending, for a long time, one or two thorough good soakings of the richest liquid manure to the Rose beds in the winter; and if Roses are ever to come out healthy on a thin, poor, sandy soil, that is just what will do it. When flower-beds and borders get exhausted by cropping, this strong liquid is very much better for them than rotten dung."

As to forced Rhubarb having a flavour of horseradish, we know both in that and in forced Sea-kale that it is occasioned by the gases emitted by the fermenting dung. The reek extends no further than the epidermis, and usually may be removed by washing, and always by peeling off the thinnest film of the epidermis.

THE CALCEOLARIA DISEASE.

Once more there are complaints about the disease in the bedding Calceolaria; and although there is reason to believe it is not so prevalent or so severe in its effects as in some previous seasons, yet it appears to be as puzzling as ever, for both the origin of the disease and a remedy have not, so far as I know, been discovered. The qualifications of the Calceolaria for bedding purposes stand so high, that gardeners may safely be trusted to try any experiment or make any effort that is likely to stamp out the disease entirely, or even to palliate its effects; but as each successive season comes round it makes its appearance, and is more or less destructive. At the same time the disease is partial in its attacks, for while some localities almost escape for one season, the succeeding season is likely to bring the disease in its severest form. This difference and partiality of attack lead one to conclude that the disease arises from atmospheric influences. Again, taking into account the time of year at which the disease makes its appearance (which is generally the latter part of July or the beginning of August, when the plants are to some extent exhausted by their first blooming period, which, by-the-by, is generally the best, and at which time the plants are less able to bear any particular pressure upon their circulating powers), I am led to think that the hot sun playing on the plants from morning till night, and the very rapid evaporation consequently going on without any counterbalancing treatment, so checks the growth and favours the ripening of the wood, that the plants cannot recover their former vigour, and consequently die.

Such is the opinion which I formed years ago, and having always had a fancy for the cultivation of the Calceolaria, I shaped out a course of treatment which I thought then, and

still think, is not an unreasonable one. That it is a safe one I have proved from experience, because since I practised it I have seldom been troubled with the plants dying-off by disease. I also think that in the treatment of the Calceolaria the soil in which it is grown should not go unnoticed, for I am of opinion that some sorts of soil predispose a plant to disease by throwing it into a sickly state through obnoxious ingredients, or from the want of fertility to enable a plant to maintain a vigorous constitution against the attacks of disease. In the case of the Calceolaria I consider a light sandy soil would favour my last opinion, so also would a gravelly one, and a poor kind of loamy soil, if shallow, would do the same. In either of these compositions the Calceolaria flowers but once, and that flowering is soon over, without the plant making the necessary growth for a continuance of blooming. What we call a cool showery summer might alter things a little, but even then they do not come up to the standard of excellence as sometimes witnessed, but oftener wished for than produced in this particular flower.

As a rule, Calceolarias grow well at first, and again when the rains and cool nights of autumn come on; but to carry them successfully through the hottest part of the year, and keep them continually in flower, is where the skill of the cultivator should be directed. To do this does not, in my opinion, depend upon the treatment at the time, for nothing seems to recover them then. It must be a pre-arranged plan, mostly as regards the treatment of the plants in the spring and the soil employed.

I prefer to take the cuttings as late as possible in the autumn consistent with the state of the weather, and root them in poor soil not much if at all before Christmas. After that I keep them as cool as they will bear night and day. At the beginning of February every one will need the centre shoot plucked-out, and when they show side shoots plant them out in some temporarily-prepared place, but still in poor soil; here they may stand, with attention, until wanted for the beds. My aim is to keep the plants as hardy as possible, and plant them in a soil only rich enough to keep them in health and produce growth enough that, by stopping, &c., a foundation may be laid for a good plant. I think it is a mistake to grow the plants so vigorously in their winter quarters as some do; it is in the flower beds where this vigour is required, and this must be supported by a suitable soil, which I consider to be a sound turfy loam, not too retentive or binding, but a maiden loam that possesses some richness. This should be chopped up roughly; then add to it about one-third of well-rotted hot-bed manure, or, what is better, one-fourth of decomposed night soil which has had a good sprinkling of lime. Lay up these materials with the loam for a twelvemonth, and turn over the compost occasionally. In spring take out the old soil, place the compost in the bed to the depth of 18 inches or more, and during the summer water the plants copiously—at least three times a-week. If Calceolarias do not thrive in this soil I shall be surprised indeed. I have tried this soil on a large as well as small scale; and at Hatfield, where I used it for several large beds, nothing could look more cheerful than for a favourite plant to be in perfection both of bloom and foliage, and entirely free from disease, as was witnessed and remarked upon by those who were competent to judge of their merits. Previously, there was considerable difficulty occasioned by the disease. This treatment has given me so much satisfaction for the past seven or eight years that I shall not only continue the practice, but would advise those who have not adopted it to give it a trial.—THOMAS RECORD.

PEACHES AND NECTARINES.

THE spring for these fruits out of doors was the worst I ever remember. Under glass, in my little viney—the Vines being cut back one-third of the length of the rafter to let in light to the Peaches and Nectarines planted-out on the brick flue at the back, and trained to wires—the crops are superb, the sorts being Royal George, Bellegarde, Albatross (one of the largest and best-formed of all Peaches here), Golden Eagle, and three trees of the Rough Roman Nectarine, *alias* Newington, which, when ripened, is the richest of all the Nectarines. Out of doors, except in favourable seasons and warm gardens, you can rarely ripen it. It is a clingstone.

My crop under glass of Peaches was 79, and of Nectarines 45. Out of doors, of Peaches 171, and Nectarines 60. This is a poor return for so many trees, almost all small, 120 in and out of doors, some few of them being maidens. A

beggar once told me, when I said I would give him nothing, that there was "no taste in that article, and that I could not give him less." I have had "a taste," and am satisfied. The trees of all kinds are in beautiful condition, and are fast forming their triple buds for next year.

There is one new Peach here which well deserves praise. It is Mr. Bivers's Early Louise. It is a small tree, in its second year, in an exposed east wall. Though hardly any tree on that wall sets its fruit, except the Royal George, Early Louise set its blossoms well, and I gathered the crop, averaging 8 inches, ripe on August 1st. On my south wall it would have been ripe July 12th to 14th. The fruit is juicy and delicious. The tree is full of fruit-buds for next year. I shall put a tree of it on my south wall in the autumn. I can safely recommend it. Early Rivers and Early Beatrice in better situations lost their flowers, so that I cannot speak of them. All three sorts appear to be hardy and good growers. The Royal George indoors and out, on east, west, and south aspects, beats all here. Early Alfred, Barrington, Princess of Wales, and Nectarine Peach are next best, and well cropped for the year. Emmer-ton's White Nectarine out of doors, and Rough Roman under glass, beat all the others. The next best crop is Rivers's White Nectarine, derived from the former. Both the White Nectarines are delicious and handsome when well ripened.

A great many of my trees, out of doors, on all aspects, either did not set their fruit, or it dropped off from the severity of the weather and the exposure of all my walls. If the weather is not hot enough to bring out bees, it is not hot enough to ripen the pollen, without which the fruit cannot set. If the weather is cold, and the pollen on the stamen is pasty, fertilisation cannot take place. I believe bees are great helpers. I found three in my viney in the spring, and I locked them in; doubtless, they helped to set a capital crop of fruit. It is said you cannot have these fruits under Vines on the back wall. It is quite untrue. Cut back the Vines one-third of the length of the rafter, and you will get a capital crop of Peaches and Nectarines, and just as many Grapes as if you allowed the Vines to go to the top of the rafter; because, when shortened, they drop close to the lower wall-plate.

Fruit under glass never colours so well as out of doors. Noblesse under glass would be a delicate creamy green, out of doors it is dappled like a Pomeranian coach dog, and very handsome. It is the richest of all Peaches. I disbud scarcely at all, and never shorten anything till the tree is in full foliage. I then shorten some twigs to the first pair of full-sized leaves for spurs, and others longer. People pull out the lungs of the tree, and then are surprised that the tree degenerates. I have just finished cutting off a portion of each leaf, except where fruit is, to let in light, air, and heat to the walls for the maturation of the wood and to prevent excessive wood growth. Visitors always admire the clean and beautiful foliage. Take care of the foliage and the roots, and the rest of the tree will take care of itself.—W. F. RADCLIFFE.

AUTUMN-SOWN ANNUALS.

I no more think of omitting sowing a crop of these in autumn than crops of Cabbage, Cauliflower, or Lettuce. Annuals are, moreover, as certain in their issues as are the vegetable sowings above named, and fill a gap in their way as great. Considering, too, the outlay and trouble involved, the relative returns are certainly as great as any display that can be produced in the garden. Every year I can see the admiration these simple flowers call forth and the pleasure they give, and this is why I never forget to sow, and seldom forget to issue a reminder to others who care to have them, to sow them also. As "welcome as flowers in May," is an old and remarkably expressive adage, for flowers are, in fact, at that season especially longed for—and why? because they are bright and cheering messengers, telling us that another morn of life is born, sparklings of spring, and harbingers of summer. Simple spring flowers must be estimated as what they are, and by their own merits, or they have not due justice. A verdict—and it is too common—that "they lack the glowing richness of summer and autumn masses, and we put them out of court," is not a fair one. I go further and say it is not an intelligent one. What should we think of a man directed to admire a glorious sunset turning away with, "Oh! I don't care for that, it will be ten times brighter to-morrow?" I can understand annuals not being grown because a particular system of gardening does not require their aid, or that they may bloom at a particular time when a garden is vacated by the effect when

it is made enjoyable, but not because they are destitute of beauty, or not so bright as brighter things.

I know annuals have charms to many, and, used in conjunction with bulbs and spring perennials, a garden can be made as fully attractive in April, May, and June as at any other period of the year. But gardens worked on the ordinary massing system, it is only practical to say, are sometimes interfered with by a prolongation of spring bloom in the beds, and the holding-back of thousands of plants, involving much labour in attention to their wants, in pots and stores. To have the crop of flowers off by the middle or end of May, only a limited number of plants, besides bulbs, are available. In addition to Hepaticas, Daisies, early Pansies, and the Primrose family, the following may be used:—Silenes, especially pendula, to be sown at once; Forget-me-nots should be now ready to prick-out; Collinsia verna, better sown in August, but will do now; Veronica glauca, sow now; Virginian Stocks, sow second week in September, or even February; Euphorbia californica, and a chance of Nemophila and Limnanthes, sow any time before the 15th inst. These are all early and give white, blue, pink, yellow, and orange. August-sown plants of the pretty Saponaria all flower early, but are not always past their best until May is out. For beds intended for more tender subjects, as sub-tropical plants, a prolongation of bloom in autumn-sown annuals is an advantage. They are the very plants to use freely. To some or all the foregoing, the Clarkias, Collinsias, Campanulas, especially pentagonia and Venus's Looking-glass, Visceraria, Candytufts, Platystemon, Larkspurs, and a few others may be sown any time from the 5th to the 20th inst., except Collinsias (excluding verna), which are better not sown until quite the end of the month, or their upright, rapid, succulent growth may render them a prey to frost-damages.

In mixed beds or borders autumn-sown annuals always show to advantage, and give an air of cheerfulness to a place at a particular season in a way which nothing else can do. Whatever charms may belong to hardy annuals, they can never be fully brought out except by autumn sowing and spring flowering.

Sown in spring, and, as is often the case, neglected, they are little better than rubbish, but sown now and tended they are really gay and attractive. Sown in autumn the plants are stronger, their flowers finer, and duration longer, than when sown in spring. In fact, their period of flowering is long enough.

These simple flowers have a beauty of their own, and are to most people pleasing. There is nothing to go into raptures about; they give a quiet soothing pleasure. I know a rectory where a batch of blue Nemophila has for years taken care of itself. Every morning of every spring, when in flower, it was visited by the rector, who derived more pleasure by this simple sheet of blue than any other flower bed in his garden. In their management a few points must be attended to. As to site, let it be as far as possible away from the lurking places of slugs and snails, as old walls, spreading herbaceous plants, &c. As to soil, do not have it rich or dig it, but run the hoe through, lightening it to the depth of an inch. That is all that is necessary, and better than doing more. As to sowing, let it be done in drills a foot apart, regulating depth according to size of seed—Nemophila, for instance, being covered half an inch, Venus's Looking-glass merely dusted over. If dry, soak the drills thoroughly before sowing; it is of no use watering after. Further attention must be given—first to thinning, letting each plant stand separately and stool naturally. This is important, and makes all the difference between crop and no crop; second, running the hoe through frequently, and by every means keeping slugs at bay; third, in severe frost and no snow, covering lightly over with Asparagus tops or Fern, but snow is the best protector. After all, however, thinning early and sufficiently is the best safeguard against frost. Attention to these hints will result in a supply to be lifted and transferred to the beds on the first fine weather in spring. If an early-and-soon-over display is wanted, plant as thickly as possible, covering the ground at once; but if a lengthened bloom is desired, plant thinner in proportion. Finally, if the worst come that can come, and a hyperborean winter kill all (which is seldom), the money loss will be trifling and the land loss nothing, and disappointment may merge into a determination to try again. I have not had one total loss in fifteen years.—J. WRIGHT.

GARDEN NETTING.—I am glad attention is being called to the question of selling netting by what can scarcely be called any-

thing but an unfair mode of measurement. If I want 25 yards of 4-yard-wide net it is measured for length by pulling it tightly in the direction of its length, and for width by pulling it tightly in the direction of its width. Measure a piece of 1-inch-mesh netting, 4 yards by 1 yard; the 4 yards drawn tight become 8 yards, and the one yard stretches to two when also drawn tight. Open the net and lay it evenly—*i.e.*, the diameters each way of a single mesh being alike—*viz.*, an inch, and the superficial loss is seen at once. Is the method of selling, or rather of measuring, fair? or is it after all only the "reputed" quart and the "imperial" quart over again?—A. R.

NOTES ON LILIES.—No. 1.

LILIUM LONGIFLORUM.

You asked me for some photographs of our Lilies, and for some gossip about them. I will begin with *Lilium longiflorum*, the pot with twenty-two blooms and two buds; height 3 feet 9 inches, width 3 feet 8 inches. The bulbs were bought at auction as *L. eximium*, which they are not. Our knowledge of *L. eximium* is rather uncertain. I understand that this was found by Siebold among *L. longiflorum*, and have always understood it to be rather dwarf-growing, with the mouths of the tubes expanding widely, and I have a Lily with these characteristics. I am now told that *L. eximium* of Siebold has



Lilium longiflorum.

according to M. Duchartre, a very long tube, and my friend, the great authority, Mr. Leichlin, confirms this, and states that it has the character of what he formerly named *L. longiflorum* Wilsoni. The pot is *L. longiflorum*, the size and height being due to the favourable conditions of growth in an orchard house, with abundant watering.

It is a very beautiful Lily, though inferior in height and size of flowers and length of their tubes to *L. longiflorum* Wilsoni. I often wonder it is not more generally grown as a conservatory plant. Here it has been constantly said by visitors of good taste, "Your Lilies are all beautiful," but none are more beautiful than this, with its pure white tubes contrasting with the fine green leaves. With us it grows well in the borders, but owing to its being a very early Lily it, unless sheltered

and retarded by dwarf shrubs, is often checked and injured by early frosts. With us it grows best in sheltered corners with a northern aspect.—GEORGE F. WILSON, *Heatherbank, Weybridge Heath.*

STRAWBERRY CULTURE AND MERITS.

AFTER so many have stated their Strawberry experience of the year, I am afraid my chance of saying anything fresh on the subject is very small; however, I cast in my mite, and I shall try and make my remarks as plain and practical as possible.

The crop of Strawberries this year has generally been very abundant, but owing to the dull and sunless weather we had the fruit did not acquire its proper flavour, and the wet caused the decay of great quantities; a small black beetle also made sad havoc amongst some of our fruit, by eating large holes in the berries. Some people fancy the cause to be slugs, but I believe the beetle is the offender, as we have caught large numbers when gathering the fruit, and the beetles were right in the centre of it. Notwithstanding all these losses we have been able to gather from 150 lbs. to 200 lbs. daily when our main crops were at their best.

Early Prolific (Dr. Roden's) is my best early variety; it will take the place of Black Prince with me, as it is only a few days later, and a much superior fruit. Next is Marguerite, a most abundant bearer of very showy fruit of immense size, but that is all it has to recommend it, as the flavour is very deficient, and the fruit when ripe will scarcely bear to be touched, it is so soft. Keens' Seedling succeeds these two, but it does not bear so well here as I should like; a great many of the plants turn out barren, notwithstanding their being carefully selected before planting. Amongst my main-crop Strawberries I must place President at the head of the list; it is a sure and most abundant cropper of very large fine fruit. Sir Charles Napier has this year done badly with me; there was a very abundant crop, but owing to the wet great quantities of the fruit decayed; still it is a good variety, a great cropper of beautiful shining-looking fruit, with a nice sharp flavour, which some prefer. Next in order comes British Queen and Dr. Hogg, the best-flavoured two Strawberries I know, but our soil is too light for British Queen. Dr. Hogg is not a great cropper with me, but the fruit is magnificent, and the flavour everything that could be desired. As succession crops for forcing they both do remarkably well. Dr. Hogg in a cool Peach house with me this year was the connecting link between in-door and out-door fruit. Duke of Edinburgh has done exceedingly well with me this year, I intend cultivating it largely; it is a superior variety as regards size, colour, and flavour. My variety of Prince of Wales I do not like at all; it is a strong grower, and bears abundantly, but it is very deficient in flavour, and the fruit is small. It is a little later than the above-named varieties, for which reason I grow a few. Carolina Superba and La Constante are two good varieties, the former is not a great cropper but the flavour is superb; in La Constante we have both qualities up to perfection, and it is likewise a beautiful-looking fruit. Goliath is a variety I have here resembling La Constante in habit, but more robust; fruit on short footstalks, and entirely hidden by the foliage; a most abundant cropper, and always sure, but it is rather deficient in flavour, and when fully ripe is rather soft in wet seasons. I also grow Rifleman, Empress Eugénie, and Cockcomb; with regard to the latter two they are good croppers, but both have very ugly-shaped fruit, and they do not colour well. I also grow the Alpine variety, which I am now sending in for dessert; it is quite equal to Black Prince as regards size, and if the flavour is not first-class, still it makes a nice variety on the dessert-table, and is relished, too, as the dishes are always brought out early.

My method of culture I stated in your Journal last year, but on reading some of your correspondents' articles I see there is a great diversity of opinion as to the length of time the beds will continue bearing satisfactorily. Some say two years; others say ten or more years. For my part I consider it greatly depends on the mode of culture adopted. If they are cultivated in beds, and the runners allowed to root and remain on the bed, I consider that they are past their best after the third year; but, on the other hand, if the ground is properly prepared, and the plants kept as individual plants by having their runners all trimmed away when they have done bearing, and in the autumn an annual top-dressing of well-decomposed manure is applied, I have no hesitation in saying that they will continue bearing satisfactorily for a much longer period.

I was very pleased to see in a former number of your Journal that Dr. Roden was bringing his new seedling Strawberries to the front. I can fully corroborate his remarks respecting them, as I have had an opportunity of seeing them growing, and I feel quite satisfied that they will be valuable additions to our varieties of Strawberries. I have not the least hesitation in saying that when they become public they will cause a good many of our old varieties to be swept out of the garden. Dr. Roden is a gentleman who has devoted a great deal of time, attention, and study, to cultivating and improving the Strawberry, and it is very gratifying to think that he is again rewarded with some valuable seedlings.—J. ANDERSON, *The Gardens, Hill Grove, Kilderminster.*

MR. LUCKHURST seems to me somewhat to beg the question, when he thinks his standard of quality with regard to Strawberries must be higher than mine. I am not accustomed to put a low standard of perfection with regard to anything, either fruit, flowers, or otherwise; and as the Strawberries I alluded to have been seen and tasted by many persons well qualified to give an opinion, and I have never heard but one opinion expressed with regard to them, I still adhere to what I before said, that Strawberry beds may, under proper cultivation, be made to bear fruit of high quality and in great quantity for several years in succession. I took fruit from these beds two years ago to Dr. Hogg, when I happened to be going up to London to him on a visit, and he pronounced them to be as fine as any he had seen exhibited at the London fruit shows, and I have seen no deterioration in these same beds, either in quantity or quality, these last two seasons. So much for the question as to standard of excellence.

When Strawberry beds become old and exhausted, it is because the runners are allowed to grow, and the beds are matted together so that the crowns are injured.

Strawberries on beds are not produced from the runners of the previous year, but from the crowns, and every inducement should be made for the crowns to make strong offsets, not runners. A strong crop of fresh leaves caused by hoeing and manuring among Strawberries now, will not in my opinion improve the fruiting of the beds next year; in fact, as a general rule, the crop of fruit is in almost inverse proportion to the leaves, especially if there is much growth of foliage either late in autumn or very early in spring, so that, although Mr. Luckhurst's argument seems to be a strong one, I am obliged to differ in *toto* from his conclusions. If Mr. Luckhurst's plan be followed, of course old beds will wear out. All I am wishing to argue for is, that under other treatment the growth of the crowns is renewed without a crop of runners, and that manure is applied to the plants after the crowns have matured, and the roots appropriate the manure to feed the flower and fruit, and not the foliage. We should succeed very indifferently with most fruits if our attention were turned to supply vigorous leaves and wood-growth, though, as in everything else, the happy mean is the right one. I prefer the application of mulching to protect my plants during the winter, and to continue the root action, and not depend upon leaves for protection, which in our north country are not to be depended upon; and, as I have before said, I do not care how few leaves I see upon my plants when the season for spring growth commences.

Of course, in venturing to dispute the recognised and stereotyped treatment of Strawberries, I lay myself open to the remarks which Mr. Luckhurst makes, but I should not have written the article Mr. Luckhurst alludes to had I not equally based my conclusions on practical experience. I do not wish, however, to be misunderstood. I have no desire to find fault with the recognised system of renewing Strawberry beds; I only wish to assert that good fruit can be grown with the other system, and this was the reason why I ventured to dispute Mr. Luckhurst's assertion, that old beds always produced fruit of a paltry description.—C. P. PEACH.

THE columns of the Journal have lately been unusually rich in Strawberry lore, and the varied points touched on by different growers one would fancy would enable anyone having a garden to enjoy a supply of this estimable fruit. Mr. Luckhurst can evidently make Strawberries grow anywhere, and with such soil as he works on I am not surprised at his advocacy of treating them as biennials, and I feel quite sure that on his particular kind of soil he can so obtain more fruit than by any other means. Mr. Peach has evidently more "body" in his soil to hold them on as perennials; so have I,

if I never dig and top-dress continually; yet, with early and good plants and a good season, I can get better fruit off plants a year old than any other.

But we must take seasons into account, and act accordingly. For instance, the rainfall in the garden under my charge for the months of June, July, and up to August 17th is only 3.40 inches, an unclouded sun prevailing nearly the whole time. This, and a limestone base many feet in thickness, keep me from digging up my yearlings. So, also, I must let alone some two-year-olds, and by thinning the crowns slightly, and always keeping the surface of the ground covered, I expect a useful crop. Thus do seasons upset pre-arranged plans. The weather cannot be ignored, and a mere rule-of-thumb practice can never be relied on in spite of it. To make the best use of the best advice, it must be taken subject to weather contingencies and local expediency. Scores of people cannot if they would turn a dry season into a wet one by the watering-can, and yearling plants cannot be fine without plenty of moisture and support to carry them to maturity without interruption. Therefore I see no inconsistency, but the reverse, in advising the digging-up plants one season and letting them remain another if weather-changes demand it. They demand it now, and I shall not grub up hastily, and advise others similarly circumstanced to hesitate also; and the warning may be useful, considering the advice—excellent at the time and in itself—that has been given by different growers.

I note what has been said against Vicomtesse Héricart de Thury. I recommend it because I find it early and free-bearing, and not for its high flavour, yet its sparkling sub-acidity is enjoyed by many palates. I know something recommends it by the many applications I have for "runners." Anything distinctly early or decidedly late in Strawberries is always a desideratum, and if we can only get the fruit there will be no great fight as to nice points in flavour. We cannot net them up like Gooseberries and Currants, and prolong the season.

I am glad to see what Mr. Douglas says; kindly differences are always instructive. He wonders, and with, no doubt, good reason, that anyone should grow Elton as a late kind, while Frogmore Late Fine is so much superior. I am not quite sure whether I have had the true Frogmore, but, at any rate, such as I had would hardly grow or fruit at all. The plants were not from a sturdy stock, and I am fully sure that growing Strawberries of unhealthy parentage is terribly uphill-work. As to Dr. Roden, I can say no more than that he and the artist make one's mouth water.—J. WAGNER.

POTATOES AS THEY ARE.—No. 2.

NORTHAMPTONSHIRE.—In answer to your inquiry respecting Potatoes, I am very pleased to give you a favourable report. I have about thirty varieties planted, and have found very few diseased. My plan is, whenever I see the "fatal" spots, which generally come in small patches, to cut off the tops immediately. I hold that small sound Potatoes are preferable to large diseased ones. The yield this season is astonishing—fine, clean, and large tubers, and many of them of first-rate quality. Among the best is old Lapstone Kidney, an enormous cropper in well-worked land; Bresee's King of the Earlies, Excelsior Kidney, Bresee's Climax, are also of first-rate quality. We have already lifted some tons of the earlier varieties, such as Veitch's Royal Ashleaf and Hogg's Coldstream; the latter, when true, is all that can be wished, but it requires careful selection yearly. Early Rose is also capital this season, but not of the quality of those mentioned, still when they have to be supplied in large quantities it is not to be grumbled at. Primer, one sent here by my friend, Mr. Johnson, Savernake, is a first-class one, being of good even size, a prodigious cropper, and of fine quality. Late varieties I have not yet tried, but will send word about them in due time.—R. GILBERT, *Burghley Kitchen Gardens, Stamford.*

CHATSWORTH, DERBYSHIRE.—The Potato crop is magnificent in my immediate neighbourhood, the finest crop that has been seen since 1845; but I regret to say the continual wet of the past fortnight has had the effect of bringing on the disease slightly, and I fear it will get worse if the weather do not take up at once. The rains have been accompanied by thunder generally.—THOMAS SPEED, *The Gardens, Chatsworth.*

KIRKCALDY, FIFE—The Potato disease is certainly showing itself; here and there patches of spotted leaves are beginning to appear, but no word of disease at present. The crop, is very heavy, and of excellent quality.—PETER RISTOUL, *Raith Gardens.*

BANFFSHIRE, SCOTLAND.—The disease, I am sorry to state, has made its appearance where the crop is much shaded or growing in cold, stiff, wet land; but where growing exposed,

and the ground anything like dry, there are little or no signs of disease. If it keep off we are likely to have an abundant crop, both large and clean.—GEORGE MILNE, *The Gardens, Cullen House*.

STAPLEHURST, KENT.—As this is not a Potato-growing district I can only speak of the small quantities which everyone having a plot of ground invariably grows. The crop is generally spoken of favourably; the disease which manifested itself early in August in many places was restricted to the haulm, with only a solitary tuber here and there affected, and the fine weather we have had since then has, on the whole, checked it. The crop seems to be ripening off in tolerable condition; it is not heavy, but good in quality, and we trust will turn out well hereafter. I hear it stated that the much-abused American Rose promises to be tolerably good in quality this season, a matter not to be wondered at when all are better than usual.—J. ROSSON, *Linton*.

ROYAL HORTICULTURAL SOCIETY.

SEPTEMBER 3RD.

DAHLIAS, Asters, and Liliums were the subjects specially invited on this occasion, but the show of all three was of the most limited description; indeed, about 100 feet of staging was all that could be filled. The Dahlias from Mr. Turner, and the Lancifolium Lilies from Mr. Baines were superlative, but the other exhibits did not rise above mediocrity; indeed, than some of the Dahlias and Asters we never saw worse exhibited. In one kind, as shown by Mr. Turner and another exhibitor, there was a difference of diameter of 2 inches, and a corresponding difference in build.

Of Dahlias, three stands of twenty-four were shown. Mr. Turner was first with splendid massive blooms of Rev. J. B. Camm, Monarch, Arbitrator, Mr. Dix, Mrs. Saunders, Crimson King, Annie Neville, Egyptian Prince, Princess, Alexander Cramond, H. G. Quilter, Duke of Edinburgh, Flag of Truce, Toisson d'Or, Charlotte Doring, Incomparable, John Standish, Victory, Lady Gladys Herbert, Julia Wyatt, W. Keynes, John Neville Keynes, Ovid, and Prince Arthur. Second came Mr. W. Seale, Vine Nurseries, Sevenoaks, who had Charles Backhouse and Lord Palmerston, scarlet, very brilliant, and very good specimens of Peri, Hero of York, James Cocker, and others. Mr. Aldons, Gloucester Road, South Kensington, also exhibited. In Class 2, for twelve blooms, the best came from Mr. Burpitt, gardener to R. P. Taylor, Esq., Loughborough Road, Brixton. The second and third prizes were awarded to Mr. Beach, gardener to R. C. Petley, Esq., Riverhead, near Sevenoaks, and Mr. Gaines, Hampton Wick; the blooms from the last were very poor.

Of Asters, in the nurserymen's class for twenty-four not quilled there were none; in the open class for twelve Mr. E. Rowe, The Rookery, Rochampton, had the best; the remaining prizes going to Mr. George, Putney Heath, and Mr. E. Smith, gardener to T. D. Galpin, Esq., Bristol House, Putney Heath. Mr. Porter, gardener to Mrs. Benham, also sent a creditable collection. In the amateurs' class for twelve, not quilled, Mr. R. Anderson, 21, Blythe Street, Bethnal Green, was a good first, Mr. Rowe second, and Mr. George third.

For the best six Asters, not quilled, in 8-inch pots, the first prize was awarded to Mr. Smith, gardener to T. D. Galpin, Esq. These were fairly bloomed. Mr. Rowe was second, Mr. George third.

Messrs. Barr & Sugden offered prizes for trays of Asters, twenty-four blooms, not less than eight varieties, respectively of Pæony-flowered incurved, Victoria reflexed, and Pompon, or small-flowered. For Pæony-flowered Mr. Anderson had the prize, for Victoria Mr. Gaines, and for Pompons the same exhibitor was also successful with flowers averaging 1½ inch in diameter; while an extra prize was given to Mr. Anderson for a very good stand of quilled.

Although prizes were offered for Verbenas and cut Roses, no one came forward to claim them. For six pots of Lilium lancifolium (speciosum) Mr. Baines, gardener to H. Micholls, Esq., was first with splendidly bloomed plants measuring from 5 to 6 feet from the ground, and covered with innumerable blooms and buds. The varieties were rubrum, very free-flowering, album, and punctatum.

FRUIT COMMITTEE.—A. Smee, Esq., F.R.S., in the chair. A handsome Queen Pine Apple of 6½ lbs. weight was sent by Mr. James Harris, gardener to Mrs. S. H. Vivian, The Gardens, Singleton, Swansea; it was grown in a small pot from a sucker in sixteen months. A cultural commendation was awarded. A seedling Peach was sent by Mr. Powell, of the Royal Gardens, Frogmore, named *The Lady*, which was not thought any improvement on existing sorts. A seedling Plum was sent by Mr. C. Ross, gardener to C. Eyre, Esq., Welford Park, Newbury, named *Welford Rose-drop*. The fruit is large, and resembles in flavour the Orleans, but was not thought by the Committee to be an acquisition. A Melon, named *Scarlet Perfection*, was

sent by Mr. J. Meakes, gardener to R. Fowler, Esq., Petersham, Surrey, but the flavour was very inferior.

A collection of Plums was exhibited by Mr. W. Earley, Valentines Gardens, Ilford, with the view of showing the relative time of ripening of twenty varieties. Mr. Earley also sent a bunch of Black Hamburg Grapes from a Vine said to be the parent of that at Hampton Court. The Vine was planted more than a hundred years ago.

A splendid dish of Jefferson Plum was sent by Mr. Dancer. The flavour was remarkably good, and a vote of thanks was voted to Mr. Dancer. Three seedling Nectarines were sent by Mr. J. Douglas, gardener to F. Whitbourn, Esq., Loxford Hall, Ilford, which were thought highly promising by the Committee, and were asked to be exhibited again next year. A seedling Plum resembling Jefferson, named *Gordon Castle*, was sent by Messrs. J. & C. Lee, Hammersmith, but not so good as that fine variety.

Messrs. Monro & Wilkinson, Potter's Bar, Herts, sent six specimens of a very fine smooth Cucumber named *Duke of Edinburgh*. It has a remarkably short neck, and the fruit is of a very serviceable size—15 inches in length. A first-class certificate was awarded. A white-spined variety of Cucumber was also sent Mr. J. Meakes, gardener to R. Fowler, Esq., Petersham, but was not considered to be distinct by the Committee.

FLORAL COMMITTEE.—W. B. Kellock, Esq., in the chair. Messrs. Veitch & Sons, Chelsea, had first-class certificates for three splendid Begonias, two of which were stated to have been lifted from the open ground. All of them had large and splendid scarlet flowers differing in their depth of colour from *Vesuvius*, orange scarlet, to *Acme* and *Stella*, deep scarlet; the last-named, however, may not be, perhaps, so hardy as the others, as it was not said to be so grown. A first-class certificate was also awarded to the same firm for *Vanda Bensoni*, a Rangoon Orchid, forming a very fine specimen, with brownish dotted sepals and petals, and a pretty pale lilac lip. Mr. Burt, Shoreham Place, Sevenoaks, had a cultural certificate for a very fine specimen of *Saccolabium* with six racemes 16 inches long.

Dahlias were numerous shown by Mr. Turner, Slough, Mr. Wheeler, of Warminster, and others. The first-named had a first-class certificate for *Ovid*, rich rosy purple, one of the finest Dahlias ever seen. Mr. Keynes, Salisbury, had a like award for *Julia Davis*, yellow, also a cultural commendation for a stand of twenty-four. Mr. Harris, Orpington, had likewise a first-class certificate for Mrs. Harris, a very fine-formed and pretty flower, ivory tipped with pale purplish violet. Mr. Rawlings, Romford, had also a first-class certificate for *Miss Dennis*. Mr. Eckford, gardener to the Earl of Radnor, Coleshill, likewise sent a collection of Dahlias, and some promising *Verbenas* and *Geraniums*. From Mr. Douglas came a spike of a sweet-scented *Aërides*, name not determined. We might have extended our remarks on the Dahlias and other subjects exhibited, but for the extreme difficulty of ascertaining what their names were and by whom exhibited. It would convey but little information to our readers to state that *61 Dahlia* was a highly meritorious variety, unless we could also state the name it was to go by and by whom it was exhibited; and though names are, or may be, put later in the day than we are compelled to take our notes, it is certainly not till long after the Committee has ceased to sit. Several exhibitors practically do away, to a certain extent, with the difficulty by attaching their names to their productions. Such we believe is the confidence felt in the fairness of the decisions of the Floral Committee, that such a precaution as the numbering of the plants submitted to it seems wholly unnecessary.

RAISIN-MAKING IN CALIFORNIA.

Any industrious person who has the right kind of Grapes can make raisins; and raisin-making, which eighteen months ago had still a very uncertain future in this State, may now safely be called one of the established and most promising industries here. Last year I ate excellent raisins in Los Angeles, and tolerable ones in Visalia; but they sell very commonly in the shops what they call "dried grapes," which are not raisins at all, but damp, sticky, disagreeable things, not good even in puddings. This year, however, I have seen in several places good native raisins; and the head of the largest fruit-importing house in San Francisco told me, the other day, that one raisin-maker last fall sold the whole of his crop there at \$2 per box of 25 lbs., Malagas of the same quality bringing at the same time but \$2 37½. There is a market for all well-made raisins that can be produced in the State, he said, and they are preferred to the foreign product. At Folsom, Mr. Bugby told me he had made, last year, 1700 boxes of raisins, and that he was satisfied with the pecuniary return; and I judge from the testimony of different persons that at 7 cents per lb. raisins will pay the farmer very well. The Malaga and the White Muscat are the Grapes which appear here to make the best raisins.

For making raisins they wait until the Grape is fully ripe, and then carefully cut off the bunches, and lay them either on a hard clay floor, formed in the open air, or on brown paper laid between the Vine rows. They do not trim out poor Grapes from the bunches, because, as they assert, there are none; but I suspect this will have to be done for the very finest raisins, such as would tempt a reluctant buyer. The bunches require from eighteen to twenty-four days of exposure in the sun to be cured. During that time they are gently turned from time to time, and such as are earliest cured are at once removed to a raisin house. This is fitted with shelves, on which the raisins are laid about a foot thick, and here they are allowed to sweat a little. If they sweat too much, the sugar oozes on the outside, and this deteriorates the quality of the raisin. It is an object to keep the bloom on the berries. They are kept in the raisin house, I believe, five or six weeks, when they are dry enough to box.—(*New York Tribune*.)

PHOTOGRAPHS OF LEAVES.

ONE very simple process is this: At any druggist's get a little bichromate of potash. Put this in a two-ounce bottle of soft water. When the solution becomes saturated—that is, the water has dissolved as much as it will, pour off some of the clear liquid into a shallow dish; on this float a piece of ordinary writing-paper till it is thoroughly and evenly moistened. Let it become nearly dry, in the dark. It should be of a bright yellow. On this put the leaf; under it a piece of soft black cloth and several sheets of paper. Put these between two pieces of glass (all the pieces should be of the same size), and fasten them all together tightly. Expose to a bright sun, placing the leaf so that the rays will fall upon it as nearly perpendicular as possible. In a few minutes it will begin to turn brown, but it requires from half an hour to several hours to produce a perfect print. When it has become dark enough, take it from the frame and put it in clear water, which must be changed every few minutes, till the yellow part becomes perfectly white. Sometimes the venation of the leaves will be quite distinct. By following these directions, it is scarcely possible to fail, and a little practice will make perfect. The photographs, if well taken, are very pretty.—(*To-Day*.)

NURSERYMEN VERSUS AMATEURS.

I PERCEIVE in your last number two short paragraphs, the one headed "Brown's Wonder Strawberry," and the other "Blue Peter and Little Gem Peas," both of which appear to me to originate from the same pen, and the animus of which is unmistakable. It is evident to the simplest mind that the writer's object was not so much to speak of Brown's Wonder, as to shield himself under that heading to make an attack upon me and the productions of which I have the pleasure, and I hope the honour, to be the raiser.

Did I unwittingly give offence to Mr. Turner in my remarks upon Peas? If so, I beg to assure him that I had not the least intention so to do. I believe the Pea so generally known as Turner's Little Gem was the production of a professional brother, the late Dr. Maclean, of Colchester, and on that ground alone I should not have been so uncourteous to his memory. As to Mr. Turner, I never thought of him in the matter.

I have nothing to withdraw from my remarks on those Peas. Little Gem is so well established that no expression of mine would prevent anyone growing it who likes a very dwarf Marrow Pea. For my part I should prefer Alpha for an early, and some of the other better sorts of Marrow Peas for a later supply, and hence I discarded it long ago; but in the Imperial class—and this was really the object I had in view, not thinking so much of Little Gem as of Beck's Gem, Tom Thumb, &c.—I should prefer such a Pea as Blue Peter to wasting stakes on many others of that class no better in quality and not so productive for the ground they occupy. But as to Emperor of the Marrows, Mr. Turner's remarks more particularly surprise me. It is quite within the range of possibility that I may be as good a judge of Peas as Mr. Turner, albeit he is a nurseryman; and I can only say, that after testing many of the acknowledged best sorts of Peas with which my gardens have this year abounded, G. F. Wilson among the number, when the Emperor came to table everyone wanted to know what it was, and said with one voice, "This is the Pea"—the best Pea they had tasted. I believe the verdict to be a true one, and fearlessly assert that your readers may grow this Pea with the utmost confidence, that is (tastes do so differ) if they like a first-class Marrow Pea.

Now as to the matter chiefly in hand, the Strawberries. Mr. Turner's remarks carry absurdity on the face of them. He says, "How is it we never meet with Dr. Roden's gems, so temptingly described in your last number? They are never met with in good gardens, on the exhibition table, or in any catalogue." It is scarcely necessary for me to reply to the above illogical proposition by asking another question, How can the above results be achieved before the plants are even distributed? Can anything more pointedly show the jealousy Mr. Turner seems to entertain towards humble amateurs like myself dabbling, I suppose he would say, in matters we have nothing to do with, and overstepping the bounds of reason and even possibility to express his feelings? I think I may here say good-bye to Mr. Turner on the above head.

But he may say, "You had other seedlings temptingly described, and which have been before the horticultural world several years." Yes, but they were not described in the last number of the Journal, and it is not true that they are never met with in good gardens or in any catalogue. It is quite true that I did not seek the assistance of men of Mr. Turner's calibre to vaunt these seedlings, neither did I seek the good opinion of the Horticultural Society to bring them before the public. I doubt the expediency of the former for many reasons, even though it may possibly lead to exclusion from such valued catalogues; but I quite agree with the latter procedure, where leisure time and other circumstances conduce to such a result. I preferred, with my active life, to let my seedlings silently and unobtrusively make their way, assured that if there was merit it would as certainly be found out without any adventitious aid whatever, and what is the consequence? Those Strawberries, Early Prolific in particular, are to be found in many good gardens, are to be found in some of the best catalogues, and are gradually finding their way into others, several of which are now before me.

The best exhibition table, and the only one I covet or care about, is the table of the private gentry, and the good and great of the land, for whom my exertions in this department of the art are mainly intended, where the judges are not only competent but unbiassed, and not for the mere trader in plants. And that this course is being appreciated, I can now tell Mr. Turner for his gratification, that my gardener cannot grow Early Prolific and Duke of Edinburgh fast enough in my limited space, the former especially, for the numerous applications he has for these varieties from all parts of the country. And with regard to the two varieties now being distributed, it will be utterly impossible this year to execute the orders he already has on hand for plants, except by limiting the numbers. The aid of nurserymen, therefore, as mere vendors of plants, even to the dreadful exclusion from their catalogues, will not be necessary. At the same time be it understood, that those nurserymen who have applied to my gardener for plants will by my instructions be treated with every courtesy and attention, and their wonted privileges extended to them in the order of priority, as far as circumstances will admit.

Having so far justified myself from this uncalculated attack, I will not obtrude further on your valuable space on a subject which is foreign to your pages, and on which I feel I could not have troubled you, had you not inserted the articles in question. I will, therefore, conclude by saying that Mr. Turner may depend that I shall always be ready, and I trust able, to defend myself from all such illiberal attacks, whether they come in the form of satire or otherwise. Mr. Turner's allusion to my gems was, doubtless, very clever, but I think the term is so thoroughly appropriated by himself that no one else has any right to it, and I for one do not use it. On the other hand, if Mr. Turner doubts my integrity or the honesty of my statements, I shall be happy to extend the right hand of good fellowship, and to see him at Morning-side at any time during a Strawberry season. We all know that no fruit varies more with soil and situation than the Strawberry, but if Mr. Turner honours me with a visit, he can judge for himself, and if I have timely notice of his approach, I will try to give him a dish of the true Emperor of the Marrow Peas.—WILLIAM RODEN, M.D.

SIAMSE TWIN CUCUMBERS.—I enclose a photograph of an extraordinary freak of nature, displayed in the growth of what, I think, may be properly termed twin Cucumbers. A number of working men in this neighbourhood, interested in gardening and fond of Cucumbers growing, have raised a variety to which they have given the name of Benicia Boy, in allusion, no doubt, to the vigorous qualities of the American pugilist. I

understand the plant is a cross between the Irishman and the Telegraph. It is a very free bearer, but was not thought to be possessed of the power of producing such a freak of nature as that represented in the photograph, and the like of which has not been previously known in this district, nor, indeed, amongst gardeners of extended experience in many parts of the country. The present example is perfectly formed, and is not at all the result of pressure, as is so often the case.—S. LEECH, *Hollingwood, near Manchester.*

[The photograph represents the two Cucumbers united at the shoulder, but both attached to one and the same stalk. All fruits are liable to produce similar unions, as they are occasioned by two embryos being in the same flower.—EDS.]

PREVENTING CALCEOLARIA FAILURES.

I HAVE often noticed complaints of failures of bedding Calceolarias from one cause or another, including fly and weevil. For three years I have regularly bedded some five hundred plants, and have lost at least half of them, in hot weather especially, and mostly owing to fly. I determined, however, this year to try an experiment of my own, which has turned out most successfully. It is as follows. I mixed in a bucket a strong solution of Fowler's insecticide, heat about 100°, and in this solution dipped every plant overhead, before putting it into the ground, for about ten seconds. Out of over five hundred bedded this year I have not lost a dozen, and have not seen the slightest sign of weevil or fly of any kind upon the plants, and they have grown and bloomed most profusely.—JAMES RAILTON, *Rosclands, Fallowfield, Manchester.*

BEDDING PLANTS IN THE LONDON PARKS.

No. 2.

WE will now cross from the Green Park into Hyde Park, and after passing some very good beds on the right, near Apsley House, we reach Stanhope Gate, from which point to Grosvenor Gate there is a series of beds which are simply superb; there are great sheets of splendidly-coloured flowers and of leaf-plants, and the numerous beds are at once extremely rich in colour, uniform as regards growth, and absolutely free from blanks.

From Stanhope Gate to South Street Gate the oblong beds on the right between the Plane trees are margined with Golden Feather Pyrethrum and edged with Iresine Lindeni, the dark, lanceolate, entire leaves of which offer a striking contrast to the beautifully cut golden foliage of the Pyrethrum. On the left-hand side next the park, the oblongs with rounded ends are margined with *Echeveria secunda glauca*, and edged with *Dactylis glomerata variegata* and Blue King Lobelia planted alternately, and which produce a light and elegant effect. There is then an inner line of *Alternanthera amabilis latifolia*. The small circles round the Oaks are margined with *Sedum glaucum*, and edged with *Alternanthera amœna*, and the remaining space is filled with *Mesembryanthemum*. The oblongs next the boundary, though their position between the trees is unfavourable, are so good that all deserve particular mention. The first is filled with Duchess of Sutherland Geranium; the second with the silvery-leaved Queen of Queens mixed with *Verbena venosa*; the third with *Lucius*; the fourth with Mrs. Pollock mixed with Blue Perfection *Viola*, a very effective combination; the fifth with Warrior, a magnificent scarlet bed; the sixth with Gaines's Dwarf Calceolaria; the seventh with Christine; the eighth with Paul's Bonfire, literally a blaze of flower; the ninth with Gaines's Calceolaria; and the tenth with Wellington, a fine dark crimson, but not at its best. The remaining four beds consist of Crystal Palace Gem, *Heliotrope Jean d'Amour*; James Richards, bronze Geranium, very fine as a bedder; and Stanstead Rival, which forms a splendid glowing crimson bed. Turning backwards, again on the right, next the park, the first oblong is Model Geranium, a neat, compact, golden-bronze kind, but which we shall discard another year, and the result here accorded with our own experience, as the bed of it is inferior to the rest in the series. Next to this is Rose Bradwardine, one of Mr. Pearson's raising, a beautiful and very pleasing deep rose, this is extremely fine. The next bed is one of the finest in the series, Crystal Palace Gem Geranium, with a centre of *Coleus Verschaffelti Improved*, perfectly even throughout, and which is much more brilliant in colour than the old form when thus seen in mass. A splendid bed of Glow comes next, followed by Mrs. C. Custons,

and then with Variegated Stella Geranium mixed with Purple Queen *Verbena*. A fine bed of Mrs. John Lee, of a deeper bronze than James Richards, comes next, and then a bed of Crystal Palace Gem centred with the Improved *Coleus*. The remaining two beds are of *Amaranth* (Pearson), deep pink, with splendid trusses and very fine in colour; the other being Mrs. Pollock mixed with Blue Perfection.

We now come to a fresh series of beds, that from the South Street Gate to the Mount Street Gate. In this the margin to the beds on the right-hand side is of *Veronica incana*, the edging of *Lantana Selovii*; whilst on the left, as far as the Elm tree, the margin is *Echeveria secunda glauca*, the edging *Mesembryanthemum cordifolium variegatum*, with an inner line of *Alternanthera amœna*. The circles are the same as in the previous series. From the Elm tree to the Mount Street Gate the margin is *Mesembryanthemum deltoideum*, with an edging of *Alternanthera magnifica*, and an inner line of Robert Fish Geranium. Among the beds of Geraniums there are very fine ones of Editor; Artemus Ward, a narrow-zoned Golden Bronze, very neat and even; Princess Alexandra, silver-edged, very pure white; Glow; Louis Roesler, deep rose, changing to soft rose, trusses very large, and forming a fine mass; Perilla, Scarlet Gem, *Lucius*, Christine, and Bayard, splendid. With these are some beds of Calceolarias, but as Gaines's Dwarf is the only one grown, we need not notice this flower further.

We will now take the inner, or park side, backwards towards South Street. The two heart-shaped beds at the end are planted with Lady Plymouth white-variegated Geranium, interspersed with Blue King Lobelia. The oblongs which follow are in pairs as regards colour, or as nearly so as possible. The first pair consists of rich masses of *Coleus Verschaffelti Improved*; then come Pearson's Florence Durand and Cleopatra, beautiful deep rose; next, La Vestale, white, which is better than its companion Madame Vaucher; then *Coleus Verschaffelti Improved*; and finally the two heart-shaped beds at the end are planted with Bijon, white-variegated Geranium, mixed with Lobelia Lustrous, deep blue. This is a very striking series of beds, those of the *Coleus* in particular being admirable. From the Elm tree, backwards still, are fine beds of Golden Circle and Golden Nugget Geraniums, respectively intermixed with *Viola Blue Perfection* and Charming, and others of remarkable beauty, planted with *Coleus* and Centaurea.

Starting again northward from Mount Street to Grosvenor Gate we find the beds on the right are margined with *Alternanthera magnifica*, and edged with Sportsman *Verbena*, rosy purple; while those on the left are chiefly margined with *Echeveria secunda glauca* and edged with *Mesembryanthemum cordifolium variegatum*, within which is a line of *Iresine Lindeni*. The heart-shaped beds, however, are margined with the Californian Houseleek. In the long beds on the right Rubro-cinctum, Bonfire especially fine, and *Lucius* are the most conspicuous for free-flowering among the Geraniums; but we must not omit to notice charming beds of *Centaurea candidissima* mixed with *Verbena venosa*, and a scroll of Mrs. Laing silver Tricolor Geranium, which is magnificent. Turning backwards we have a fine heart-shaped bed of W. Sanday, golden Tricolor; then follow oblongs in pairs of White Star and Flower of Spring, Mrs. Milford and Golden Chain, Jean Sisley and Leonidas, Albion's Cliffs intermixed with Blue King Lobelia, along with Lady Plymouth similarly blended. Then come Chilwell Beauty and Duchess of Sutherland, both very fine but the former taking the lead. Four heart-shaped beds round the Rhododendron clump are beautifully finished-off. These are planted with *Impératrice Eugénie* Geranium, golden bronze, interspersed with Lobelia Lustrous. There are, besides, two circles of Mrs. Upton, pink, fine; and then we come to an oblong of Violet Hill Nosegay, and Vesta, dark crimson scarlet, extremely free. Next follow Artemus Ward and Mrs. Pollock, and then Mrs. Laing and the Rev. F. F. Fenn, the latter with splendid crimson trusses, large and freely produced; and then we have Madame D. Bertrud, deep pink with a white eye, paired with Pink Nosegay; followed by beds of Black Douglas and James Richards of the Bronze class, the former very effective by its deep blackish zone. Of William Thomson there is a magnificent bed; the colour of the flowers, a magenta-flushed rosy crimson, being splendid, while the trusses are not only good but very freely produced. Lawrence Heywood, in the way of Duchess of Sutherland, is also very good. There is a charming bed of Golden Harry Heever; and the heart-shaped beds at the end are most effectively planted with Bright Star

and Countess of Warwick, the one silver-edged, the other a silver Tricolor Geranium, intermixed with Lustrous Lobelia.

From Grosvenor Gate to Brook Street, and thence to the Marble Arch, the beds are numerous, but not so close together owing to the number of trees and shrubs. Although the planting is tasteful and well executed throughout, we shall not enter into details. There are excellent beds of Abutilon Thompsoni interspersed between Colens aureo-marginata, of Titian Geranium, and of Mrs. Kingsbury, silver Tricolor, edged with Lobelia, and margined with Golden Feather Pyrethrum. From Brook Street to the Marble Arch the beds are margined with Alternanthera magnifica, and edged with Lobelia Blue King, and among them are some very beautiful circles and rounded oblongs. We noticed Ianthe Geranium, one of Dr. Denny's raising, as especially splendid both in colour and size, combined with profusion of bloom. There are likewise several admirable beds of Coleus.

EXPERIMENTS IN POTATO CULTIVATION.

We take the following account of some very interesting experiments made by Mr. J. V. H. Scovill, of Paris, Oneida County, New York, from the report of the Department of Agriculture of the United States:—

Many practise the habit of selecting only small Potatoes for seed, reserving those that are merchantable for sale. Others plant medium-sized Potatoes, cutting only the largest. Some practise shallow planting; others plant more deeply and dig them with a machine. I have made some experiments during the past season to ascertain, if possible, what is the best kind of seed to use. The ground used for this purpose was a clay loam, and was an inverted green sward, ploughed about 7 inches deep. The Potatoes were planted in hills, the rows being 3 feet by 2 feet 9 inches apart, making 5280 hills to an acre. The number of hills planted of each kind was seventy, and the result figured-out as if by the acre. The seed was carefully weighed, both at the time of planting and at the time of digging, and was estimated at the rate of 60 lbs. to the bushel. The rows were marked with a horse-marker, and the seed covered about 2 inches deep. The variety experimented with was the Garnet Chili, a variety largely cultivated in Central New York for local marketing. They were planted June 1st, and harvested October 21st.

No.	Seed used per Acre.	Total products per Acre.			
		Bush. of 60 lbs.	Bush. of 60 lbs.	Bush. of 60 lbs.	Bush. of 60 lbs.
1	One eye to a piece, and one piece in a hill . . .	31	102	54	108
2	One eye to a piece, and two pieces in a hill . . .	9 1-6	175	16	191
3	Two eyes to a piece, and one piece in a hill . . .	8 1-5	160	14	175
4	Two eyes to a piece, and two pieces in a hill . . .	13	175	21	194
5	Three eyes to a piece, and one piece in a hill . . .	10	175	21	197
6	Three eyes to a piece, and two pieces in a hill . . .	18	164	41	205
7	Four eyes to a piece, and one piece in a hill . . .	12	156	22	179
8	Four eyes to a piece, and two pieces in a hill . . .	27	146	47	193
9	One large Potato in a hill	44	168	62	210
10	One large Potato divided, in a hill	22	163	28	191
11	One small Potato in a hill	10	138	21	169
12	One small Potato divided, in a hill	6	125	18	143
13	Two small Potatoes in a hill	21	132	46	159
14	One medium Potato in a hill	26	130	36	162
15	One medium Potato divided, in a hill	16	154	26	181
16	Seed end of the Potato in a hill	12	158	24	182
17	Potato, with seed end cut off, in a hill	29	156	38	194
18	Two medium Potatoes cut in two, four pieces in a hill	30	191	38	229
19	One medium Potato quartered, four pieces in a hill	27	168	62	230
20	One large Potato in a hill, with eyes dug out . . .	35	114	14	128
	Field crop . . . . .	..	151	38	184
	Field crop, Peach-blows . . . . .	..	194	21	215

Some very interesting and curious facts are observable from a perusal of the foregoing table. The strongest seeding, in almost every case, furnishes the most flattering results. The largest yield were those of Nos. 9 and 19, 230 bushels to an acre, and a difference of about 17 bushels in amount of seed used, while the proportion of small Potatoes was unusually large. The best proportion of large Potatoes was in Nos. 2, 4, and 5, and largest amount in No. 18. Two eyes to a piece, and two pieces in a hill, and three eyes to a piece, are better than two single eyes; while three eyes to a piece, and two pieces

in a hill, give eleven bushels less of large ones than a single piece of the same number of eyes, and nearly double the number of small ones, as will be seen by referring to Nos. 5 and 6.

I find this minute in my memorandum at the time of planting, referring to Nos. 5 and 6:—"The labour of cutting with three eyes to a piece is increased, and most of the seed ends thrown out." Also of Nos. 7 and 8:—"Seed ends left in and generally divided, and sometimes more than four eyes to a piece, and less care in cutting." No. 20, one large Potato, eyes dug out. Of the seventy hills planted ten did not grow, and three of these were dug up and destroyed by fowls. I am satisfied that the proportion of those which did not germinate would have been less had the planting been earlier. Everything which resembled an eye was carefully dug out, and the Potatoes were all carefully examined by other parties previous to planting. What does it prove? It proves the wonderful vitality of the Potato, and that the cutting and planting may be done with a machine without fearing any material risk or damage from missed hills.

From the result of these experiments my previous opinions are confirmed, and I would say, Use good seed, and avoid the danger of a depreciating quality by feeding the small ones to your stock. I usually plant a good medium-sized Potato, and, if large, cut it once in two lengthwise. The "field crop" noticed was grown alongside the above, and was, I think, less than my general crop.

These Potatoes were grown in the town of Paris, Oneida County, New York, in an elevated locality, 1500 feet above the level of the sea.—(Canada Farmer.)

USING STONES IN POTTING.

HAVE any of your readers ever used stones purposely in potting such things as Vines and Pines? It is the custom to pick these carefully out of the compost before using it; and I confess, myself, to a prejudice against them hitherto, though I am not prepared, I must admit, to give a very good reason for the same. I am led to ask the above question from an idea which occurred to me the other day when examining the roots of a Pine Apple plant which had been turned out of the pot. As has often been observed in the case of potted plants, the roots were all at the side of the pot. Just to see how far they had availed themselves of the body of soil between the stem and the pot, I poked the soil out at the bottom of the ball from the top. So few were the roots, comparatively, that this could be done easily, leaving just the skeleton of the ball—a thick mat, which had formed at the sides of the pot, and inside nothing but a few strong roots radiating from the stem of the plant to the outside of the ball, where they had congregated and thickened, without the least disposition to turn back and take advantage of the bulk of rich soil they had left behind. I estimated that the roots had availed themselves of about one-third or one-half of the soil in the 12-inch pot, living principally—after they had eaten the strength out of this—upon the nourishment supplied in the waterings. No doubt it was observation of this kind which led to the practice of shifting plants forward by inches, in order that the roots might be compelled to eat their way through in a regular manner; and there is reason in the practice, though in the case of the Pine Apple the many-shift system is not a good one. Still, if by any other practice we could produce the same results it would certainly be advantageous. If a good plant can be grown in a 12-inch pot upon only one-half the diet supplied, it would doubtless be a much better specimen if it could be induced to take it all; and a 10 or 12-inch pot contains no more soil than a strong Pine plant requires, but it is unable to avail itself of the store under the circumstances, and it is therefore lost. It is the same with pot Vines and other plants, but to a less extent, perhaps; for the Pine has a very bad habit of warping its roots round the sides of the pot, especially when it is potted loosely. It would appear, therefore, that to make the roots occupy the soil in the pot regularly as they progress, they must be obstructed in their passage. Hard potting will do this to a great extent, but it is not entirely effectual in preventing the majority of the roots from establishing themselves at the side of the pot. It seems to me, therefore, that a fair proportion of stones among the soil would effectually bar their direct progress. Round boulders would be too bulky, but flat slaty stones, introduced vertically here and there between the stem and the pot at potting time, would necessarily cause the roots to break up into branchlets and seek a more roundabout way to their ultimate destination—utilising, at the same time, the

body of soil at their disposal, which they would otherwise have disregarded.

Supposing we could accomplish the end in view, it seems certain that less-sized pots would do, and two pots of a given size would give better results. I have frequently noticed, as others must have done, that the ball of an old Pine plant when squeezed with the foot, would burst its skin, and the contents, soil and bones, scarcely touched with a root, would fall out in much the same condition as when the plant was first potted, except that the bones in the soil were just in that state in which the roots like to find them for immediate use.—J. S.—*(The Gardener).*

NANT,

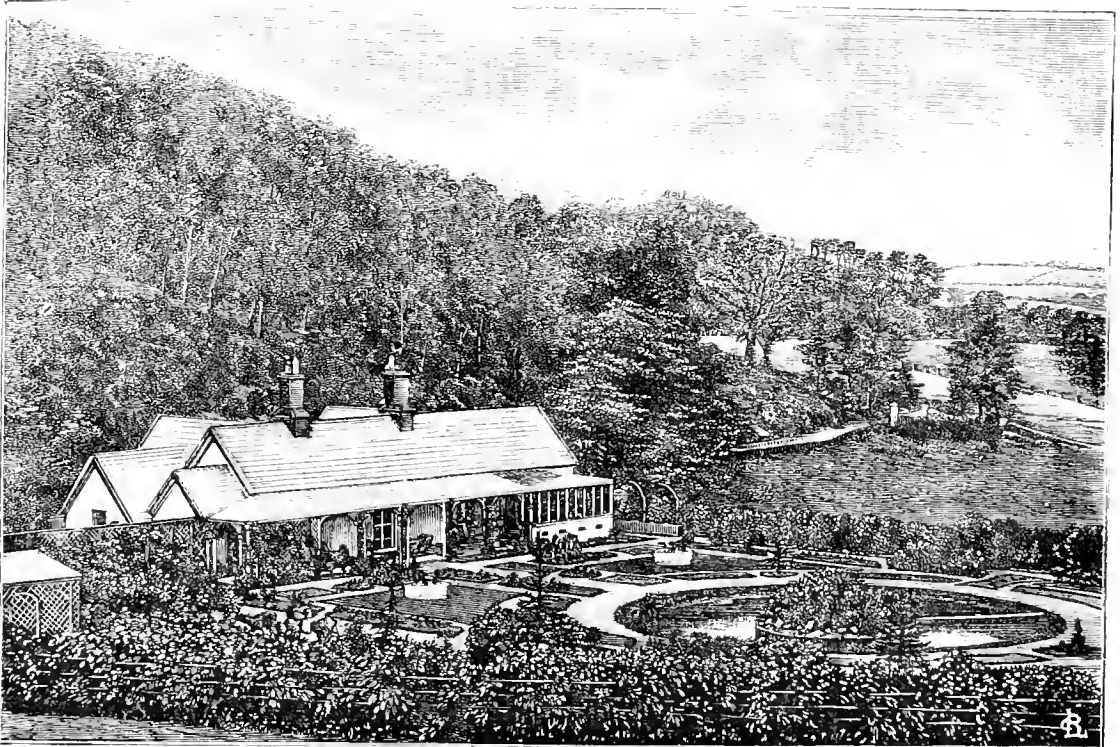
THE PRINCIPAL FLOWER GARDEN OF BARON HILL,
THE SEAT OF SIR RICHARD BULKELEY WILLIAMS BULKELEY,
BART., BEAUMARIS, ANGLESEA.

To us this is an establishment quite unique, and as beautiful as singular. It is at the base of wooded heights sheltering it from the strong prevailing winds, and its name, *Nant*, a dingle, well describes its position. It is about a mile from the mansion, and hither Lady Bulkeley resorts almost daily; it may be regarded as her boudoir, and in the two rooms of the little villa, the windows of which admit a view of the entire garden, her ladyship receives visitors, and has her "five-o'clock tea." There is a brightness and elegance characterising the whole that render it most attractive. The entrance is from the road

Nant. What Mr. Gough has to accomplish with his present glazed structures will be estimated justly when we add that the Nant garden requires nearly 14,000 plants, and Baron Hill garden about 10,000, exclusive of potted plants for the conservatory, verandah, and house. We have but one other suggestion to make, and we daresay that he is as fully aware of it as we are—climbers will never flourish in the little conservatories in front of the Nant villa until better top ventilation is secured to them. The whole of the uppermost panes of the roofs might easily be fitted into a hinged frame, and they would not allow of too free a current of air.

ARUNDO CONSPICUA.

ALTHOUGH this plant has been known for many years, it has certainly not yet received that attention which it merits, for it is seldom we meet with it, although its rival the Pampas Grass is plentiful enough. Whether it is that a plant which is in beauty more than two months earlier than the Pampas Grass, and at a time when the garden possesses other attractions, is thought of less value on that account, or that an idea has got abroad that the plant is not very hardy, or is difficult to manage, I know not. It is, however, more likely that the plant is not sufficiently known. Certain it is that this fine *Arundo* from the Antipodes is not met with so often as it ought to be; it flowers early in July, and its numerous spikes or heads resemble the Pampas Grass in every way, are often as large, and are produced on stems which are, on the whole,

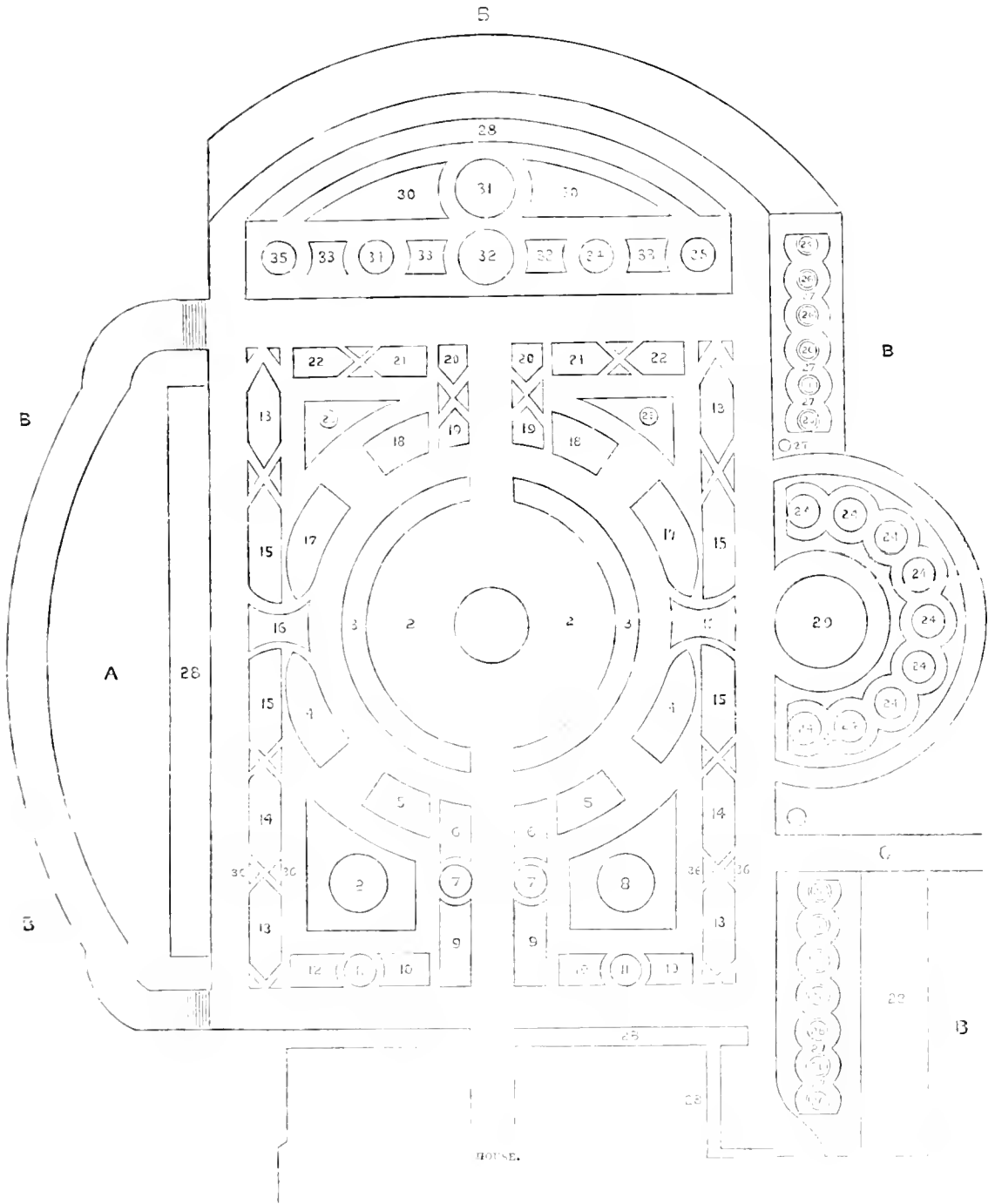


NANT.

from Beaumaris by Llanfraes church, beyond which church it is about half a mile. The public are admitted three days in the week—Tuesday, Thursday, and Saturday, between the hours of ten and two. The garden is about three-quarters of an acre, and is arranged and planted as in the annexed plan. It is one of the brightest, most varied, and best planted flower gardens we ever inspected. It is highly creditable, as is all the gardening connected with Baron Hill, to Mr. Gough, the courteous head gardener, and we hope when next we visit Beaumaris to find him in a more suitable residence, and with more glass houses, somewhere between Fryars and Nant; he would then be better able to supply the demand for flowers, and without that consumption of time required in passing over the too-long distances between Baron Hill, Fryars, and

taller than those of that popular autumn ornament. What is of more consequence, they are even more spreading, a greater proportion of them rising diagonally on all sides of the plant as well as upright in the centre, giving it as uniform a character as the most fastidious dresser of plants for an exhibition could desire.

The plant has a strong resemblance to the Pampas Grass, but is somewhat broader-leaved, and, perhaps, does not rise quite so high, so that a greater portion of the flower stem is seen above the plant than is shown in its compeer; its foliage is also not so rough, but in all other respects the plants very much resemble each other. From the difference in the time of flowering we are in the habit of naming the one the summer and the other the autumn Pampas Grass, still it must not be



PLAN OF NANI FLOWER GARDEN.

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| <p>1. Dolphin Vase, surrounded with Stella Geranium.
 2. Pond, containing Nymphaea alba and gold fish.
 3. Laurel Hedge, 2 feet high and 18 inches wide.
 4. Calceolaria Aurea floribunda, edged with blue Lobelia.
 5. Geranium Clipper, edged with Golden Feather Pyrethrum.
 6. Iresine Lindenii and Mrs. Pollock Geranium, edged with Alternanthera paronychioides.
 7. Lobelia speciosa.
 8. Centre, Emperor Aster, edged with Golden Feather Pyrethrum and
 9. Friesland Dubois Geranium, edged with blue Lobelia. Alternanthera.
 10. Geranium Mrs. C. Barry, edged with Lobelia. 11. Geranium Diadematum.
 12. Geranium Rose Rondatler, edged with Pyrethrum.
 13. Geranium Bicolor, edged with blue Lobelia.
 14. Geranium Am. Hoeg, edged with Golden Feather Pyrethrum.
 15. Geranium Stella, edged with Bijon Geranium pegged down.
 16. Calceolaria Brown Prince of Orange.
 17. Geranium Baron Hill Seedling, edged with Mesembryanthemum.</p> | <p>18. Geranium Madame Vaucher, edged with blue Lobelia.
 19. Geranium Clipper, edged with blue.
 20. Lobelia speciosa and Crystal Palace Nasturtium.
 21. Geranium Mrs. Pollock, edged with Lobelia.
 22. Geranium Tom Thumb, edged with Golden Feather Pyrethrum.
 23. Vase. 24. Portugal Laurels, 1 foot by 2 feet 6 inches.
 25. Scrollwork of Alternanthera, Pyrethrum, Iresines, and Lady Plymouth Geranium.
 26. Cineraria maritima and Iresine Herbstii.
 27. Seed of Calceolaria Aurea floribunda and Beauty of Montreal.
 28. Ribbon border. 29. Fountain. 30. Clipper Geranium.
 31. Centre, Dalhias, finished off with Pyrethrum and Alternantheras.
 32. Centre, Geranium Prince Silverwings, finished off with Pyrethrum and
 33. Carpet of Alternantheras, Pyrethrum, &c. Alternantheras.
 34. Geranium Roseberry.
 35. Centaurea candidissima and Diadematum Geranium. 36. Tree Box.
 A. Rock-ork. B, B, B. Shrubby. C. Walk to Rose garden.</p> |
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inferred that as the *Arundo* blooms so early it necessarily is soon over. On the contrary, there are few plants that I know which continue longer in a showy condition, and it is not too much to say that it often looks well up to the middle of October, after which, however, its appearance will not compare with the newly-developed plumes of its neighbour. Up to the end of August its beauty can hardly be said to be impaired; in fact, I might add, that at the present time (August 13th), some spikes that were fully out in the first week of July look better than they did three weeks ago. As regards hardiness it may also be placed in the same list as the Pampas Grass, for some of our plants have occupied the same position, and that a fully exposed one, since 1866, without protection of any kind, the situation being somewhat dry—too much so, I believe, for well-developed spikes or plumes, and yet even in that position it is but little inferior to the best examples of the Pampas Grass. Its flower spikes may not be quite so numerous, as I have not been able to count more than forty on one plant. I strongly advise those who have not yet grown this Grass to procure it, and whether as a single object on the lawn, or in front of a shrubbery, its appearance when in bloom is equally graceful.—J. Renou.

PLANTS AS DOCTORS.

In addition to the pleasure that may be derived from floriculture, the sanitary value of flowers and plants is a feature of the subject so important as to call for special mention. It was known many years ago that ozone is one of the forms in which oxygen exists in the air, and that it possesses extraordinary powers as an oxidant, disinfectant, and deodoriser. Now, one of the most important of late discoveries in chemistry is that made by Professor Mantegazza, of Pavia, to the effect that ozone is generated in immense quantities by all plants and flowers possessing green leaves and aromatic odours. Hyacinths, Mignonette, Heliotrope, Lemon, Mint, Lavender, Narcissus, Cherry, Laurel, and the like all throw off ozone largely on exposure to the sun's rays; and so powerful is this great atmospheric purifier that it is the belief of chemists that whole districts can be redeemed from the deadly malaria which now infests them, by simply covering them with aromatic vegetation.

The bearing of this upon flower culture in our large cities is also very important. Experiments have proved that the air of cities contains less ozone than that of the surrounding country, and the thickly inhabited parts of cities less than the more sparsely built, or than the parks and open squares. Plants and flowers and green trees can alone restore the balance; so that every little flower-plot is not merely a thing of beauty while it lasts, but has a direct and beneficial influence upon the health of the neighbourhood in which it is found. Surely, it is a beautiful provision of Nature that something which is at once the most dainty of occupations and most delightful of amusements should be intimately bound up with the solution of problems so important as the health of our cities and the redemption of fever-infected districts in the country.—(*Appleton's Journal*.)

NOTES AND GLEANINGS.

We have received an official extract from the *London Gazette* of the 26th of August, which records the list of awards in the British section of the VIENNA UNIVERSAL EXHIBITION, and are well pleased to see that in Group 2, "Agriculture, Horticulture, and Forestry," Messrs. Carter & Co., High Holborn; Gibbs & Co., Mark Lane; Lloyd, Grantham; Sutton and Sons, Reading, had awarded to them medals of the highest class for "Progress," when their productions are compared with those of previous exhibitions.

A CURIOUS contribution to the literature of that excellent and mournful root, the ONION, comes from a little French village. The inhabitants of this place regularly perform a ceremony without which they hold the general well-being of the said vegetable could not be secured. This ceremony consists in the gorgeously-attired people of the village dancing in a circle, holding hands; and is said not only to make the Onion healthy, but to impart to it a fascinating roundness and perfection of form. The festival continues eight days, and is accounted generally pleasant and profitable.—(*New York Tribune*.)

A WRITER of experience states that he has found no trees that succeed so well by the seaside as PINUS INSIGNIS and the CORSICAN PINE. He has plants of the latter growing and

flourishing where the Sycamore and Beech, twenty years planted, never could even get into respectable bushes. The Pines named also have the advantage that hares and rabbits will not touch them, and the wood of the Corsican Pine is very valuable, while that of the Austrian, another great tree for the seaside, is worth but little. He has also succeeded in growing the Aleppo Pine (*Pinus halepensis*), from seeds brought from the Isle of St. Marguerite, opposite Cannes, where this Pine grows with its roots down to the salt water, and where it withstands the most terrific sea gales without seeming a bit the worse for them.—(*New York Tribune*.)

WORK FOR THE WEEK.

KITCHEN GARDEN.

A GREAT change has taken place in the weather, and frequent showers have greatly refreshed vegetation; therefore, now is the time to be busy with the hoe in earthing-up the various crops that require it, and also for planting those that from the dry state of the weather could not be planted out before. Prepare ground for spring Cabbage, and also for hand-glass Cauliflowers. Where Broccoli has not been sufficiently planted, large plants may yet be put out with success. They should be laid-in with a spade in a slanting direction; earth-up the advancing crops. Earth-up *Cardoons* for blanching in favourable weather. Continue to earth-up the early crops of *Celery* carefully to the tops of the plants, and they should always be dry at the time. The crops that have not yet been earthed-up should be kept very moist. Those *Cucumbers* in frames which it is intended to keep in bearing, should be covered-up when the nights are cold, the beds should also be newly lined. Continue to blanch *Endive*, and plant-out from successional sowings. Another sowing of the various sorts of *Lettuces* may be made. It is always better to have a superfluity in the spring than otherwise. *Mushroom* beds may now be made, either in sheds or in the open air. Thin the summer sowings of *Parsley* when in a young state, the plants will then gain strength to stand the winter. A portion of the spring sowing should be cut down. Gather the fruit of *Tomatoes* as it ripens, remove all the shoots that shade it, also some of the leaves.

FRUIT GARDEN.

As soon as the fruit is gathered clear away the old wood from Raspberries, also any extra shoots left at the summer thinning; tie the young shoots to stakes or rails, and if very long pinch-off their points, but do not shorten them too much now, as from the exposure of the pith a severe winter would be apt to make the canes shorter than you wish to have them at spring pruning. Fork-in a coat of manure, for, like the Vine, the Raspberry delights in rich feeding. If the above course be adopted you will be rewarded with well-ripened prominent buds for next season. Vines, attend to the directions previously given, thin-out all useless shoots, remove leaves where they are too thick, and where you do not want the buds in the axils for next season; but while exposing the bunches to more light, be careful to leave a sufficiency of leaves to shade from the direct influence of the sun's rays. Pay attention to the ripening fruit, gather it immediately it is ripe, and use every means of destroying insects which attack it. Where wasps are numerous bottles half-filled with some sweetened liquor should be hung about the walls. Continue to plant-out Strawberries, good strong runners of which may now be procured from the old beds.

FLOWER GARDEN.

Now that the weather is favourable it will be as well, where such convenience is required for the preservation of the more hardy of the tender plants through the winter, that provision be made for the formation of a good-sized temporary pit. Turves of dry peat, where they can be readily procured, are as good a material as can be used, but in the absence of them, turves of a loamy nature will be found a good substitute. The situation where the pits are built should be dry and sheltered, and the turf walls should not be less than 15 inches thick. Make the walls firm as you proceed, and when of the requisite height dress the sides off square and neat with an old hay-knife, or some other instrument. The turves of the top layer must be secured in their places by driving pegs through into the lower ones; and if the whole of the walls of the pit could be covered with patent asphalt roofing, which is a very inexpensive material, they would be rendered doubly secure, as so long as they are dry there is no fear of frost penetrating; but if they become wet, which the asphalt would prevent, their protective influences would be greatly deteriorated.

GREENHOUSE AND CONSERVATORY.

The management of the conservatory will be more uniform now than in summer. No syringing will be necessary unless for a plant here and there which may require it for keeping down insects. Where blinds have been in use to keep off the sun they cannot yet be dispensed with altogether, but use as little as possible from this time. Get all the watering done in the

morning, and give no more of it to any of the stove plants which are brought into this house for their flowers, than just enough to keep them from drooping their leaves. The few species of Lantana which we cultivate in this country, are well suited for flowering in this house in the summer and through the autumn, and there is no doubt some kinds of them would interbreed and make fine hybrids. There are between forty and fifty sorts of Lantanas in the Berlin Botanic Garden, many of which, no doubt, would be welcome in this country, and might be easily procured through the nurserymen. The old *Turnera elegans* is a very useful and gay plant, it flowers from April to October in the conservatory, and even out of doors in summer, but it requires a house rather warmer than a greenhouse in winter, and is the first to go off in damp winters. Young plants of it in small pots well drained and filled with sandy loam only, might now be put in a spare Melon frame to ripen them off. When they have filled the pots with roots harden them by admitting plenty of air. In winter place them on a shelf near the glass in a cool part of the stove.

STOVE.

The beginning of September, when night fires will be necessary in dull or cold weather, is a critical time for stove plants. The house must now be kept more close, air being given in the middle of the day. An increase of heat by artificial means is more likely to retard the ripening of plants now than if they were left cool and dry. The thermometer should not, however, be allowed to fall below 60° for the next six weeks, and during this time it is of as much importance to keep the atmosphere of the house dry as in the dead of winter. These rules, however, do not apply to plants whose habit is to grow in winter, as in the case of many bulbs, Orchids, and a few other plants. *Clerodendron splendens* is one which grows late in the autumn, and may now be encouraged; it will flower for a long time in winter, and established plants of it should not be forced to grow in the spring or early summer. Like some other plants, it requires a long time of rest after flowering. Prune and tie-in the climbing plants, and prepare for those plants which have been placed in the conservatory.

PITS AND FRAMES.

Keep up a gentle heat in the cutting frames; give air to allow the cuttings to dry; pot-off seedling plants, and also rooted cuttings. Always use very small pots for the purpose at this season of the year.

FRUIT ROOM.

Put this in good order for the reception of fruit, and gather not only the finest wall fruit as it ripens, but also some favourite Apples and Pears, so that by sweating part of them by dry, sweet hay, you will be enabled to prolong their season. Keep the fruit room cool and airy in order to allow of the escape of moisture given off by the fruit, which is considerable for a few weeks at first. Look over the fruit remaining out of doors frequently, and gather it as it becomes fit. Also examine that stored in the fruit-room, as there will occasionally be found a few decaying for some weeks after housing, and these should be removed as soon as possible.—W. KEANE.

DOINGS OF THE LAST WEEK.

We have had hazy weather accompanied by drizzling rains—weather especially favourable for the spread of the Potato disease, and, as a consequence, it is showing itself in the haulm, which is much affected in places. No diseased tubers have as yet been found.

FRUIT AND KITCHEN GARDEN.

The young *Strawberry* plants which were put out early in August are making rapid progress, consequently they produce runners freely; these are not allowed to remain, but are pinched off once a-week. A large crop of weeds was springing up between the rows, and the Dutch hoe, run through amongst them, loosened the surface, which had become caked by the heavy rains, and the weeds were thus destroyed. We saved a small bed of old plants, which were treated in the following manner: All outside leaves and runners were cut away from the plants, the ground had become quite matted with runners and the leaves of the old plants; these were cut up with a draw-hoe. The ground was then raked over with a small rake, and a dressing of decayed manure applied. Except hoeing to keep down weeds, no other attention is needed.

We are attentive to gathering Apples and Pears as they ripen. It is better to gather Pears before they become quite ripe, and where the collection is limited, two or three gatherings at intervals of five or six days will prolong the season of certain sorts. Of Williams's Bon Chretien, than which there is no better bearer as a standard, bush, or pyramid, the first gathering has just been made. This fine Pear is mealy, and has a disagreeable flavour if allowed to remain on the trees until the fruit is quite ripe.

Keep the hoe at work amongst all kitchen-garden crops, such as Sprouts, Broccoli and Coleworts. Cleared off Pea haulm after the peas had been gathered, and dug over the ground.

This takes very little more time than it does to hoe and rake the ground, and it is, besides, better for succeeding crops.

CONSERVATORY AND PLANT STOVE.

In these structures we admit more air, and do not shade so closely, as it is highly desirable to have the wood well ripened for the winter. We have repotted all Ferns requiring it, and small specimens of hardwooded stove plants have had a final shift for the season. Such subjects as *Ixoras*, *Gardenias*, *Dipladenias*, &c., should not be stunted for pot room in the earliest stages, if healthy handsome specimens are desired. We have been washing the leaves of Orchids and some other plants on which mealy bug had appeared; we use only clear rain water and soft soap. Training climbers in the conservatory, such as *Lapageria rosea* and *L. alba*. These are by far the best autumn-flowering greenhouse climbers, and under proper treatment they are of very free growth. One often sees them in an unhealthy condition, and on looking for the cause it will be found in the potting material used. Many persons pot them in turfy loam, or loam and peat mixed together, neither of which composts suits them. We have grown both varieties (and of the two *L. alba* is, perhaps, the stronger grower), for many years in turfy peat, and sand if the peat does not naturally contain enough; and the pots used should be large in proportion to the size of the plants. A good supply of water at the roots is essential; the leaves should likewise be freely syringed at least once a-day in summer. Under such treatment thick fleshy roots will be formed, and strong shoots as thick as a man's little finger will be thrown up from the base. Amateurs ought not to be deterred from purchasing this fine plant owing to its being difficult of cultivation; it is one of the easiest grown of plants treated as above.

Typing and Training Chrysanthemums.—We grow a great number of this useful winter flower to fill our large orchard house. The largest proportion are grown specially to produce fine flowers; we pot three plants in an 11-inch pot, or two in a 9-inch pot; each plant will bear from six to nine flowers, and the treatment requisite to produce these causes the plants to grow very tall—from 5 to 8 feet. They require very stout sticks, otherwise the shoots are damaged by the wind. Dwarf-trained specimens, both of the large-flowered and Pompon sections, are now being trained; the shoots have to be much bent to get the plants into a dwarf character, but it is bad management if the bent shoots are conspicuous when the plant is in flower. A handsome specimen fit for the exhibition-table should present a rounded surface of foliage and flowers. The flowers, standing well up above the leaves, should be of large size and well-shaped, as one good flower on a specimen plant is worth a dozen inferior ones. As soon as the buds were visible we watered with weak liquid manure water. A pinch of guano in the water-pot suits them well.

FRUIT AND FORCING HOUSES.

Pinerias.—We have a fair supply of nice fruit from our small houses, and it is of good quality, a sure sign of which is that it keeps well after it is ripe. Some Queens cut and laid in a box in the fruit room, which box was very nearly air-tight, were quite as good at the end of fourteen days as when they were cut. We have done nothing to the plants except attending to watering them, and this in the autumn requires much care; it is better to give them too little moisture rather than too much.

Vinerias.—In the late houses a few berries had become cracked very slightly at the apex; these were cut out, as they soon mould, and if not attended to will damage the sound berries. We have not used any artificial heat this year to ripen the fruit, not even in the Muscat house, and the fruit is, we think, as good or perhaps better than we ever had it when more fuel was consumed. Alicante, Mrs. Pince's Black Muscat, and Muscat of Alexandria are all that can be desired. Gros Guillaume has not ripened so well, but if we find the first-named three do succeed perfectly in ordinary seasons without any artificial heat, the last will be cut out, as it is not first-rate in every respect. The Vines make but little growth now, and little attention has been required as regards pinching and training the shoots. Pot Vines, which had made good growth in one of the Pine houses, have been turned out of doors; we like to see the wood quite brown and hard before turning them out. A sure sign of the wood being ripe is the leaves at the base taking on an autumn tint. Now is a good time to bud Vines. Inarching is best done in summer, when the wood is green and the Vine in full growth. Grafting should be performed when the Vines start into growth in the spring.

Strawberries in Pots.—The latest of these are now being potted. The sorts are mostly new; and it may be noticed here that when a new sort is introduced it has every justice done it. A large number of plants, say fifty, more or less, are planted out, and a similar number are grown in pots, and compared with the old-established sorts, and very few stand the test of this mode of comparison. Mr. C. Turner asks in last week's Journal how it is we never meet with the varieties raised by Dr. Roden. Early Peonie, Duke of Edinburgh, and I think another of his varieties were tested here, and not being of any great merit were thrown out. It is late now to pot them, but

we shall obtain from six to twelve good fruit from each plant—enough to test their merits. We have a great many sorts on trial this year, and should any possess distinct, novel, and good features, we shall be glad to recommend them. All our runners were later this year, but the earliest are now making good plants. We look the plants over once a week to destroy a small green caterpillar which feeds upon and disfigures the leaves, and also to pinch-off the runners, which are freely produced.

ORCHARD HOUSE.

We can only repeat what was stated last week. We have abundant supplies of Peaches, Nectarines, Pears, and Plums. It is astonishing what can be done to supply a succession of fruit from pot trees. This system of culture has its advantages and disadvantages. It is true that fruit of the very best quality, and size with quality, can be obtained; a large number of varieties can be grown, and by removing some of the trees out of doors as soon as the fruit is set a longer succession can be obtained. There is, on the other hand, one serious drawback, and it is of no use disguising the fact, that they require unremitting attention as regards watering, and when the trees are in full growth an hour or two of neglect will ruin them for the season. Prince and Princess of Wales Peaches are now coming in, as well as the later Nectarines, such as Albert and Rivers' Victoria. We continue to pot any trees that have been cleared of their fruit.—J. DOUGLAS.

TRADE CATALOGUES RECEIVED.

Charles Turner, Royal Nurseries, Slough.—*Catalogue of Hyacinths, Narcissus, Tulips, &c.*

T. S. Ware, Hale Farm Nurseries, Tottenham.—*Catalogue of Bulbs and Hardy Tuberos-rooted Plants.*

Carter, Dunnett, & Beale, 237 and 238, High Holborn, London, W.C.—*Carter's Catalogue of Flower Roots, Fruit Trees, and Roses.*

W. Clibran & Son, Oldfield Nursery, Altrincham, Cheshire.—*Catalogue of Dutch Flower Roots, &c.*

Dickson & Robinson, 23, Market Place, Manchester.—*Catalogue of Hyacinths and other Dutch and French Flowering Bulbs.*

W. Rollisson & Sons, The Nurseries, Tooting, London, S.W.—*Supplement of New, Choice, and Popular Plants to General Catalogue, 1873-74.*

John Harrison, Darlington.—*Catalogue of Flower Roots.*

George Poulton, Angel Road, Edmonton, London.—*Catalogue of Dutch Flower Roots, Vegetable and Flower Seeds, &c.*

William Ramsey, Joyning's Nursery, Waltham Cross, London, N.—*List of Bulbs, Hardy Plants, Roses, &c.*

TO CORRESPONDENTS.

* * We request that no one will write privately to any of the correspondents of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed *solely* to *The Editors of the Journal of Horticulture, &c., 171, Fleet Street, London, E.C.*

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

N.B.—Many questions must remain unanswered until next week.

BOOKS (*J. G.*).—Johnson's "British Ferns" enables in plain language anyone to detect the name of a Fern without a magnifier. You can have it free by post if you enclose 3s. 9d. in stamps with your address. (S. S.).—The "Cottage Gardener's Dictionary" will furnish you with information. Let us warn you that your suspicions are not justified by our experience, and you will find that a usual mode of rendering anyone untrustworthy is to show him that you mistrust him.

SEEDLING GERANIUM (*C. la Bota*).—The petals were all shed, but we could perceive that the tips and entire truss are large and the scarlet very bright.

FRUIT FOR WEST WALL (*G. M. E.*).—As you reject Pears you may have Black Tartarian, Bigarreau, and Belle Aigle Cherries. The last-named variety has the great merit of not being touched by either birds or wasps, and hangs very late.

BOTANICAL DRAWING (*Mrs. L. G.*).—Your query will be answered by the following extract from Burbridge's "Art of Botanical Drawing." We advise all who wish to draw plants and flowers correctly to buy the book. Its price is but one shilling. It is well illustrated. "In making botanical drawings everything should be clearly shown, and there must be as much variety in the position of the leaves and flowers as possible. Many leaves are smooth or glabrous in front and shaggy behind, this peculiarity must be correctly represented. In defining the margins of woolly leaves or leaves of great substance, the student will find a soft pencil give a much better effect than a very hard one, while a hard pencil is best for the definite outlines of flowers and their dissections. Be particularly careful to show the petioles of some of the leaves, and carefully note whether the leaves are arranged alternately, opposite, ver-

ticillate or distichous, and also note if they are furnished with stipules or other appendages, as hairs, warts, or glands on the petiole or lamina; if there is evidence of these being present, carefully examine them through your pocket lens (an indispensable companion to the botanical student and draughtsman alike), and if their being borne by the species is unusual, carefully represent them in your drawing, magnified when necessary, so as to be easily observed and noted."

SEEDS OF FLANDERS SPINACH (*H. R. Q.*).—The seeds are smooth, and any sent to you with prickles are either of another variety or a cross-bred. Mr. Keane in this Journal said that "the seeds are nearly round and smooth," which is totally distinct from "very prickly." In the "Bon Jardinier," the best of authorities, the Flanders Spinach (*Epinard de Flandre*, is especially described as one of the smooth-seeded kinds; and so it is by another good authority. Mr. Thompson, in his "Gardener's Assistant," who adds—"Leaves large, hastate, from 6 to 8 inches in breadth." Grow plants from the seed sent to you, and if they do not agree with this description give the seedsman "the right end of the stick."

FUCHSIA LEAVES BROWNED (*R. S. S.*).—The Fuchsia leaves you sent have shown no trace of being now or lately attacked with insects, and we should therefore consider the plants have suffered from want of water and the bright weather. The plants not having been shaded may have been the cause of the mischief.

INSECTS ON GENISTA (*Idem*).—It is an aphid, which may be destroyed by syringing with a solution of soft soap 2 ozs. to a gallon of water, adding to each gallon a pint and a half of tobacco juice. It is best applied in the evening of a dry calm day. The worst-infested shoots should be dipped in the solution.

GRASS IN STRAWBERRY BEDS (*P. H.*).—It is next to impossible to eradicate grass from the beds without seriously injuring the plants; and we can offer no better advice than to pull it out, which will destroy all the kinds except those that have creeping stems, and for these there is no remedy but to fork out the roots, and that would entail the destruction of the Strawberries. We should continue to pull up the grass. If it is Couch or any other grass with creeping underground stems, you may, by pulling them up as they appear, keep them in check; but the only effectual remedy will be to destroy the beds and thoroughly clear the ground of the roots by digging and forking these out. After cleaning, the ground would need trenching; and well manuring. See that the ground for the new beds is thoroughly cleared of the roots of the grass, and trenched and well manured.

CARELLIANS ON CAULIFLOWERS (*Idem*).—The best remedy is hand-picking, which you say you have practised without making much difference. Persist in it, and it will soon be found that the plants will be freed; or you may dust the plants with quicklime, choosing early in-morning, or just before dark in the evening.

ANNUALS FOR FLOWERING IN HOUSE (*Idem*).—You may sow now in pots the following annuals:—*Alyssum maritimum*, *Calandrinia umbellata*, *Campanula pentagona*, *Clarkia pulchella* var. *inarta* flore-pleno, *Collinsia bart-siefolia*, *C. bicolor*, *Eryimmum arkansanum*, *Enchardidium grandiflorum*, *Gilia tricolor*, *Gypsophila muralis*, *Kunzia amelloides*, *Leptosiphon densiflorus*, *Lupinus nanus*, *Mignonette*, *Neon phila insignis*, *N. atomaria*, *Platystemon californicus*, *Sap-naria calabrca*, *Silene pendula ruberrima*, *Venus's Looking-glass*, and *Virginian Stock*. They will need to have the protection of a frame in winter, or a position in-doors.

REMOVING OLD STEMS OF VINES (*Ten-years Subscriber*).—Cut away the old rods as soon as the Grapes are cut, or as early after this as you can. The manure on the border would not cause the Grapes to shank. Probably your crop is heavy, hence the want of colour; and the shanking may be due to the roots having gone deep into an outside border, and the roots not supplying sap to meet the demands of the branches.

VARIETIES OF VEGETABLES FOR EXHIBITION (*Idem*).—Of the varieties named in your list we select Marquis of Lorne Cucumber, Kidney Potatoes, Canadian Wonder Kidney Bean, Intermediate Carrot, Turnips, Nasby Mammoth Onion, Cauliflowers, Excel-sior Tomato, Mammoth Celery, and Custard Marrow. We should have liked you lot better if you had had Peas.

BLACKBERRY PLANTATION (*J. B. N.*).—We presume you refer to an answer to a correspondent in our number for December 5th, 1872. The address you require is Messrs. Rivers & Son, Sawbridgeworth.

VINE MILDEWED (*D. H.*).—It is very difficult to successfully combat mildew out of doors. Mix 8ozs. of soft soap and 8ozs. of flowers of sulphur in four gallons of boiling rain water, and thoroughly syringe the Vine with it. You should have some person stirring the water while you are using it. Every part affected must be wetted. If you fail to do this you will also fail to destroy the mildew. Many cures fail of the desired effect because they are not properly applied.

GRAPES ATTACKED BY BLISTER-BLE FLIES (*Subscriber*).—We have tried to protect our Grapes from these flies in many ways, but can only recommend one of them, and that is to hang gauze of some sort over the ventilators at the front and back of the house. It is of no use putting the bunches in bags, it will only spoil them.

PEAR LEAVES BLISTERED (*J. J.*).—We have seen leaves similarly affected when the roots were in a stiff, undrained clay soil. It is also caused by the sun acting upon the leaves after cold nights. If your trees are in unsuitable soil, dig round the roots and add turfy loam.

CELERY AND VEGETABLE MARROW CULTURE (*R. D. W.*).—Celery may be grown for many years upon the same ground if it is well manured after each crop. Remove the plants from the seed beds or pans as soon as they are large enough to handle, pricking them out 3 inches apart into a border of rich light soil, or a prepared bed of one half old leaf mould or rotten manure, and one half garden soil, with a little road grit or sand, well mixed. Water freely, and the plants will soon be ready for the trenches. Vegetable Marrows do well in any rich soil, or on a manure heap; in your case we should prefer the manure heap, or plant on a bed raised a foot or two above the common level, and you will have no more decayed plants. To obtain good Cucumber seed, impregnate the female flowers with the pollen of the male flowers, and let the fruit remain on the plant till it turns yellow. The seed, and all other of a similar character, should be kept dry, as damp spoils it.

CUCUMBERS YELLOW AT THE POINTS (*Another Gardener*).—We think you are killing your plant with kindness. The cause of the fruit turning yellow at the points is the atmosphere of the frame being too moist and the soil too wet. Do not give any water as long as the leaves do not flag, and we think you will have Cucumbers this month. We find in June frames that this year Cucumbers have required very little water, ours damping-off as yours

did; but we discontinued watering, admitted a little air at night, and watered only when the plants flagged. They have done well, a little shade being given from bright sun.

INSECTS ON GESNERAS AND GLOXINIAS (Cops).—There were some thrips on the leaves when they reached us. There was also an aphid. The atmosphere has been too dry and bright; slight shade from bright sun and a moister atmosphere would have been desirable, as the leaves are not only infested with insects, but slightly scorched, probably from the sun's rays falling powerfully on them whilst wet, or it may be due to the atmosphere being dry and the evaporation from the leaves excessive. For the insects fumigate the house on two successive evenings with tobacco, shutting the house up close, and wetting the floor and other surfaces, but keeping the foliage of the plants dry. These plants are easily injured in their foliage by strong fumigations, therefore only fumigate moderately.

VARIETIES OF STRAWBERRIES. L. C.—You should plant say nine sorts and select those most suitable for your garden. Black Prince is earliest, followed by Keen's Seedling, Sir J. Paxton, President, Premier, British Queen, Mr. Badelyffe, La Constante, and Pignore Late Pine.

USE OF SEWAGE (G. M. H.).—You will see what is said on our first page to-day. All your questions, and more, you will find answered in "Manures for the Man," which you can have free by post from our office if you enclose 3*d.* in stamp with your address.

NAMES OF FRUIT (H. B.).—Send the specimens carriage paid addressed to the Editors at our office, and we will name them. It must, however, be understood that we cannot undertake the labour of naming large hamperfuls at a time.

NAMES OF PLANTS (J. K. Hartlbury).—We cannot name varieties of florists' flowers, nor any plant from leaves only. (*Clara Subscriber*).—We cannot name plants from such scraps. (*Anne and Odors*).—We have received boxes, some without senders' names, and all with such numerous specimens that we could not examine them. (*C. F.*).—Your specimen is very imperfect; we believe it to be *Campanula trachelium*.

POULTRY, BEE, AND PIGEON CHRONICLE.

PUBLISHING JUDGES' NAMES.

I WAS rather glad to see this subject discussed again in the pages of the Journal, as I think it of some importance to the well-being of the fancy. I am not at present personally interested in the question either way, utter want of time preventing me from making any attempt to exhibit, except at the few great shows at the close of the year, at which, though we often do not know exactly who will judge our birds, we do know that competent parties are pretty sure to be appointed; but I have had various complaints poured into my ears of late concerning the awards at certain local exhibitions, which show things to be in a far from satisfactory condition. It is not perhaps very easy to take a beating good-temperedly, even when one is forced to acknowledge that the winning birds are really better than one's own; but when anyone who understands his breed knows and feels that his birds have been unjustly displaced in favour of birds which are not superior, it is only natural to expect that his feelings will be bitter indeed. Even then, if the mistake has been made by a sterling good judge, who has the sense to own it as a mistake which—perhaps from want of time, or bad light, or other reason—he could not avoid, and you know he has honestly done his best with the opportunities he had, you can, after the first momentary vexation, put up with the mishap; but when it is felt that such mistakes have been the result of sheer incompetence, directly chargeable to the committee of the show, I do not wonder that heart-burnings and dissatisfaction find open expression, as I know on many occasions lately to have been the case.

I wish, however, chiefly to point out two advantages which it seems to me would follow from the names of the judges being published in the schedule. The differences of opinion of certain judges are well known, and have been remarked upon already; for instance, I could name two who differ considerably as to what is the proper ground colour of a Gold-spangled Hamburg, and another, not deservedly respected, whose partiality to an almost bare leg in Asiatics, rather than to what most breeders now like—viz., a nice, full, but soft curling hack, is also notorious. I am not, be it remembered, finding fault with these gentlemen; my object is not at all personal, and they have as good a right to their own opinions as I have to mine, and to judge consistently with them. What I wish to point out is the obvious inconvenience and injustice to themselves which arises from the present system. Supposing, for instance, Mr. A has been winning at almost every show with his Cochins, so that it is well known he has about the best birds of the season, and such a judge as I have hinted at, dishing the "feather" of these birds, throws them out; the consequence is that the judge is branded as incompetent by men who know nothing of his breed, but only see that he passes by birds the usual judges consider standards. But most breeders of Asiatics have various kinds of leg feather in their yards, and had it been known that such and such a judge would be appointed, they could have selected a pen of birds, first-class in quality, of such a leg feather as would have suited him. The advantage would be not so much to Mr. A, but that the violent shock to public opinion would be avoided, and confidence in the judge maintained.

I cannot see that selecting pens to suit the views of judges is at all illegitimate. So long as they judge at all consistently, they have a right to do so by what they think correct standards, and also by discouraging measures to check any strong tendency they may think they perceive towards a given fault. There can be no harm in such consistent opinions becoming known, if only they are known alike and openly to all; and it is far worse as happens now, for a very few only to know who is going to judge, and thus have an advantage over the rest.

But what in my judgment would be a still greater benefit would follow. Committees, having to engage judges in time to put in their schedules, would be compelled to make early arrangements for judging; and even if disappointed of the man they first applied to, would still have ample time to engage some other competent person. As it is, they perhaps leave it till only a week or two before the show, and then write off in a hurry to, say, Mr. Hewitt. He is engaged. Then they apply to Mr. Teebay. He is engaged too. They try someone else; and at last are obliged to be content with someone who would never have been even thought of, had it not been left till too late to get anyone else. And not only so, but many clashing dates would thus be prevented. For suppose a committee write to a well-known judge and ask him if they may count upon him to judge at A—, on the 15th November. He writes back, perhaps, "I would gladly come, but I am engaged to judge at B— on the same day." The question at once arises (the schedule not being yet issued), whether the A— committee had not better alter their date to avoid clashing with B—, and thus they very likely would avoid an injurious competition, and get their wished-for judge after all.

I have never seen one good argument against such a course. If a judge is at all accessible to private letters, supposing him known beforehand, he lacks the very first element of the judicial office—integrity, and the sooner he is disposed the better. Should he be troubled with any kind of letters, he may justifiably leave them unanswered if he chooses. In simple fact, there are dozens of shows yearly, which it is well understood will be judged by the same parties yearly if nothing absolutely prevents; and I am quite sure these shows and the judges who officiate there stand at least as far above suspicion as any others whose judges are not known.

I hope the correspondence will draw out a few more opinions upon the subject. I do not mean necessarily all on one side. If there are any good reasons why the names should not be published, I am sure we should all like to hear them, and that exhibitors as a body are open to conviction.—L. WRIGHT.

EXHIBITION FRAUDS.

TWO letters have recently appeared in your Journal strongly condemning the practice of persons exhibiting what they have "bought," and Mr. Paul in effect states that no one should be allowed to exhibit plants, flowers, or such-like unless they were actually "cultivated," and brought to their true state of excellence by the "skill and industry" of the exhibitor; but if this rule were made law it would practically put a stop to all shows of whatever sort or kind. A rule that applied to an exhibition of the vegetable kingdom must, by a party of reasoning, apply to an exhibition of the animal kingdom; and therefore if a person who exhibits flowers he has bought is to be considered as wanting in morality, and guilty of a fraud, and to be held up to general execration, so also must be he who buys "a pretaking animal" at one show and exhibits it afterwards at others as his own, and yet this is the rule rather than the exception. The great majority of the horses, dogs, poultry, &c., exhibited at our present shows, were never bred nor reared by the exhibitors, but simply purchased, or perhaps even only borrowed for the occasion. "Skill and industry" have had nothing to do with the matter; it has been merely a question of pounds, shillings, and pence; and therefore if an exhibitor is considered perfectly justified by all rules and precedents in exhibiting and taking a prize at a show with some animal which he has just purchased, why should an exhibitor be so severely condemned for doing exactly the same thing with plants, flowers, &c.? If the prize were for "the best roses to be grown by the exhibitor," "bought roses" would be of course disqualified, and in a country show everybody would know whether they were bought or not; but if simply for "the best roses," no one could be considered guilty of fraud because he himself had not grown what he exhibited.—L. C. C.

POULTRY ON AMERICAN FARMS.

THE careful manager of a full stock of all the varieties comprised in a respectable establishment, will be particular to place the Turkeys so that they cannot worry the common hens; the Geese so that they will not tyrannise over the Ducks, and so on with the rest, at the same time preventing the breeding portion from being annoyed by their own species; for the young broods do best when away from the regular haunts of the old fowls.

At the present moment I know of two places where poultry

have been raised and are being raised. They are within sight of each other. The first started with eighty common hens, six Turkey hens, six Guinea hens, six Muscovy Ducks, and forty pairs of old Pigeons. The management at this place was about as follows:—The women walked around every morning and evening calling "Biddy! Biddy! chick! chick!" throwing first corn and then wetted meal, never looking to the right or left to see whether old hens, Turkeys, or Guinea fowls ate up the food; and the broods of young chickens got next to none. The eggs were looked up two or three times a week, and sometimes not so often; every species laid, and were set in hay-mows, mangers, &c., and commenced sitting on about thirteen eggs; but others would be laid to them till twenty would be there, and some would be put under other hens. The result of this has been about three dozen eggs per week, besides what have been broken and spoiled by the general casualties attending the situation; about eighty chickens from at least fifty sitting hens, two or three hatchlings making up a brood; eight young Turkeys from the six old hens, and Guinea birds, &c., in proportion. The Pigeons do the best, yet the eighty old Pigeons have only about twenty nests, and those and the floor of their room is 3 inches or more thick with dried dung; and the floor of the room has as many nests as the Pigeons can agree upon. In other buildings, those not likely to fight for a place in the crowded cote, find corners, &c., and bring forth young, giving a better return than the other feathered creatures.

The second place alluded to is a long way from being perfect, as the premises are not so convenient, there being no farm buildings, and consequently no shelter beyond where the fowls roost. This place had nearly as many common fowls, three Turkey hens, and twelve Ducks. These had nests made chiefly by placing old flour barrels about, and the young chickens were fed every two or three hours, from sunrise till they went to rest; eggs looked up every day; sitting hens' eggs all marked, and every one looked under each day; fowls never called, but old ones fed morning and evening, always at one time. Results not so good as might have been, as a fox took over forty, vermin and hawks more than that number, and a heavy thunderstorm drowned several Turkeys, &c. However, 320 chickens survive, or have been used for the table; thirty-seven young Turkeys and 102 Ducks; the eggs having averaged over ten dozen per week—fifteen dozen some weeks; the chickens sold made \$5 and \$6 per dozen, and the eggs twenty cents and upwards per dozen (forty cents at the start). The food consumed has been about the same at both places, the Pigeons being great eaters—from one and a half to two bushels of corn per week at each place. The range is unlimited at either place.—A WORKING FARMER.—(Rural New-Yorker.)

WHITBY POULTRY SHOW.

The fortieth annual gathering of the Whitby Agricultural Society was held on the 27th of August, and the day being fine the number of visitors was very large. The poultry pens were placed in single tier along two sides of the field.

Adult *Dorkings* were first on the list, and they were good, but the chickens of that variety were even better, the whole of both lots being of the Dark Grey variety. *Spanish* were a fair lot, but somewhat low in condition. Both adult and young *Cochins* were extremely good. Among the former a grand pair of Whites was first, closely pressed by a very large pen of Buffs. Buffs also won in the chickens. In adult *Brahmas* the winners were Dark, but a pen of Light birds fairly left all the Dark ones in the next class. *Game* do not require special notice. *Hamburghs* had six classes devoted to them, but the entries were few, though the winners in most cases left little to be desired. In the Gold-spangled class the competition was very close, the second losing only by a slight loss of colour on the bottom of the tail. The cup for the best pen in the Show was awarded to a pen of Silver-pencilled in the adult class, and these birds were in splendid bloom and perfect in all particulars. For *Game Bantams* the first prize was gained by Piles, and the second by Black Red chickens; and in the following class Black Rose-combed were first, and White second. In the Any other variety class Gold Polands were first, and Crève-Cœur second.

Aylesbury Ducks were well shown and good in all respects, and some of the birds were claimed at a very low rate. *Rouens* were also good but out of feather, especially in the adult class. The first-prize *Geese* were large White birds in the best possible trim, and the second were Toulouse of good quality.

The *Pigeon* prizes were small, and the birds not numerous, but there were some good birds, the first-prize White Pouters being a fine showy pair. Carriers were poor, but both Fantails and Jacobins contained some good specimens; the only other pair of great merit was of Spangled Ice Pigeons in the Variety class.

- DORRINGS.—1, J. White. 2, R. Smith, jun., Norton, Malton. *he*, Lady D. Woodthorpe, Whitby. *c*, A. Jackson, Great Broughton. *Chickens*—1, J. White, Warburton. 2, E. Barker, Stokesley. *he* and District Cup, J. Carr, Whitby. *he*, J. Watts, Barmotham.
SPANISH.—1, J. Powell, Bradford. 2, H. Beldon, Bingley. *c*, J. Booth, Lythe. *Chickens*—1, H. Beldon.

- COCHINS-CHINA.—1 and *phe*, G. H. Frocter, Darham. 2, H. Beldon. *c*, F. Horseman, Boroughbridge; H. Tomlinson, Birmingham; G. Holmes, Driffield. *Chickens*—1, G. H. Frocter. 2, H. Tomlinson, *he*, H. Beldon; D. & I. Betson, Whitby.
BRAHMA POOTRA.—1, J. F. Smith, Sheffield. 2, H. Beldon. *he*, F. Horseman. *Chickens*—1, H. Beldon. 2, J. Booth. *he*, W. Whiteley, Sheffield.
GAME.—*Black-boned* and *other Reds*—1, H. Beldon. 2, H. M. Julian, Hull. *c*, W. Wharton, Scarborough. *Any other variety*—1, H. M. Julian. *Chickens*—1, J. T. E. Statterthwaite, Castle Howard. 2, T. Pyson, Halifax. *c*, T. Peirson, Rosedale, Pickering.
HAMBURGH.—*Gold-spangled*—1, G. Holmes. 2, J. Rollinson, Lindley. *he*, H. Beldon; J. Rollinson. *Silver-spangled*—1, H. Beldon. 2, J. Rollinson. *he*, W. Dickson, Lythe; T. Tweedy, Thrusk. *Golden-pencilled*—1, H. Beldon. 2, T. H. Readman, Whitby. *he*, G. Holmes. *Silver-pencilled*—1 and Cup, H. Beldon. 2, G. Speedy. *he*, T. H. Readman.
HAMBURGH.—*Gold* or *Silver-spangled*—*Chickens*—1, H. Beldon. 2, G. Speedy. *Gold* or *Silver-pencilled*—*Chickens*—1, H. Beldon. 2, W. E. Clayton, Kettleby. *he*, D. Waller, Stokesley. *c*, J. Webster.
BANTAMS.—*Game*—1, G. Holmes. 2 and *he*, W. C. Dawson. *Any other variety*—1 and 2, H. Beldon. *he*, J. Watts. *c*, R. Henderson, Middlesborough; J. Russell, Whitby.
ANY OTHER VARIETY—1 and *phe*, H. Beldon. 2, T. P. Carver, Langthorpe, Boroughbridge. *he*, Mrs. Cooper. *c*, T. Peirson; W. J. Weverhill, Whitby; R. Ward, Whitby.
FARMYARD CROSS.—1, R. Smith, jun., 2, J. Ireland, Frodingham. *he*, J. Storry, Stokesley; G. Pounder, Kirby Moorside.
SELLING CLASS.—*Cock* and *Hen* or *Drake* and *Duck*—1, G. Urwin, Whitby (Buff Cochins). 2, E. Barker (Dorkings). 3, R. Smith, jun. *he*, T. P. Carver; J. Bassell (Silver-spangled Hamburghs). *c*, T. P. Carver; T. Dobson (Brahmas); Mrs. Stonehouse, Darhulm (Spanish).
DISTRICT CUP.—*Black-boned*, *Spanish*, *Cochins*, *Brakins*, or *French*—*Chickens*. 1, J. Carr. *Game*, *Hamburgh*, or *Bantam*—*Chickens*—1 and Local Cup, G. Speedy, Whitby. 2, J. Webster, Whitby. *he*, T. H. Readman; G. Speedy. *c*, J. Russell.
DUCKS.—*Aylesbury*—1, T. P. Carver. 2, Mrs. Stonehouse. *Ducklings*—1, T. Scar, Tingwick. 2, J. W. Storry. *he*, T. P. Carver. *c*, O. A. Young, Driffield. *Rouen*—1, G. Garbit, Sunnington. 2, T. M. Derry, Gedney, Wisbeach. *he*, Mrs. Welford, Roxby. *Ducklings*—1, Miss Jordan, Driffield. 2, G. Sadler, Boroughbridge. *Any other variety*—1, J. Watts. 2, G. Sadler. *he*, R. P. Clarkson, Farmyard Cross—1, Mrs. Welford.
GESE.—1, J. W. Storry. 2, O. A. Young. *he*, P. Bedlington, Whitby. *c*, W. Thompson, Lealholm. *Swans*—1.—Hudson, Malton. 2, W. Thompson. *c*, R. P. Clarkson.
TURKEYS.—1, T. P. Carver. 2, Mrs. W. Ward. *Poult*s—1 and 2, Mrs. W. Ward. *he*, J. Storry.
EXTRA STOCK.—1, M. Simpson, Whitby (Silver Pheasant).
PIGEONS.
POTTERS.—1, J. Blanchard, Great Driffield. 2, J. E. Crofts, Blyth, Workop. *he*, J. Kilpatrick, Whitby. *c*, T. Booth, Lythe.
TUMBLERS.—1, H. Yardley, Birmingham. 2, G. Pyman, Raithwaite. *c*, J. Acouley, Rosedale Abbey.
CARRIERS.—1, J. E. Crofts. 2, J. Acouley. *he*, G. Sadler.
FANTAILS.—1, J. F. Loversidge, 2, G. Pyman.
JACOBINS.—1, R. G. Sanders, Leven, Beverley. 2, S. & T. Denham, Pickering. *he*, J. Acouley; J. E. Crofts. *c*, H. Yardley.
TRUMPETERS.—1, J. E. Crofts. 2, J. H. Watkins, Hereford.
BARBS.—1, H. Yardley. 2, J. P. Fawcett, Whitby. *c*, J. E. Crofts.
ANY OTHER VARIETY.—1, J. E. Crofts. 2, J. H. Watkins. 3, J. Kilpatrick. *he*, J. Pyman; G. Sadler; J. Acouley (2); H. Yardley; J. Watts; T. Booth. *c*, J. E. Crofts; J. W. Hyde, Norton, Malton.
SELLING CLASS.—1, J. E. Crofts. 2, S. & T. Denham.
The Judge was Mr. E. Hutton, Pudsey.

CIRENCESTER POULTRY SHOW.

This was held in the Abbey Grounds on the 28th of August. The awards were:—

- DORKINGS.—1, Rev. E. Bartram, Berkhamstead. 2, S. Probert, Lostwithiel. *he*, T. C. Burnell, Mitcheliever. *c*, J. Watts, King's Heath.
SPANISH.—1, H. Feast. 2, E. W. Darby, Cirencester.
GAME.—*Black-boned* and *other Reds*—1, E. Winwood, Worcester. 2, G. S. Prentice, Ampney Crucis. *c*, E. S. Goodell, Stroud; J. Smith, Chesterton. *Any other variety*—1, E. Aykroyd, Whitehill. 2, E. Winwood.
BRAHMAS.—*Light*—1, E. Woodworth, Cheltenham. 2, Rev. N. J. Ridley, Newbury. *he*, J. Mitchell, Mosley. *c*, J. Hope, Fairford; T. A. Dean, Malden. *Dark*—1, Cup, and *c*, T. F. Ansdell, St. Helen's. *he*, H. Feast; J. Trinder, Cirencester.
BRAHMAS.—*Light* or *Dark*—*Chickens*—1, T. F. Ansdell. 2, W. Ford, Hamberstone. *he*, A. Gibson, Woodley; O. E. Cresswell, Bagshot; J. Turner, Bath; T. A. Dean, Malden. *c*, H. Feast. 2, E. Knorr, Bristol; W. Morris, Ross.
COCHINS.—*Light*—1, S. Probert. 2, R. S. Woodgate, Pembury. *he*, J. Bloodworth, Cheltenham. *Any other variety*—1, Mrs. Ainsop, Worcester. 2, T. F. Ansdell. *he*, H. Feast. *c*, E. Bloodworth.
HAMBURGH.—*Gold* or *Silver-spangled*—1, Mrs. G. M. Rolfs, The Hendre. 2, H. Feast. *c*, J. S. Maggs, Tetbury. *Gold* or *Silver-pencilled*—1, C. Bloodworth. 2, J. McConnell, Ewyas Harold. *he*, H. Feast.
FRENCH.—1, Rev. N. J. Ridley. 2, H. Feast.
GAME BANTAMS.—*Black* or *Brown Reds*—1, A. Ashley, Worcester. 2, E. Bony, Southampton. *c*, E. Bowly (2); R. Scammell, Hupperton; G. S. Prentice. *Any other variety*—1, J. Mayo, Gloucester. 2, A. Ashley. *he*, R. Smith, Cirencester. *c*, C. Simpson, Ampney Crucis.
SELLING CLASS.—1, Miss J. Milward, Newton St. Loe. 2, J. Croote, Heavittree. 3, H. Feast.
ANY OTHER VARIETY.—1, J. Croote. 2, C. Bloodworth. *c*, H. Feast; S. Probert, Lostwithiel. *Chickens*—1, Rev. R. W. Everett, Monmouth. 2, H. Feast. *he*, E. S. Goodell, Stroud; M. H. Sturt, Pewsey; C. Bloodworth (2); T. T. Cooper, Malwood; Viscountess Abingdon; F. F. Fowler, Plymouth. *c*, J. Watts; J. Turner; M. H. Sturt (2); J. S. Backland, Cradwell.
DUCKS.—*Rouen*—1, E. Ponting, Rodden Down. 2, G. Holloway, jun., Stroud. *he*, G. Key, Coates. *Aylesbury*—1, E. Bowly, Saldington. 2, J. S. Maggs. *he*, J. S. Maggs, Tetbury; H. Feast. *c*, G. Key, Coates; T. A. Dean. *Any other variety*—1 and 2, G. S. Sainsbury, Dizes. *c*, R. S. S. Woodgate, Pembury.
GESE.—1 and 2, A. M. Murphy, Cirencester.
TURKEYS.—1, Rev. N. J. Ridley, Newbury. 2, T. Porter, Baunton. *he* and *c*, W. Slater, Stratton.
FRASANT OR GUINEA FOWL.—1, L. D. Little. *he*, J. Cross, Rendcombe. *c*, D. Blackford, Cirencester. 1, L. D. Little, Driffield; W. Slater.
SWEETSTAKES.
BRAHMA.—*Light* or *Dark*—*Cock*—1 and Extra, T. F. Ansdell. 2, J. Turner. *GAME BANTAM*—*Cock*—1, E. Bowly. 2, A. Ashley, Worcester. 3, J. Habgood, Stratton.
PIGEONS.
CARRIERS.—1, P. B. Spencer, Hereford. 2, H. Yardley, Birmingham.
DRAGONS.—*Blue* or *Silver*—1, H. Yardley. 2, N. Cuss, Ampney Crucis. *c*, W. Lane, Hereford.
FANTAILS.—1, Miss J. Milward, Newton St. Loe. 2, H. Yardley. *c*, F. J. Lovridge, Newark.

ANTWERPS.—1, D. Blackford. 2, H. Yardley. *hc*, F. B. Bulley, Oxford; J. Croule (2).
 JACOBINS.—1, O. E. Cresswell, Bazshot. 2, J. Croule.
 OWLS.—1, E. Lee, Nantwich. 2, G. S. Prentice. *hc*, J. Croule; H. Yardley.
 TUMBLERS.—1, *any variety except Almonds*.—1, J. Croule. 2, H. Yardley.
 ANY OTHER VARIETY.—1, H. Yardley. 2, H. Stanley, Stroud. 1, Essex 2, P. R. Spencer, Hereford. *hc*, K. Barrett, Stroud; O. E. Cresswell; F. B. Bulley, Oxford (2). *c*, G. Holloway, jun.; J. Croule.
 SELLING CLASS.—1, E. F. Woodman, Cirencester. 2, P. R. Spencer. *c*, G. H. Gregory, Taunton; G. Holloway, jun.; J. Croule; T. A. Dean.
 JUDGE.—Mr. W. B. Tegetmeier, of London.

HALIFAX AND CALDER VALE POULTRY SHOW.

The meeting of the Halifax and Calder Vale Association was held on August 30th. This, one of the oldest of the Yorkshire agricultural societies, is very popular in the West Riding and Lancashire, and the day being fine there was an immense gathering of visitors. The management and arrangements were perfect, with the exception that the poultry and Pigeon pens were open both back and front, causing a draught not at all suitable for the birds, but we understand pens of a more modern type will be adopted in future. As is generally the case at the end of the season, the entries in both poultry and Pigeons were not large, but the quality was very high, especially in the case of the Pigeons, of which few birds were shown except by celebrated exhibitors.

We were surprised to find the adult poultry in such good plumage, some of them scarcely showing signs of moult, while, taken as a whole, the young birds were not so forward as we usually find at this time of year.

The class for adult *Spanish* was very good, and the cup for the best pen in the Show was awarded to the first-prize bird. Adult *Dorkings* were few but of fair quality, as were also the chickens. *Cochins* and *Brahmas* were well represented, and the *Game* classes good, which may be explained by the great encouragement offered to that variety. *Polish* were very good in both classes, and *Golden* won the first prize in each case. *Hamburgs* were good in all the classes, although some of them seemed to be rather overshadowed. There were no good *Game Bantams* with the exception of about two pens, but several of the Blacks were of fair quality, and the Variety class contained good birds throughout. The first prize went to Pekins, and the second to Silver Sebrights.

Aquatic birds were well represented in all classes, and the first-prize *Turkeys* were very large.

In the Selling class White *Cochins* were first, and Light *Brahmas* second.

Pigeons, as before stated, were of the highest quality, but in some classes the birds were out of feather and showed signs of fatigue. The whole of the birds in the first three classes were named, the first prize in *Pouter* cocks going to a handsome *Blue* in capital show, though not so long a bird as the second, which was a *White* one extremely neat but not in full blow. In *Hens*, a very large and perfect *White* was first, and this also won the cup for the best pen in the Show; it was in the highest possible show condition. In *Carrier* cocks the first prize went to a *Black*, and the second to a *Dun*; but the gem of the *Carrier* classes was the *Black hen* shown by Mr. Fulton. *Almonds* were a neat lot, and the competition close. The first prize went to the smallest and best-matched pair we have ever seen in the show-pen, the second being very high in head properties, but the cock somewhat dark. In *Tumblers* of any other kind the winners were both *Black Mottles*, *Kites* and *Splashes* being highly commended. The winning *Dragoons* were *Blue* and very good, but most of the others too flat in the skull. *Trumpeters* were all noticed and mostly of the foreign variety, the first prize going to an extraordinary pair of *Black Mottles*, and the second to *Blacks*. *Owls* were all foreign, but some of the best were out of feather, the winners being *Whites*. The winning *Turbits* were *Blue*, but with one exception the rest were not noteworthy. *Jacobins* for the most part were a little soiled, but the birds noticed were very good, the winners being *Red* and the highly commended birds *Yellow* and *Black*. The first-prize *Fantails* were an extraordinary pair, the tails being of immense size. In *Barbs* *Blacks* were first, and *Duns* second, and in head properties they were an extraordinary lot, but very few were in good condition. *Antwerps* were bad, scarcely one really good bird being shown. In the Variety class, Spangled *Swallows* were first and *Nuns* second, while a nice pair of plain-backed *Ice Pigeons* were highly commended.

There was a good display of eggs, the two winning dishes being large but not so sound in shell as some of the smaller lots; the latter point is of the utmost importance for success.

SPANISH.—1 and Cup, J. Leeming, Broughton, Preston. 2, J. Powell, Bradford. *hc*, H. Wilkinson, Early, Skipton; H. Beldon, Goutstock, Bingley. *Chickens*.—1, J. Leeming. 2, H. Beldon.
 DORKINGS.—1, J. Walker, Rochdale. 2, J. Robinson. *Chickens*.—1, T. Statter, Manchester. 2, J. R. Johnson.
 COCHINS.—1, C. W. Brierley, Middleton. 2, H. Beldon. *Chickens*.—1 and *hc*, A. Sedgwick, Keighley. 2, H. Beldon.
 BRAHMA POUCE.—1, B. Bowness, Newchurch. 2, H. Beldon. *hc*, A. H. Haigh, Lindley. *Chickens*.—1, J. H. Pickles, Birkdale, Southport. 2, H. Beldon. *hc*, J. H. Pickles. *c*, Carr, Walsden, Bingley; W. Whiteley.
 GAME.—*Black-headed Red*.—1, J. Fletcher, Stoneclough, Manchester. 2, T.

Bottonley, Shelf. *hc*, H. Beldon. *c*, R. Hemmings, Shelf. *Chickens*.—1, J. Fletcher. 2, Travis & Barton, Thurgoland, Sheffield.
 GAME.—*Brown-breasted and other Reds*.—1, C. W. Brierley. 2, J. Fletcher. *Chickens*.—1 and 2, W. T. Coates, Barnoldswick, Leeds. *hc*, W. Ormerod, Walsden, Burnham, *c*, J. Forth, Keighley.
 GAME.—*Duckwing Grey or Blue*.—1, J. Fletcher. 2, E. Aykroyd, Eccleshall. *Chickens*.—1, Travis & Barton. 2, J. Fletcher.
 GAME.—*Any variety*.—1 and 2, R. Walker, Gomersal. *Chickens*.—1, H. C. and W. J. Mason, Drighlington.
 POLANDS.—1 and 2, H. Beldon. *Chickens*.—1, J. Robinson, Garstang. 2, H. Beldon.
 HAMBURGS.—*Gold or Silver-spangled*.—1, H. Beldon. 2, J. Bowness, Newchurch. *hc*, J. Robinson. *Chickens*.—1, W. & E. Clayton, Rothley. 2, J. Robinson. *hc*, J. Robinson; J. Bowness.
 HAMBURGS.—*Gold or Silver-spangled*.—1, J. Robinson. 2, J. Robinson. *hc*, J. Robinson; H. Beldon. *Chickens*.—1 and *hc*, J. Robinson. 2, J. Robinson.
 HAMBURGS.—*Any other variety*.—1, H. Beldon. 2, J. Bowness. *hc*, J. Robinson. *Chickens*.—1, F. W. Hobbes, Rasheroff, Baildon. 2, J. Robinson. *hc*, J. Bowness.
 ANY OTHER VARIETY EXCEPT BANTAMS.—1, J. Robinson. *Chickens*.—1, C. J. Holloway, Bingley.
 GAME BANTAMS.—1, J. Noble, Staincliffe. 2, W. F. Adhe, Preston. *hc*, W. F. Adhe; F. Steel, Halifax.
 BANTAMS.—*Black*.—1, H. Beldon. 2, E. Walton, Horncliffe. *hc*, J. Walker. *Any other variety*.—1, H. B. Smith, Brooklands, Broughton. 2, E. Walton. *hc*, H. Beldon.
 DUCKS.—*Julesburg*.—1 and 2, J. Walker. *hc*, R. Hutchinson, Littleborough. *hen*.—1, J. Newton, Harwood, Leeds; W. Harvey, Shelfield; K. Fulton; J. Hawley, Gillington, Bradford; J. G. Taylor, Huddersfield. *Hen*.—1 and Cup, W. Harvey. 2, R. Fulton. *c*, R. Holloway, Halifax; T. Rule; E. Horner; W. Harvey; K. Fulton; J. Hawley; J. G. Taylor.
 CARRIER.—*Cock*.—1, J. G. Taylor. 2, E. Horner. *c*, H. Yardley; R. Fulton (2). *Hen*.—1 and 2, R. Fulton. *c*, E. Horner (2).
 TUMBLERS.—*Almond*.—1, R. Fulton. 2, J. G. Taylor. *c*, E. Horner; H. Adams, Bowley; W. Harvey; H. Yardley, Birmingham; R. Fulton; J. Fielding, jun.; Rochdale. *Any other variety*.—1, J. Fielding, jun. 2, R. Fulton. *hc*, J. G. Taylor; E. Horner; H. Yardley. *c*, W. Harvey.
 DRAGOONS.—1, W. Harvey. 2, H. Yardley. *hc*, E. Horner; E. Burnhill, Cleckheaton; R. Fulton (2).
 TRUMPETERS.—1, T. Rule. 2, R. Fulton. *hc*, E. Horner.
 OWLS.—1, J. G. Taylor. 2, H. Yardley. *hc*, E. Horner; J. Fielding, jun. (2).
 TURBITS.—1, R. Fulton. 2, J. Fielding, jun. *hc*, T. Foster (2).
 JACOBINS.—1, R. Fulton. 2, E. Rule. *hc*, J. Hawley; J. G. Taylor.
 FANTAILS.—1, T. Rule. 2, E. Horner.
 BARBS.—1, E. Horner. 2, J. G. Taylor. *hc*, R. Fulton (2); J. Fielding, jun.
 ANTWERPS.—1, T. Foster. 2, J. Hawley. *hc*, E. Horner; H. Yardley.
 ANY OTHER VARIETY.—1, J. G. Taylor. 2, E. Horner. *hc*, J. Thresh; H. Yardley; R. Fulton.
 SELLING CLASS.—1, J. Hawley. 2, E. Horner. *c*, J. F. Loversidge.
 The Judges were—for Poultry, Mr. Teelay, Preston; for Pigeons, Mr. E. Hutton, Pudsey.

BURY POULTRY SHOW.

The third annual Exhibition of the Bury Agricultural Society was held at Fishpool, Bury, on the 25th of August.

In the poultry department, *Spanish* adults headed the list; some good specimens competed, but nearly all were sadly out of condition. *Brahmas*, *Cochins*, and *Dorkings* were all good classes. The *Game* were not numerous, but choice, more particularly the *Brown Reds*. Some of the chickens of the same colour were very promising. *Hamburgs*, as usual in this part of the country, were excellent, the first-prize *Gold-spangled* adults deserving especial mention. All the chicken classes contained capital birds, with a very close competition. *Game Bantams* were not largely shown; all the prize pens, however, made up for this deficiency by their quality. *Black* and *White Bantams* had each a separate class, with a capital entry. In the class for *Any other variety of Bantams*, *Pekins* were first, and *Silver-laced* second. *Creve-Coeurs* took the prizes in adults, *Any other variety*; *Houdans* and *Malays* in chickens.

The *Turkeys*, *Geese*, and *Ducks* were very good, the Rouen *Ducks* being particularly so, almost every pen receiving notice, and all being worthy of a prize. The *Pigeons*, although not numerous, formed a very nice collection, nearly all varieties being fairly represented.

The following is the prize list:—

SPANISH.—1, H. Wilkinson, Early, Skipton. 2, Furness & Snell, Rawton-stall. *hc*, J. Thresh; J. Nash, Walsall. *Chickens*.—1, H. Wilkinson.
 COCHINS.—*Cinnamon or Red*.—1 and 2, W. A. Taylor, Manchester. *Chickens*.—1, W. A. Taylor. 2, C. Sedgwick, Keighley. *hc*, C. Sedgwick; H. Tomlinson, Birmingham.
 COCHINS.—*Any other variety*.—1, C. W. Brierley, Middleton. 2, W. Hey, Rochdale. *hc*, W. A. Taylor. *Chickens*.—1, W. A. Taylor. 2, C. Sedgwick. *hc*, W. A. Taylor; E. S. S. Woodgate, Pembury, Tunbridge Wells.
 BRAHMAS.—*Dark*.—1 and 2, T. F. Ansell, Covey Mount, St. Helens. *Chickens*.—1 and 2, J. H. Pickles, Southport. *hc*, C. Leyland, Warrington; W. A. Taylor.
 BRAHMAS.—*Light*.—1, H. Beldon, Bingley. 2, S. A. Smith, Withington. *Chickens*.—1, H. Beldon. 2, T. A. Dean, Marden, Hereford. *hc*, J. Watts, Birmingham.
 GAME.—*Any colour*.—*Cock*.—1 and 2, C. W. Brierley.
 GAME.—*Black or Brown Red*.—1 and 2, C. W. Brierley. *Chickens*.—1, W. Tiltotson, Coates, Leeds. 2, E. Mann, Wallbild Stand, *hc*, W. Tiltotson. *hc*, J. R. Fletcher; E. Mann; T. P. Lyon, Liverpool; W. Ferrin, Southill.
 GAME.—*Any other variety*.—1, C. W. Brierley. 2, Furness & Snell. *hc*, J. Answorth. *Chickens*.—1, C. W. Brierley. 2, Furness & Snell. *hc*, J. R. Fletcher.
 GAME.—*In bloom and feather*.—*Cock*.—1, J. R. Fletcher, Stoneclough, Manchester. 2, T. Tomlinson, Bury.
 POLARDS.—1 and 2, H. Beldon. *hc*, J. Robinson, Garstang. *Chickens*.—1, J. F. Lawson, Newton-le-Willows. 2, J. Robinson.
 HAMBURGS.—*Golden-spangled*.—1, G. & J. Duckworth, Chelch. 2, J. Bow

ness, Newchurch. *hc*, H. Beldon; J. Robinson. *Chickens*.—1, J. Robinson. 2, J. Hall, Stacksteads. *hc*, G. & J. Duckworth.
HAMBURGHS.—*Silver spangled*.—1 and 2, J. Robinson. *hc*, H. Beldon. *Chickens*.—1, M. Isherwood, Bury. 2, J. Robinson. *hc*, H. Beldon; H. Stauworth, Worsthorpe, Bury.
HAMBURGHS.—*Golden-pencilled*.—1, H. Beldon. 2, J. Bowness. *Chickens*.—1 and 2, W. & E. Clayton, Morton Banks, Keighley. *hc*, G. & J. Duckworth; J. Bowness.
HAMBURGHS.—*Silver-pencilled*.—1, J. Bowness. 2, H. Beldon. *hc*, J. Robinson. *Chickens*.—1, J. Robinson. 2, H. Smith, Keshley. *hc*, H. Beldon.
HAMBURGHS.—*Black*.—1, J. Robinson. 2, H. Beldon. *hc*, N. Marlor, Denton, Manchester; W. A. Taylor; J. Bowness. *Chickens*.—1, N. Marlor. 2, M. Isherwood. *hc*, C. Sidgwick; H. Beldon; W. A. Taylor; J. Bowness.
DORKINGS.—1, J. Robinson. 2, J. Walker, Rochdale. *hc*, A. Darby, jun., Bridworth. *Chickens*.—1 and 2, T. Statter, Stand, Manchester. *hc*, J. Stott, Healey, Rochdale.
ANY OTHER VARIETY EXCEPT BANTAMS.—1, J. Robinson. 2, G. W. Hibbert, Hyde, Manchester. *Chickens*.—1, G. W. Hibbert. 2, J. F. Walton, Horncleafe, Rawtenstall.
BANTAMS.—*Game*.—*Black or Brown*.—1 and 2, W. F. Entwisle, Westfield, Bradford. *hc*, T. Bowker, Hill End, Bury. *Any other variety*.—1, E. Walton. 2 and *hc*, W. F. Entwisle. *Any other variety except Game*.—1, H. B. Smith, Brooklands, Preston. 2, E. Walton.
GAME.—*Cock*.—1 and 2, W. F. Entwisle.
GAME.—*White*.—1, I. Cropper, Beap. 2, H. Beldon. *hc*, T. Cropper, Pickles and Whittaker, Great Hey, Edenfield; E. Walton. *Black*.—1, E. Walton. 2, W. A. Taylor. *hc*, Pickles & Whittaker; H. Beldon; R. H. Ashton, Mottram, Manchester.
DUCKS.—*Aylesbury*.—1 and 2, J. Walker, Spring Mount, Rochdale. *hc*, R. Hatchinson, Shaw Moss, Littleborough; T. Tomlinson, Elton. *Ruon*.—1, T. Wakefield, Gholme, Newton-le-Willough. 2, T. Statter. *hc*, J. Walker, P. Unsworth, Newton-le-Willows; T. Wakefield; T. Statter. *Any other variety*.—1 and *hc*, H. B. Smith, Brooklands, Preston. 2, J. Walker.
GEES.—*White*.—1 and *hc*, J. Walker. 2, T. Statter. *Goslings*.—1, J. Walker. 2, T. Statter. *Grey*.—1, T. Statter. 2, J. Walker. *Goslings*.—1 and 2, J. Walker. *TURKEYS*.—1 and 2, J. Walker. *hc*, Mrs. Milnes, Oaklands, Walmsley. *Chickens*.—1, Mrs. Milnes. 2, J. Walker.

PIGEONS.

POUTERS.—1, T. Rule, Gilesgate, Durham.
CARRIERS.—1, J. Chadwick, Lark View, Bolton.
TUMBLERS.—*Amoud*.—1, J. Fielding, jun., Rochdale. 2, J. J. Stott, Preston. *Bulls or Beards*.—1 and 2, J. Fielding, jun. *hc*, W. Hill, Heaton Moor. *Any other variety*.—1 and 2, J. Fielding.
OWLS.—*Foreign*.—1 and 2, J. Fielding. *English*.—1, J. Chadwick, Bolton. 2, A. Jackson, Chequerbent, Bolton. *hc*, J. Whitworth, Bury; R. Erierley, Fish-pool, Bury.
BARBS.—1, A. Justice, Salford. 2, J. Fielding, jun. *hc*, H. Yardley, Birmingham.
TURBITS.—1 and 2, J. Fielding. *hc*, J. B. Bowden, Blackburn.
NUSS.—1, J. W. G. Birmingham. 2, J. B. Bowden. *hc*, T. A. Dean, Marton.
JACOBS.—1, W. Dugdale, jun., Ennley. 2, T. Rule, Gilesgate, Durham. *hc*, W. Hill, Heaton Moor.
ANTWERPS.—1, A. Justice. 2, W. Gamon, Chester. *hc*, R. Erierley, Bury J. Wright, Manchester.
FANTAILS.—1, H. O. Bowman, Higher Broughton. 2, W. Hill.
DRAGOONS.—1, W. Hill. 2, H. Yardley. *hc*, J. Watts; W. Hill.
MAGPIES.—1 and 2, J. B. Bowden. *hc*, H. Yardley.
ANY VARIETY.—1, T. Rule. 2, H. Yardley.
JUDGES.—*Poultry and Pigeons*: Mr. T. J. Charlton, 23, Blenheim Road, Manningham, Bradford; Mr. S. Fielding, Trentham Park, Stoke-on-Trent.

BINGLEY POLY SHOW.

The seventh annual Show of the Airedale Agricultural Society took place on the 27th of August at Bingley. The following report on the Pigeons has reached us.

(From a Correspondent.)

PIGEONS.—Pouter cocks had four entries. A Blue was first; this bird also won the cup for the best bird in this and the three following classes. A White was second. In the hens Yellow and White were first and second. Of Carrier cocks there were four entries; both the winners were Blacks, and the judging of several previous shows was reversed, and in the opinion of all Mr. Allsop was right. In hens a good Dun and Black were the winners. Amoud Tumblers consisted of five pens, and four of them were birds such as are seldom met with at any show. In Tumblers, Any other variety, a grand Red Whole-feather was first, a Black Mottle second, and Red Agates were highly commended and commended. Barbs were a good class, Blacks were the winners. Foreign Owls were remarkably good; White was first, and Blue second. English Owls were a grand class of twenty-two pens; a good old-fashioned Silver was first, White second. A Silver, very highly commended, was the best-conditioned bird in the class, and with age will be difficult to beat. In Jacobins, Red or Yellow, a good Red hen was first, a Yellow cock second; and in Jacobins, Any other colour, a remarkably good White with perfect pearl eyes was first; this bird obtained the cup for the best bird in this, the preceding, and two following classes. A good Black was second. Of Fantails there were twenty-six pens of such birds as are seldom seen; twenty-four of them were Whites, one Black, and one Blue. The first-prize bird was the largest-tailed and best-carried bird seen for some time. The whole of this class was highly commended. Of Turbitts there were nineteen pens of all colours; Black was first, and Yellow second. In Dragoons, Blue or Silver, Blues were the winners of both prizes. Dragoons, Any other colour, had four entries, Yellow being first; this bird won the cup for the best bird in this, the preceding, and four following classes. A Red was second, Yellow being highly commended and commended. Of Short-faced Antwerps there were twenty-three entries; Red Chequers were the winners. Long-faced Antwerps had the same number of entries as the preceding class; Blue was first, a Dun second. In the class for Any other variety a Trumpeter was first, Blondinette second.

This was a good class. In the Selling class there were fourteen entries; Black Barbs first, Blue Owls second.

The arrangements were good, and the birds well fed and watered. The Show was held under a spacious marquee; and under the management of so good a Committee and enthusiastic and ardent a fancier as the Secretary, Mr. Thompson, all went smoothly and well. This was certainly the best Show of Pigeons we have seen in Yorkshire for some time. The entries reached 2½ pens, affording another proof, if any were wanted, that the single-bird plan is far the best.

GAME.—*Black or Brown Red*.—*Cocker*.—1, J. Forfane, Keighley. 2, W. Tiltson, Coates, Barnoldswick. 3, H. E. Martin, Southorpe, Fakenham. *Any other variety*.—*Cocker*.—1, C. T. Burton, Thurgold, Sheffield. 2, W. F. Entwisle, Westfield, Cleekeaton. 3, H. C. & W. J. Mason, Drighlington.
GAME.—*Black or Brown Red*.—*Pullet*.—1, H. Butler, Bradford. 2, W. Tiltson. 3, J. Mason, Worcester. *Any other variety*.—*Pullet*.—1, J. W. Thornton, Bradford. 2, M. Jowett, Bradford. 3, E. Ayskroyd.
SPANISH.—*Chickens*.—1, J. Leeming, Broughton. 2, J. J. Booth, Silsden. 3, J. Walker, Wolverhampton. *hc*, H. Wilkinson, Earby, Sipton.
DORKINGS.—*Chickens*.—1, T. Braden, Earby, Sipton. 2, T. Statter, Whitefield. 3, J. Robinson, Garstang.
BRAHMAS.—*Chickens*.—1, J. H. Pickles, Birkdale, Southport. 2, W. A. Taylor, Manchester. 3, P. S. Arkerhitt, Sutton Scarsdale.
COCHIN.—*Chickens*.—1 and 3, W. A. Taylor. 2, C. Sedgwick, Keighley.
HAMBURGHS.—*Any variety*.—*Cocker*.—1, H. Robinson, Baildon, Leeds. 2, J. Smith. 3, J. Robinson. *Pullet*.—1, C. Pamberton, Bingley. 2, E. Gill, Fearncliffe, Bingley. 3, J. Sni I.
HAMBURGHS.—*Golden-spangled*.—*Chickens*.—1, T. May, Wolverhampton. 2, J. Robinson. 3, J. Newton, Silsden, Leeds. *Silver spangled*.—1 and 3, J. Rollinson, Lindley. 2, J. Robinson.
HAMBURGHS.—*Golden pencilled*.—*Chickens*.—1 and 2, W. & E. Clayton, Morton Banks. 3, J. Preston, Alerton. *Silver-pencilled*.—1, J. Robinson. 2, H. Smith, Morton Banks. 3, J. Smith.
HAMBURGHS.—*Black*.—*Chickens*.—1, C. Sedgwick. 2, T. W. Holmes, Baildon. 3, J. Moore, Bingley.
GAME BANTAMS.—*Chickens*.—1 and 3, W. F. Entwisle. 2, G. Noble, Staincliffe, Dewsbury.
BANTAMS.—*Any other variety*.—*Chickens*.—1, W. A. Taylor. 2, R. H. Ashton, Mo tram. 3, J. Mitchell, Keighley.
ANY OTHER VARIETY.—*Chickens*.—1, J. Bowker, Keighley. 2, Rev. A. G. Brooke, Shirwardine. 3, C. Holdsworth.
ANY OTHER CLASS.—*Cock*.—1 and 2, J. I. Booth. 3, H. Andrews, Eccleshill. *Hens or Pullets*.—1, C. Carr, Wilsdon. 2 and 3, J. I. Booth.

PIGEONS.

POUTER.—*Cock*.—1, T. Rule, Gilesgate, Durham. 2, R. Fulton, London. *Hen*.—1 and 2, R. Fulton.
CARRIERS.—*Cock*.—1, R. Fulton. 2, H. Yardley, Birmingham. *Hen*.—1 and 2, R. Fulton.
TUMBLERS.—*Amoud*.—*Cup*. R. Fulton. 2, H. Adams, Beverley. *Any other variety*.—1, H. Adams. 2, R. Fulton.
BARB.—1, R. Fulton. 2, J. Lister, Keighley.
OWL.—*Foreign*.—1, H. Yardley. 2, R. Fulton. *English*.—1, Ward & Rhodes. 2, J. W. Edge, Erdington.
JACOBS.—*Red or Yellow*.—1, W. Croft, Killinghall, Ripley. 2, R. Fulton. *Any other colour*.—1, A. A. Vander Meersch. 2, R. Fulton.
FANTAIL.—1, O. E. Cresswell, Bagshot. 2, J. Walker, Newark.
TERBIT.—1, R. Fulton. 2, A. A. Vander Meersch.
DRAGOONS.—*Blue or Silver*.—1, W. Gamon, Chester. 2, Ward & Rhodes. *Any other colour*.—1, R. Fulton. 2, J. Watts.
ANTWERP.—*Short-faced*.—1, J. Lister, Keighley. 2, W. R. Wright, Birmingham. *Long-faced*.—1, R. Pritchard, Ludlow, Salop. 2, H. Jennings.
ANY OTHER VARIETY.—1, R. Fulton. 2, H. Yardley.
SELLING CLASS.—1, R. White. 2, J. Mitchell.

JUDGES.—*Poultry*: Mr. Richard Teebay, Fulwood, Preston. *Pigeons*: Mr. H. Allsop, Birmingham.

ALDBOROUGH AND BOROUGHBRIDGE POULTRY SHOW.

This was held on August 22nd. The following is the prize list:—

DORKINGS.—1, T. P. Carver, Langthorpe, Boroughbridge. 2, H. R. Farrer, Greenhammerton Hall. 3, H. S. Thompson, Kirby Hall. *Chickens*.—1, J. Newhall, Clifton, York. 2 and *hc*, T. P. Carver, Langthorpe, Boroughbridge. 3, H. J. Parish, Boroughbridge Hall.
SPANISH.—1, Palmer & Hawkins, Topcliffe. 2, H. R. Farrer. *Chickens*.—1, Pallister & Hawkins.
GAME.—1 and 2, J. Watson, Knaresborough. *Chickens*.—1, J. Robshaw, Whinley.
COCHIN-CHINA.—1, F. Horsman, Boroughbridge. 2, J. Sherwin, Ripon. *Chickens*.—1, Croft, Lendal, York. 2, F. Horsman.
BRAHMA POOTHA.—1, Mrs. G. Mangles, Givendale, Ripon. 2, H. S. Thompson. *Chickens*.—1, T. P. Carver. 2, Mrs. G. Mangles.
HAMBURGHS.—*Golden-spangled*.—1, E. Barnett, Thermanby. 2, T. Tweedy, Thirk. *Golden-pencilled*.—1, J. Sherwin. 2, J. Newhall. *Chickens*.—1, J. Watson. 2, P. Gill, Boroughbridge.
HAMBURGHS.—*Silver-spangled*.—1, A. Umpleby, Boroughbridge. 2, T. Tweedy. *Chickens*.—1, J. Walker, Ouseburn. *Silver-pencilled*.—*Chickens*.—1, J. Clayton, Thirk.
POLANDS.—1, C. Walker, Boroughbridge. 2, Mrs. Croft. *Chickens*.—1 and 2, C. Walker.
BANTAMS.—*Game*.—1, T. P. Carver. 2, H. S. Thompson. *hc*, J. Watson, jun. *Any other variety*.—1 and 2, T. P. Carver. *hc*, J. Sherwin. 3, J. Waddington, Gilsely.
FARMYARD CROSS.—1, W. Woodward, Munkip, Boroughbridge. 2, H. S. Thompson. *Chickens*.—1 and 2, T. P. Carver. *hc*, W. Woodward. 3, H. S. Thompson.
ANY OTHER VARIETY.—1, T. P. Carver. 2, J. Watson. *hc*, G. Rutherford, Thirk. 3, G. Slator, Ripon.
TURKEYS.—1, Mrs. Leck, Tholthorpe, York. 2, Mrs. G. Mangles. *Poultis*.—1, Mrs. G. Mangles. 2 and 3, W. Bekeridge. *hc*, Mrs. Kirk, Givendale, Ripon.
GEES.—1, Mrs. G. Mangles. 2, J. T. Renton, Ripon. *Goslings*.—1, Mrs. G. Mangles. 2, I. Moorey, Malwath, Ripon. *hc*, Mrs. Smith, Humbarton.
CHICKENS.—*Adelourey*.—1 and 3, T. P. Carver. *hc*, W. Woodward. 2, H. S. Thompson. *Ducklings*.—1 and 2, T. P. Carver. *houn*.—1, C. Graham, Aldborough. 2, G. Sadler, Boroughbridge. *Ducklings*.—1, G. Sadler. 2, Mrs. G. Mangles. *Any other variety*.—1, G. Sadler. 2, E. Thudry, Dalton, Thirk.
GUINEA FOWLS.—1, J. T. Renton. 2, Miss Kirk.
SELLING CLASS.—1 and 2, T. P. Carver. 3, H. R. Farrer.

PIGEONS.—*Pouters*.—1, G. Sadler. 2, F. Umpleby. *Carriers*.—1 and 2, G. Sadler. *Trumpeters*.—1, W. Kitchen, Fescovale. 2, C. Auton, Pettergate, York. *Jacobins*.—1, C. Auton. 2, G. Annald, Bishop Monkton. *Fantails*.—1, C. Auton. 2, W. Kitchen. *Tumblers*.—1 and 2, C. Auton. 3, W. Kitchen.

Darbs.—1, C. Anton. 2, J. Smith, Allhallowgate, Ripon. *Turbits*.—1 and 2, W. Kitchen. *Antwerp*.—1, T. Horsman, Ripon. 2, G. Sadler. *Owls*.—1, A. Umpleby. 2, G. Sadler. *Any other variety*.—1, W. Kitchen. 2, C. J. Garnett. *See also* C. Anton. *Selling Class*.—1, W. Scott, Boroughbridge. 2, A. Wells, Ripon. *See also* C. Anton.

FABRICS.—*Any Dress*.—1, A. Robson, Merton-on-Swale. 2, C. Anton. 3, J. A. Powell. *Do.*.—1, A. Robson. 2, C. Anton.

EXTRA STOCK.—1, W. Wilson, Boroughbridge (Guinea Pigs). Equal 1, J. N. Warnick, Langthorpe (Fantails).

JUDGE.—Mr. S. Burn, Whitby.

POLYGAMY IN PIGEONS.

PERMIT me to refer to the article under this title which appeared in "our Journal" of August 21st. The writer must excuse me if I am a little incredulous. I was once attending at a petty sessions, when some case or other came on, I forget what, but the question was asked (the people were quite in a humble rank), "My good man, are you married, now?" A little woman in a shawl immediately called out, "Yes, sir, he is, and here's the baby," at the same time holding up as high as she could an infant of a very few weeks old. The laugh can well be imagined, and the marriage was believed in. Now, to believe fully in this account of the polygamy of Pigeons I want to see the babies, not one, but four. The case given by "R. W." is so contrary to all my thirty-five years' experience as a Pigeon-fancier—indeed, I have never known or heard of anything of the kind. I do not for one moment impute the least atom of untruthfulness to "R. W.," but I think by reading his account some links in the chain of evidence are wanting. That Pigeons may change-over partners, this I believe. Was this case more than simply such an exchange?

"R. W." says, "I believe that the Blue cock regularly took his turn on each nest." Am I to understand that the "I believe" means "I surmise or think," or that it means "I know for certain?" Then how could one cock take his turn on each nest? for Pigeons, cock and hen, sit a regular time. Unless "R. W." not only believes but knows, I must doubt the statement. One cock was evidently the master cock and a great tyrant, as occasionally they are. I knew a cock Dragoon that was such a tyrant no one would keep him, and he was the source of a little income to the dealer who owned him, and sold him over and over again.

Next as to the hatching. One pair of eggs were broken, and though each contained a bird, the evidence as to variety is at an end. Those that were hatched I should like to have been seen when older, for three weeks is scarcely time to decide between such near colours as Black and Blue, for many Blues are very dark at first. Of the second hatching "R. W." states nothing as to colour, and the shifting to the care of nurses was unfortunate. Knowing how very easily mistakes are made with the best intentions, especially with respect to the habits, &c., of birds, I take the liberty to doubt at present that Pigeons are polygamous.

I will now briefly notice what I believe is not unusual, the strong preference which some cock Pigeons feel for one certain hen—I mean that one hen has many admirers. Mr. Darwin, I believe, thinks that the brilliant colours of the male birds are intended to attract the females; on the principle, I suppose, that young ladies at a garrison town are said to have frequent attacks of *scarlet fever*. Probably he is correct; fine feathers not only make fine birds but also attractive birds. In Pigeons, I think sometimes the male birds are attracted by any special beauty of a female. I had for some years an unusually pretty Buff Baldhead hen, always clean, always trim, and so pretty in colour and shape that strangers were wont to say, even though not Pigeon-fanciers, "What a very pretty bird that is!" Now this little hen was constantly being followed and cooed round by different cocks both mated and unmated; but to all her admirers she was wholly indifferent, and, like a good moral little lady, went calmly on with her duties as a wife and mother. I have had the case of a cock bird who was also pestered with an admirer of the opposite sex, and who beat her off for a time, and his lawful mate beat her too; but in the end, alas! he yielded, and left his partner to muse on the infidelity of husbands.

I think that when a Pigeon is attractive he or she is unusually good-looking. A regular old frump of a hen is not admired. The cocks who are tempted are lively, spirited, bright plumed birds, always cooing and showing themselves off to perfection—in fact, regular "gay birds." It is unfortunate for romance that the class of Dove known as the domestic Pigeon is neither gentle nor always constant, for they habitually fight, and fight pertinaciously, and they break pair occasionally; while one variety, the Pouter, will forget himself and his mate in a shameless manner with at least any unmated hen in the loft, but the Pouter is the most showy and cooing of all varieties, and hence very attractive.—WILTSHIRE RECTOR.

PROLIFIC TURKEY.—My Turkey hen has laid altogether eighty-seven eggs. She has often remained on the nest for twenty-four

hours at a time, but never properly settled to sit. She has discontinued laying for a few days, and then laid several eggs continuously again.—WALTER BISCOE.

PIGEONS AT HITCHIN AND EXETER SHOWS.

I REGRET I cannot agree with Mr. Fulton, that dealers are the great supporters of shows in the three kingdoms. Let the amateurs all retire, and what would be the use of dealing in birds? I for one, with many others, vote Messrs. Fulton, Yardley, &c., intense nuisances as exhibitors, and what we do is this—we find out if we can where they intend to exhibit, and then keep our birds at home, although not being prize-grabbers we cannot afford to help every committee to pay Mr. Fulton's prizes. If dealers would exhibit less we think it would be more to their advantage, and to the advantage of the birds also, which are now shown by dealers until they die, no use being made of them as stock during the breeding season.

As to the judgment at Exeter and Hitchin being reversed, it is quite possible that the condition of the birds was reversed, but as I was not at either show I cannot offer any remarks upon this; but one thing I do say, that if the judges are to be judged in the way they are at present, and with such intense animus that appears to prevail against at least some of them, I should think their services would be discontinued. As to expecting perfection in them, or anything else in this world, it is simply stuff. If you get them honest that must compensate for their deficiencies in awards, and as in these days the names are always published, if you do not like the judge, stay at home. Having acted more than once in the capacity, I know how pleasant it is to be surrounded by disappointed grumbling exhibitors, who in nine cases out of ten are wrong. The judges in England are pretty well known, so there need not be much difficulty about it. I have no personal feeling against either dealer mentioned; in fact, one I do not know. I believe Mr. Fulton to act as strictly and straightforwardly as a dealer can, but I still think that if dealers exhibited less, but less, they would find amateurs increase as well as their business. At present it stands thus, What is the use of showing? Mr. Fulton is sure to be there.—OBSERVER.

CLEANSING CAGE WATER-BOTTLES.

THERE are, doubtless, many of your readers lovers of pet birds, as I am, who have been puzzled, as I have been for years, to find the easiest and best method of cleaning the fountain bottles used in most bird cages. To begin, I ought to state that I take care of my birds myself, have been very successful in rearing Canaries, and have seldom lost a bird from disease of any kind. Some have flown away, poor, silly, little, short-sighted things; one or two have died of old age, gradually and painlessly; and a favourite hen once died while laying. Then, of course, there have been untoward accidents, such as the attacks of wicked malevolent cats, and twice a cage has fallen down. The first time my poor Dick's leg was broken, and though set with tender care he died. The second time a hen was jolted off her nest with her four young ones, which, as may be supposed, was not good for mother or chicks. Barring these accidents I have been a very successful owner of cage birds. But the fountain-bottles have been one of my life-long difficulties. Of course I like them to be clean and bright, but, in spite of all my pains, the green (some sort of algae) would accumulate on the insides of the bottles, and I found it a long and troublesome business to remove it. At the suggestion of various housemaids I tried eggshells, tea leaves, ashes, paper torn up in small pieces, &c., and at the suggestion of the housemaid's master several kinds of acids. All were effectual in time, but I have often spent an hour in cleaning one bottle. Now, my plan is so easy and so simple, I want to recommend it to all your bird-keeping readers. Put a little common garden soil, say two teaspoonfuls, into the bottle, washing it down with water. Half a dozen good shakes will make the bottle quite clean and bright, and remove all traces of green, and a rinse in clean water will make it fit for the prettiest little pet bird in the loveliest lady's drawing-room in England.—A LOVER OF ALL ANIMATED CREATURES.

SUBSTITUTING A LIGURIAN FOR A COMMON QUEEN.

I HAVE two stocks of bees in Woodbury hives, in one of which the bees had worked across the bars, so that I could not move them. Accordingly, about a fortnight since, I drove the bees into an empty hive, the bars of which were prepared as recommended in your "Bee-keeping for the Many," and I am glad to find they are working their combs straight. I intend to feed them well.

I am desirous of knowing if I could obtain and join to this stock a Ligurian queen, and if this would be a good time for so

doing. Will you also kindly inform me where I can procure a pure fertilised queen, and the proper course to be followed to ensure a successful union?—G. M. F.

[As you do not appear to have utilised the combs already constructed in the first hive, we fear that you will have but a very small amount in the new box at the present time. An enormous quantity of artificial food would be necessary to enable the bees to supply the deficiency in combs, and to lay in sufficient store for the winter. Under these circumstances we should not advise your incurring the expense of a Ligurian queen with the risk of losing the stock during the winter. You could, however, try the experiment with your other live now, or wait until next spring to see if the transferred colony would then be in a sufficiently prosperous condition. There is no objection to the present time, other matters being suitable, for exchanging Ligurian for common queens. If you determine on making the attempt, write either to Messrs. Neighbour, Regent Street, London, or to Mr. W. J. Pettitt, Dover, either of whom will supply you with a reliable queen, and with instructions as to the best mode of proceeding to ensure a favourable result.—Evs.]

HONEY SEASON IN GLOUCESTERSHIRE.

I HAVE received a letter from a bee-keeper in Gloucester giving a very poor report of the season in his vicinity. He states that "Everybody who keeps bees about here is sadly complaining of want of luck this year. I went out yesterday two miles in the country to see a person who had taken two hives, an old stock and a swarm of this summer, and only obtained 12 lbs. of honey from the two. At another place, where there were eight hives, the owner destroyed four, and took but 12 lbs. from the whole. I have taken one super with 17 lbs. and another small cap with 5 lbs. There was a good deal of dark comb and some brood in one of the supers."

This general deficiency of honey, and the prevalence of breeding in supers, continue to be the complaint from all parts of the country. I should be glad to hear at the proper time what bees may have done at the heather this autumn.—S. BEVAN FOX, Exeter.

RAPID PICKLING OF MEAT.—Roll the meat in a mixture of 16oz. salt, 1 oz. saltpetre, and 1 oz. sugar, so that all parts may be completely salted; then wrap closely in a piece of cotton cloth previously well scalded and dried, and place in a porcelain or other vessel. The cloth is essential with small pieces, to contain the brine formed in contact with the meat. After about sixteen hours, however, some brine will drain off into the bottom of the vessel, and it will be necessary then to turn the meat, still wrapped up, daily. A piece of 6lbs., treated in this way for six days, then unwrapped and boiled, will be found quite palatable and sufficiently pickled. For larger quantities the cloth may be dispensed with, since the brine formed will be sufficient to cover the mass, provided the pieces are closely packed, and any unavoidable cavities filled with stones.—(English Mechanic.)

OUR LETTER BOX.

DONKEY AND MEIGLE, POULTRY SHOWS.—These were local shows, not advertised.

BUCKWHEAT FOR FOWLS.—"I read in your number for August 14th, in answer to 'COLNE,' "Buckwheat is not good for fowls." How am I to reconcile this with Wright and other authorities?—ELICEE."

[The authority we consult on subjects connected with poultry-keeping condemns buckwheat as a poultry food; but we know it is used as a pleasant food by gamekeepers, and good authorities speak in its favour for poultry; so, as you have purchased some, you will do wisely to try it and thus test its merits. We do not know where you live, but if near Suffolk or Essex you might readily obtain it if you call it "brank."] "

GAME FOWLS' PLUMAGE (J. Fovial).—We have submitted your letter to Mr. Wright, and his reply is, "I will communicate with him direct if he wishes." Mr. Wright's direction is, "at Messrs. Cassell & Co.'s, Editorial Department, La Belle Sauvage Yard, Ludgate Hill, London, E.C."

NORTHERN COUNTIES COLUMBARIAN SOCIETY.—The gentleman who won the first prizes in the classes for Pouters, Tumblers, and Foreign Owls was Mr. Townson, of Bowdon, not Messrs. Townson, of Ezzemont, who did not exhibit.

KEEPING WOOD PIGEONS IN CONFINEMENT (E. A.).—A single, even a very large one, would be a small place for Wood Pigeons; a room, or shut-in loft, would be better. We say shut-in, as when adult they would be certain to fly away and not return, all attempts to domesticate them and cure their roving propensities having failed. Brought up from the nest and confined to a room they will be fairly tame, and possibly may breed. Give them for food peas, barley, or wheat. If healthy and kept well fed and clean, they will live four years. Mind not give water for drinking and bathing.

UNITING SWARMS (Ignorant).—We think your surmise is correct. The swarm of August 14th doubtless came out of your second hive in the glass case; but as this cannot be moved about without danger of falling to pieces, we should not meddle with it. Why not break it up if it has few bees and no honey? You might smoke the bees out of it, and save all but the drones; but if these are not yet got rid of, and the bees are few in number, we should be inclined to destroy them, as of no probable value. As to the swarm, we should feed it up at whatever cost, seeing that your stock of bees is so

limited. It would pay well another year with a fair honey harvest. (Bee).—You can most easily unite any number of stocks by simply driving the bees of each hive, one after the other, into a common empty hive, and then dashing them all out in a heap in front of the stock you wish to keep. It is not too late to drive bees. If you put this on the ground in an open space, just tilting up one side of it on a bit of wood or a stone, all the bees will march up into it without any fighting whatever. Of course they will settle between themselves who is to be the reigning mother. Blow a little smoke in at the entrance of each hive before you begin to operate.

HONEY DEFICIENT—UNITING SWARMS (An Old Subscriber).—We sympathise with your disappointment, having no honey harvest whatever ourselves this year, but we do not despair. We shall feed largely, and advise you to do the same, beginning towards the middle of September, and feeding mostly by night. It will be good policy also to unite all weak hives to their stronger neighbours. No method of uniting stocks can be simpler or more effective than that recommended in this day's Journal to another inquirer. Drive two or more stocks of neighbouring bees into some common hive or box, and dash them out on the ground in front of the hive you desire to strengthen; but we would drive out the population of this hive as well, and then return the whole united bees to it in the way prescribed. Write again if you want further information. Driven or united bees need not be far removed from each other.

TRANSPORTING HIVES (An Old Subscriber).—You will find your queries fully answered next week. Let us know how you succeed.

METEOROLOGICAL OBSERVATIONS,

CAMDEN SQUARE, LONDON.

Lat. 51° 32' 40" N.; Long. 0° 8' 0" W.; Altitude 111 feet.

DATE.	9 A.M.				IN THE DAY.				RAIN.	
	Baromet. ter at 30 and Sea level.	Hygromete- ter.		Direction of Wind.	Temp. at 5 ft.		Radiation Temperature			
1873, Aug. and Sept.	Inches.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	In.	
We. 27	29.910	65.3	59.7	S.W.	61.8	75.4	55.8	122.2	51.3	0.153
Th. 28	29.592	62.2	53.9	W.	61.9	68.2	55.7	115.6	55.1	0.183
Fr. 29	29.719	55.9	59.2	S.W.	61.1	62.5	47.7	112.4	43.2	0.640
Sat. 30	29.751	61.8	59.0	W.	58.8	71.3	59.2	119.2	45.8	0.051
Sun. 31	29.840	62.7	59.7	W.	60.5	69.5	57.1	94.3	59.5	0.026
Mo. 1	29.785	63.4	60.8	S.W.	61.3	68.8	61.5	94.1	58.0	0.128
Tu. 2	29.791	58.9	53.8	N.W.	60.4	66.0	52.3	119.1	47.6	0.050
Means	29.777	61.3	56.6		60.7	68.5	54.4	110.6	56.2	0.587

REMARKS.

27th.—A fine day, though there was a little rain once or twice.
28th.—Very dark at 7.30 A.M., but fine soon after; heavy rain soon after noon; thunder at 3.25 P.M., with two or three heavy showers, and much strong wind during the day.
29th.—Bright, though raining at 8.30 A.M.; fine at noon and till 6 P.M., from that time showery.
30th.—Fine pleasant day.
31st.—Rain early, but fair by 9 A.M.; cloudy before noon and till 6 P.M., when it rained heavily; wet evening.
Sept. 1st.—Rather dull, but not raining in the middle of the day, but several showers in the evening; fine night.
2nd.—A very showery day, with bright gleams of sunshine between the showers.
Showery week and much lower temperature, in fact (except the minima) lower than for many weeks past.—G. J. SYMONS.

COVENT GARDEN MARKET.—SEPTEMBER 3.

A LARGE supply of fruit comes into the market; a difficulty in clearing it.

FRUIT.

	s. d.	s. d.		s. d.	s. d.	
Apples.....	1	6 to 1	6	Mulberries.....	10 lb. 1 0 to 0 0	
Apricots.....	2	0	0	Nectarines.....	doz. 4 0 to 8 0	
Cherries.....	1	0	0	Oranges.....	per 100 6 16 to 0 0	
Chestnuts.....	1	0	0	Peaches.....	doz. 4 0 to 12 0	
Currants.....	2	0	0	Pears, kitchen.....	doz. 0 0 to 0 0	
Black.....	2	0	0	dessert.....	doz. 2 0 to 3 0	
Figs.....	0	6	2	Pine Apples.....	lb. 3 0 to 6 0	
Fulberts.....	1	0	1	Plums.....	1	0 to 2 0
Cobs.....	1	6	0	Quinces.....	doz. 0 0 to 0 0	
Gooseberries.....	0	9	1	Raspberries.....	lb. 0 0 to 0 0	
Grapes, hothouse.....	1	0	0	Strawberries.....	per lb. 0 0 to 0 0	
Lemons.....	per 100	8	0	Walnuts.....	bushel 8 0 to 12 0	
Melons.....	each	2	0	ditto.....	per 100 2 0 to 2 6	

VEGETABLES.

	s. d.	s. d.		s. d.	s. d.
Artichokes.....	doz.	3	0 to 6 0	Mushrooms.....	pottle 2 0 to 4 0
Asparagus.....	per 100	0	0 to 0 0	Mustard & Cress, punnet	0 2 to 0 0
French.....	0	0	0 to 0 0	Onions.....	bushel 3 0 to 6 0
Beans, Kidney.....	1	0	0 to 0 0	pickling.....	quart 0 6 to 0 0
Beet, Red.....	doz.	1	0 to 3 0	Parsley per doz. bunches	0 4 to 0 0
Broccoli.....	bunch	0	9 to 1 6	Peas.....	doz. 0 9 to 0 0
Cabbage.....	1	0	1 to 1 6	Peas.....	quart 0 8 to 1 0
Cap-sicums.....	per 100	1	6 to 0 0	Potatoes.....	bushel 4 0 to 6 0
Carrots.....	bunch	0	6 to 0 0	Kidney.....	do. 0 0 to 0 0
Cauliflower.....	doz.	3	6 to 0 0	Round.....	do. 0 0 to 0 0
Celery.....	bundle	1	6 to 2 0	Radishes.....	doz. bunches 1 0 to 1 6
Coin-worts.....	doz. bunches	2	6 to 4 0	Rhubarb.....	bundle 0 6 to 1 0
Cucumbers.....	each	0	3 to 0 3	Salsify.....	bundle 1 0 to 1 6
Endive.....	doz.	0	0 to 0 0	Savoy.....	doz. 0 0 to 0 0
Endive.....	doz.	2	0 to 0 0	Schrotenberg.....	bundle 1 0 to 0 0
Fennel.....	bunch	0	3 to 0 0	Sca-kale.....	basket 0 0 to 0 0
Garlic.....	lb.	0	6 to 0 0	Shallots.....	lb. 0 3 to 0 0
Herbs.....	bunch	0	3 to 0 0	Spinach.....	bushel 2 0 to 3 0
Horseradish.....	bundle	0	4 to 0 0	Tomatoes.....	doz. 2 0 to 8 0
Leeks.....	bunch	0	0 to 0 0	Turnips.....	bunch 0 3 to 0 0
Lettuce.....	doz.	1	6 to 2 0	Vegetable Marrows.....	0 1 to 0 3

WEEKLY CALENDAR.

Day of Month	Day of Week	SEPTEMBER 11—17, 1873.	Average Temperature near London.			Rain in 43 years.	Sun Rises		Sun Sets.		Moon Rises.		Moon Sets.		Moon's Age.	Clock after Sun.	Day of Year	
			Day.	Night.	Mean.		m.	h.	m.	h.	m.	h.	m.	h.				Days.
11	Th	Camerarius died, 1721.	68.7	47.0	57.8	11	30	af	5	22	af	6	31	11	19	3	33	254
12	F	Bury St. Edmunds Horticultural Show.	69.1	44.8	57.0	16	32	5	20	6	55	8	after.	20	3	51	255	
13	S	Twilight ends 8.3 P.M.	68.4	45.7	57.0	19	31	5	18	6	31	9	12	2	4	15	256	
14	SUN	11 SUNDAY AFTER TRINITY.	67.0	46.1	56.5	22	35	5	16	6	18	10	17	3	12	4	26	257
15	M		67.5	45.9	56.7	16	37	5	13	6	18	11	8	4	23	4	57	258
16	Tu	Kampfer born, 1651.	68.4	46.8	57.6	16	38	5	11	6	morning.	47	4	24	5	18	259	
17	W	Royal Horticultural Society, Fruit, Floral, and General Meeting.	68.9	44.9	56.9	16	40	5	9	6	25	0	11	5	25	5	30	260

From observations taken near London during forty-three years, the average day temperature of the week is 68.3; and its night temperature 45.9. The greatest heat was 88°, on the 13th, 1865; and the lowest cold 25°, on the 12th, 1869. The greatest fall of rain was 0.99 inch.

ORNAMENTAL PLANTING.—No. 8.
AVENUES.



AVENUES for carriage-drives may be classed as of two distinct kinds: in one the trees are sufficiently near for the branches to meet across the drive and form a living arch high overhead; in the other they are kept so far apart and so far from the sides of the road, that each tree has ample space to become a fine specimen by the development of the full proportions and peculiar features of its species. The aspect of an arched avenue is peculiar and striking, and its formal and stately appearance is not displeasing when the situation is well chosen. Due attention is not always given to this important point, for I have seen drives from which fine views have been shut out by the compact but misplaced and unmeaning margin of trees. Instances there are, too, of belts of lofty trees intervening between a lawn and beautiful park scenery; and although the shelter of the trees might be necessary, it could have been obtained almost equally well by a series of groups so arranged as to afford pleasing views of the scenery beyond.

Like every other feature of ornamental planting, an avenue must have expression, or, in other words, there must be an apparent reason for its presence, otherwise it will fail to please, however fine it may appear. The most suitable position, then, for the formation of an avenue, which in time may become a living arcade, is along a drive leading in a straight line from an entrance lodge to the residence, to some important place or object, or, when the drive passes through plantations of under wood. In the first instance a glimpse of the mansion at the further extremity of such a noble gallery seems to welcome the visitor, and imparts a pleasing unity and expression to it: in the second, the sides of the avenue, without altogether concealing the green woods behind them, serve to break the monotony, and impart an importance and interest to a part of the drive that would otherwise appear very tame.

The length of straight avenues should be limited to a furlong, or at most two. A straight line that stretches away till it is lost in the distance is fatiguing to the eye, and is almost devoid of any feature that is graceful or interesting: to my mind it is a symbol of power or force and nothing else; and when a drive is very long a few curves may be introduced, without materially adding to its length, while the ever-valued charm of variety is gained. An avenue for such a drive should be of a wide and open character, with the trees of kinds that are remarkable for size and symmetry. There are few trees equal to the Chestnut for such a purpose, but it, like the Oak or Elm, attains so slowly to the huge proportions which we admire so much, that the planter knows full well that a generation or two of frail humanity must pass away before his work will obtain its full need of admiration, and therefore that he is planting for posterity.

Avenues of such noble old trees are exceedingly rare,
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yet the sight of one is enough to excite in anyone for whom such things have an interest, a strong wish to be the founder of a scene of such magnificence. In Maresfield Park, nearly opposite the entrance to the by-road leading to Messrs. Wood's nursery, there are three very fine old Chestnuts which are perfect models of what trees for an open avenue should be; the immense boles are crowned with numerous huge spreading branches, which from the freedom of their wide-spread growth clearly show that no other trees have ever grown very near them. Like the Oak, the Chestnut does not form a lofty stem when its branches are exposed to the full play of air and light, but it bestows its full vigour upon the leading branches which spring outwards and upwards from the stem at a few yards from the ground. In striking contrast to the spreading habit which is induced by such an ample breathing space, I may instance the fine Chestnut knoll in Godington Park, near Ashford, in Kent, where the crowded trees are more than twice as high in stem and branch as those at Maresfield, and although so lofty as to be remarkable, they are not individually very picturesque. The longevity of the Chestnut is another important merit: the great age to which it is known to live being very far in excess even of that of the Oak. In an orchard at Norton Court, near Faversham, there is a Chestnut of very similar appearance to the Tortworth Chestnut, and which is said to be several hundred years old.

Next to the Chestnut I would place the Beech, which, from its stately air and the graceful sweep of its branches, has been most aptly termed the "Lordly Beech." Then come the Oak, Elm, Lime, and Horse Chestnut among deciduous trees; and among Conifers the Wellingtonia, Cedrus Libani, C. Deodara, and Araucaria imbricata. Individual taste will doubtless suggest others, but I have intentionally restricted my list to a few very choice kinds that are certain to make a fine appearance wherever they are found to flourish.

For a close-arched avenue the whole of the deciduous trees already named answer admirably, and of Conifers we may take the Scotch Fir; Pinus Cembra, which has such strikingly beautiful bark when it is old; Norway Spruce, with its dense growth and very ornamental pendant branches that droop abruptly downwards from the stem, and yet curve upwards and outwards far from it, with the lateral growth or branchlets suspended from beneath like clusters of long green tassels; and to these may be added Pinus austriaca and P. macrocarpa.

The arrangement of the distance apart of the trees for either kind of avenue is an important but not a difficult matter if the planter remembers that for a tree to grow to a large size its branches must be tolerably exposed to the healthy influence of air and light. For narrow avenues, 30 to 50 feet apart, according to the kind of tree used, would be ample; while for an open avenue, or, to use a more expressive term, an avenue of noble specimens, double that distance, or even more, would be requisite; for in order that a fine tree may display its full beauty it should not stand very close to another, but should have a considerable sweep of turf beyond the

expanse of its branches, so that while the avenue is unbroken, yet each tree may be regarded with pleasure for its own intrinsic merit.—EDWARD LUCKHURST.

THE HORTICULTURAL EXHIBITION AT MANCHESTER.

SEPTEMBER 3RD, 4TH, 5TH, AND 6TH.

ONE of those great efforts at horticultural exhibitions which are made periodically was held last week at Manchester under the title of "The Grand International Horticultural Exhibition of Fruits, Vegetables, Autumnal Flowers, &c." The Show was held in the Botanical Gardens, and though inaugurated and conducted throughout by an independent body, it was under the auspices of the Botanical and Horticultural Society of Manchester. The conception and execution of this was a bold venture, involving, as it did, a prize list of £1100. But if such a venture is to be made at all, Manchester is the place wherein to make it, and where there are so many people, as Lord Derby said, "to whom the parting with £100 note could be an operation so familiar and so customary, that they would hardly know they had done it." Yet these Manchester men are business men, and liberal as they are, they do not give their money without a shrewd idea that it will be spent to some purpose; and the result of the effort that has been made we have no doubt has proved satisfactory to them in the production of an autumnal show, the like of which has never yet been seen in the provinces.

The Show was formally opened by Lord Derby on the 3rd inst., and its leading feature was Grapes and a fine display of vegetables. As concerned fruit generally, it may be said to have been meagre. It was yet too early for our hardy fruits, and if the Show had been postponed to embrace them it would, probably, have been too late for the Grapes. It is evident, therefore, that these were to be the great attractions of the Show, and so they were. In our report, which follows, full particulars will be given of them. Of autumn flowers there was also a good exhibition, especially of Gladiolus, Dahlias, and cut flowers. But in no respect was the Show international, except as between "John Bull, Sandy MacDonald, and Pat Murphy," as old Donald Beaton used to say. Our continental neighbours were conspicuous by their absence, and so the British gardeners had all the competition to themselves.

The arrangements were very good, and admirably carried out; and whatever merit there is in this respect is due to Mr. Bruce Findlay, Curator of the Botanical Gardens, to whom the direction of the whole was entrusted, and with whom and Mr. John Shaw, we are informed, the conception mainly originated. The fruit was shown in the conservatory, a handsome spacious glass structure, 150 feet long by 60 wide, on six tables running longitudinally the whole length of the building, and the flat effect which always attends a fruit show without some accessories was entirely relieved by the permanent climbers that clothed the pillars and rambled in free luxuriance overhead, while the available area of the house was furnished with exhibitions contributed by Mr. B. S. Williams and Mr. William Bull, of London; Messrs. Cole, of Withington; and Messrs. Dixon, of Beverley. These consisted chiefly of fine-foliaged and new and rare plants, and were highly meritorious; the names of the exhibitors being a guarantee for the quality of the plants. The fine fruit was, therefore, well set off, and the eye was not wearied with monotony.

Running at right angles to the western end of the conservatory was a large canvas tent, probably 100 yards long and 20 wide. This was skilfully laid-out in the gardenesque style with centre beds, and raised winding terraces at the sides. To these were devoted the exhibition of plants and autumnal flowers, with groups and settings of fine-foliaged plants interspersed. This great tent was supported by a frame of woodwork, the pillars of which were covered with Ivy, thereby taking off the naked look which they would otherwise have had, and which is so objectionable in all such structures when they are unprotected. One of the best coverings we have ever seen of this sort is of sprays of Scotch Fir and Spruce nailed to the pillars. At one end of this tent there was a bank of Gladiolus exhibited by Messrs. Kelway, of Langport, which could not but rivet the attention of all lovers of this splendid autumn flower. A little lower down was a trophy of vegetables exhibited by Messrs. Dickson, Brown, & Tait, of Manchester, arranged with much skill and taste, and forming a prominent object in this part of the Exhibition. In the furnishing of this portion for effect the

merit is due chiefly to Mr. John Shaw, of Bowden; Messrs. Barron & Son, of Borrowash; and Mr. R. S. Yates, of Sale. Messrs. Jackman & Son, of Woking, had a splendid group of their new popular Clematises, which attracted much attention; while Mr. J. T. Peacock contributed a fine collection of succulents from his fine collection at Hammersmith. Messrs. Lane and Son, of Berkhamstead, had a fine exhibition of Ivies; and Mr. Richard Smith, of Worcester, one of evergreens.

Besides these two departments there were others more detached, one a great tent containing the vegetables, and the other the Potatoes. On the terraces surrounding the conservatory were fine specimens of Conifers in tubs, shown by Messrs. Barron & Son, of Borrowash, and Mr. Maurice Young, of Godalming. Numerous implements and garden structures, boilers, and heating apparatus were also exhibited, which will be alluded to anon.

Such an occasion would not have been complete without a dinner, and this was seized by the President and Council of the Manchester Botanical and Horticultural Society to issue invitations to the leading horticulturists present at the Show. About 150 accepted the invitation, and sat down to a splendid banquet presided over by Lord Derby, in the Hulme Town Hall. It is not usual publicly to criticise the hospitality of one's host, but on such an occasion it is admissible, and especially so when the preparations and arrangements are such as to serve as a pattern to those who are fond of getting-up public dinners and testimonial entertainments. Some of our metropolitan caterers may profitably take counsel with Mr. Bruce Findlay, to put them in the way of knowing how to dine a large assembly, not only sumptuously but in comfort. In concluding these preliminary remarks we have only to add that the whole arrangements were perfect, and we neither saw nor heard of anything occurring to ruffle the susceptibilities of the most sensitive, or to cause pain or disappointment to anyone.

FRUIT.

THE great strength of the fruit display lay in the collections, which were truly grand, and for which valuable prize were offered. Of Grapes, the show was very large, but that of Apples and Pears very weak. The period of the season was, of course, somewhat early for these fruits, and in October a better show of them would, no doubt, have been secured. It seems a pity that the promoters, having had the opportunity of making a grand exhibition of the fruits of this and other countries, did not fix the date later, so that not only Grapes, but what are after all the great standard fruits of the country, Apples and Pears, would have been well represented. The Exhibition would then have been, what it was not in any sense of the word, international.

COLLECTIONS.—For a collection of twenty kinds of fruits, comprising not more than six kinds of Grapes, two kinds of Pine Apples, and two kinds of Melons, prizes of £30, £20, and £12 were offered. Here Mr. G. Johnston, gardener to the Earl of Strathmore, Glamis Castle, Forfar, made a most magnificent display, being a long way ahead of his competitors, and so he was the winner of the premier prize of the Exhibition. His Grapes—Black Hamburgh, Muscat of Alexandria, Buckland Sweetwater, and Black Alicante—were very fine; likewise the Nectarines—Pitnastown Orange, Elruge, &c. Peaches were represented by Sulhamstead (a variety of the Noblesse), Grosse Mignonne, and Red Magdalen; Pines by the Smooth Cayenne and Ripley Queen; with these were Brown Turkey Figs, Melons, &c. In every respect this was a most meritorious display. Mr. Jones, Royal Gardens, Frogmore, and Mr. Grant, gardener to J. B. Glegg, Esq., Chelford, were second and third respectively. In collections of fifteen kinds of fruits three very good lots were staged. The first prize of £20 was awarded to Mr. Simpson, gardener to Lord Wharfedale, Wortley Hall, who had good Grapes—Black Hamburgh, Muscat of Alexandria, &c., and Enville and Smooth Cayenne Pine Apples, Melons, Peaches, Nectarines, Jargonelle Pears. Mr. Upjohn, gardener to the Earl of Ellesmere, Worsley, was awarded the second prize for a lot nearly equally fine. The Grapes were very good, some examples of Gros Colmar especially so, and a dish of Violette Blative Nectarines in this collection were peculiarly pretty. For the collection of ten kinds of fruits, exclusive of Pines, there was also a good competition. Mr. Miles, gardener to Lord Carlington, Wychcombe Abbey, Bucks, was awarded the first prize for very excellent Grapes, Peaches, Nectarines, Figs, Pears, &c. Mr. Bain, gardener to Sir C. R. Broughton, Bart., Ludlow, obtained the second prize for some very large, but rather coarse, examples of Grapes, both black and white; good Peaches, Nectarines, &c. The third prize fell to Mr. T. Bannerman, gardener to Lord Bagot, for a very excellent lot. For the collection of twelve kinds of hardy fruits on a basket or tray, the first prize

was awarded to Mr. Cox, gardener, Madresfield Court. The fruit was all good, but having to be exhibited in a cramped space—in this instance on an old tea-tray—it had a poor appearance.

GRAPES.—So plentifully were these exhibited, and in many cases so extremely fine, that they formed the greatest attraction of the whole Show. The prizes offered for Grapes were large, and they were divided into numerous classes to suit exhibitors of all grades. The general character of the display was good, the most striking feature being, however, perhaps the great size of the bunches rather than the fineness of the quality. We do not know that we have ever seen such large bunches so well finished of many of the varieties, but we have certainly seen an infinitely superior show of Black Hamburgs years ago, and we almost venture to say Muscats. The display at Manchester this year was superior as regards quality, taking it *en masse*, to that at Glasgow last year; many very poor exhibits, however, were staged, and by some of our reputed Grape-growers too, which it would have been well for them to have left at home.

The finest and best dish of Grapes in the Exhibition was the Madresfield Court, exhibited by Mr. Meredith, of Garston, which won for him the first prize for two bunches of Grapes in commerce three years prior to the Exhibition. The second prize was awarded to Mr. Cox, the raiser, for the same variety, and the third prize also was given for Madresfield Court. It is satisfactory to find that this new Grape is proving itself so well. For the best seedling Grape not in commerce, the first prize was nobly won by Mr. Thomson, of the Tweedside Vineyard, Galashiels, with the Duke of Buccleuch, a truly grand Grape in every way. Mr. Hunter, gardener to the Earl of Durham, staged a white variety, named Lambton Castle Seedling, which was simply the White Tokay. For the heaviest bunch of black Grapes, a noble specimen of Black Hamburg, 13 lbs. 2 ozs., the heaviest of this variety on record, we believe, was shown by Mr. Hunter, of Lambton Castle. It was well coloured for its size, but, as usually is the case with large bunches, it is more of a cluster than a bunch. The next heaviest was a Barbarossa, weighing 5 lbs. 14 ozs., from Mr. Dickson, gardener to J. Jardine, Esq., Langholm, which, although not very well coloured, was clearly entitled to the second prize; it was, however, passed over for a better coloured example of Black Hamburg 1 lb. less in weight, from Mr. Coleman; and a still smaller bunch from Mr. Bruce, gardener to James Fildes, Esq., received the third prize. The heaviest bunch of white Grapes was sent by Mr. Dickson, gardener to J. Jardine, Esq., Langholm, N.B., the same exhibitor who at Glasgow last year staged the largest bunch on record of the White Syrian, weighing over 21 lbs.; the example this year was a trifle over 16 lbs.

Coming now to the *pièce de résistance* among the Grape classes. For ten varieties, one bunch of each, there was a grand contest, the examples from Mr. Hunter and from Mr. Johnston being very fine. Mr. Hunter staged 1, Muscat of Alexandria; 2, Mrs. Pince; 3, Raisin de Calabre; 4, Black Hamburg; 5, Golden Champion, 5 lbs. 3 ozs.; 6, Gros Guillaume, 9 lbs. 4 ozs.; 7, Black Alicante; 8, Lambton Castle Seedling (White Tokay); 9, Bowood Muscat (Muscat of Alexandria); 10, Pennington Hall Hamburg (Gros Guillaume), thus making in all only eight distinct varieties. Now, according to strict justice this collection ought to have been disqualified. The Judges, however, may have felt, as we felt, that it would have amounted almost to a cruelty to have done so; the exhibitor, no doubt, having shown them as, and believing them to be, distinct. The first prize of £15 was, therefore awarded to Mr. Hunter, who may be dubbed at present as the champion Grape-grower. The champion, Mr. Johnston, Glamis, made a good second. His examples of Raisin de Calabre, Buckland Sweetwater, Lady Downe's, Mill Hill Hamburg, Black Alicante, White Nice, Bowood Muscat, Aramon, &c. were very fine, the bunches averaging between 5 and 6 lbs. and being well finished. Mr. Hill, Keele Hall, came in third with much smaller but nice examples.

For five varieties of Grapes, one bunch of each, there was a strong competition—over twenty entries. Mr. Hunter was again placed first with very large and truly fine examples of Black Hamburg, 9½ lbs., a fine bunch; Black Alicante, Raisin de Calabre, Gros Guillaume, and Muscat of Alexandria. Mr. Bruce, gardener to J. Fildes, Esq., was placed second with very excellent examples also, but much smaller than Mr. Hunter's. For three bunches of Black Hamburg Grapes there were twenty-eight competitors, many of the bunches being of but ordinary quality. The first prize was most worthily awarded to Mr. Coleman, Ledbury, for three perfect examples, cut from a Vine sixty years old. The next lot in point of merit came from Mr. Hunter; the bunches were large, moderately well coloured, and with fine berries. These were, however, passed over for much smaller examples, a little better finished, from Mr. Temple, gardener to the Duke of Marlborough, Blenheim, and some similar from Mr. Bruce were third.

Colour seemed to be the test with the black Grape; but to be consistent the same rule should have been applied to the

white ones. In the very next class—three bunches of Muscat of Alexandria, the best ripened and the finest coloured lot came from Mr. J. Wakefield, gardener to R. F. Gretton, Esq., Burton-on-Trent, and these received no prize at all. The first prize was awarded to fine examples, large both in bunch and berry, but a little green, from Mr. Hunter. The second prize was awarded to Mr. Roberts, gardener to the Earl of Charleville, Charleville Forest, Ireland, for noble examples very large in berry, and of a peculiar delicate colour, but a little over-thinned. Mr. Meads, gardener to Raikes Currie, Esq., Farborough, was placed third with very pretty examples, having a most lovely tint. Many other excellent exhibits were made in the class.

For three bunches of any black Grape (not Black Hamburg), Mr. Coleman carried off the first prize with fine examples of Lady Downe's, very large in berry. Mr. Bruce was placed second with excellent Gros Guillaume, named Pennington Hall Hamburg. Mr. Meredith was third with Madresfield Court. Some fine examples were also shown of Muscat Hamburg and Alicante. In the corresponding class for white Grapes Mr. Hunter was again first with large and very fine examples of Golden Champion, Mr. Hill being second with Foster's White Seedling, and Mr. Goodacre, gardener, Elvaston, third, with Canon Hall Muscat. For the best collection of such kinds of Grapes as are not included in the other prizes offered, Mr. Hunter was again first with fourteen varieties of very good quality. Messrs. Lane and Son, Berkhamstead, exhibited twenty-one varieties, not so good, however, as in Mr. Hunter's, and received the second prize. For ornamental baskets of Grapes, not less than eight varieties, single baskets were staged, containing a bunch of each. The Grapes were good, but neither the baskets nor the manner of exhibiting was ornamental. Mr. Roberts, Charleville, obtained the first prize, Mr. FAnson second, and Mr. Upjohn third. Messrs. Lane & Son had an extra prize for a large very elaborate stand of eight baskets of distinct varieties, but which was anything but ornamental.

PINES.—Of these the exhibition in point of numbers was meagre, the encouragement given by the small prizes offered being small in comparison with the almost lavish expenditure for Grapes. If poor in number, however, in quality the Pines were extremely good. Mr. C. Sandford, gardener to the Earl of Bective, Kirkby Lonsdale, had the honour of producing the largest Queen Pine in England or anywhere else, so far as we know. We were curious to ascertain carefully the weight of this noble fruit, and found it was just 8 lbs. 4 ozs. It was, of course, awarded the first prize in the class for one Queen Pine Apple. The next surprise here was in the class for two Pine Apples, any other kind. In this Mr. Miles, gardener to Lord Carington, carried off the first prize with truly magnificent fruits of the Enville Queen, weighing respectively 9 lbs. 14 ozs. and 9 lbs. 9 ozs. These were certainly two of the finest fruits of that variety we have seen. Mr. Miller, Workop Manor, was first for the two Queen Pines; Mr. Jones, Frogmore, was first for the Smooth Cayenne; and for any other kind Mr. Miles was first with a fair fruit of Providence.

PEACHES, NECTARINES, AND APRICOTS.—Here Mr. Johnston, of Glamis, came well to the front. In the class for four dishes of Peaches, six in a dish, Mr. Johnston was first with very fine fruits of Noblesse, Grosse Mignonne, Sulhamstead, and Red Magdalen. Mr. J. Louden, gardener to T. Barnes, Esq., was second with two dishes of Noblesse and two of Royal George. In the class for twelve Peaches, three kinds, Mr. Malcolm, gardener to Lord Cholmondeley, Nantwich, was first with good examples of Royal George, Belle Beaunce, and Noblesse. Mrs. W. G. Siddall, Cheltenham, was second with Barrington, Grosse Mignonne, and Noblesse; and Mr. J. Barnes, Gloucester, third. For six Peaches, any kind, the competition was very strong. Mr. J. Park, Railway Cottage, was first with very fine Noblesse. Mr. Hind, gardener to Sir S. E. Moss, Bart., Roly, was second with Grosse Mignonne; and Mr. Beesley, gardener to R. Aders, Esq., Whalley Range, third with Grosse Mignonne.

In Nectarines, three kinds in fours, Mr. Grant, gardener to J. B. Glegg, Esq., was placed first with fine Elruge, Pitmaston Orange, and Balgowan; Mr. Cox second. For twelve Nectarines, three kinds in fours, Mr. Johnston staged some very fine examples, and obtained the first prize; the varieties were Duc du Telliers, Murrey, and Pitmaston Orange, all very fine. It is not a little remarkable that the best Peaches and Nectarines should come from so far north. For the best six Nectarines of any kind, Mr. Hind was first with very fine examples of Violette Hative; Mr. Malcolm second with Fine Apple; and Mr. J. Taylor, Huyton, third with Pitmaston Orange.

Apricots were poorly represented, the Moorpark being the only variety exhibited. Mr. Hill was first, Mr. E. Rooker second, and Mr. J. Larking third. For the best six fruits Mr. Malcolm was first, Mr. Jennings second, and Mr. Larking, Chipping Norton, third.

MELONS.—Of these a goodly number was staged as usual, but judging by appearances, the greater portion were very inferior. In the green-fleshed class Mr. D. T. Fish was the winner with a fruit named Queen Emma, but which was very distinct from

that variety. It was stated to be of very excellent quality, but its appearance was not at all prepossessing. Mr. Miller, Work-sop, was second with a variety named Lord Napier. Mr. Temple, Bienenheim, was first in the scarlet-fleshed class.

PLUMS.—Of these there was a fair supply, but they were not well displayed. In the class for twenty Plums, five kinds, Mr. Jones, Frogmore, was first with Magnum Bonum, Green Gage, Washington, Goliath, and Victoria, all very excellent examples. In the class for twelve Plums, Rivers's Early Favourite from Mr. J. Morris, Braintree, was placed first, Victoria (Denyer's) being second.

PEARS AND APPLES.—Pears, if we except the Jargonelle, were not well exhibited. Mr. C. Rylance, Ormskirk, was placed first with these for very good examples. In the collection of Pears, twelve kinds, two of each, the best lot came from Mr. Jones, Frogmore; they were, however, passed over. Mr. G. Miles obtained the first prize with Beurré Diel, Louise Bonne of Jersey, Gansel's Bergamot, Duchesse d'Angoulême, Pitmaston Duchess, Glou Morceau, Catillac, Brown Beurré, Knight's Monarch, and Williams's Bon Chrétien. This, as well as all the other collections, was placed on a small dish and huddled-up, having a very hilly appearance. The tickets, in many collections, were badly placed, and in some horrible mis-spelling occurred. The same remark applies to the Apples, the exhibition of which was very poor. Creditable examples stood forth here and there, but the great mass was miserable for an important show like this. Mr. Webb, of Calcut, was placed first for baking Apples, and Mr. Jones Frogmore, first for dessert in the collection classes. For the single dish of dessert Apples Mr. Webb was first with very fine examples of Red Astrachan.

Figs were not largely shown, the principal variety being Brown Turkey.

GOOSEBERRIES, considering the lateness of the season, were well shown, the chief variety being Red Warrington; the best coming from Mr. J. Hodder, Prestbury, Cheltenham.

CURRENTS, RED AND WHITE, made also a good display, the examples being very large and fine.

TOMATOES were here included amongst the fruit classes; whether intended for dessert or kitchen we were not informed. For four distinct kinds, three of each, the first prize was awarded to Mr. Hunter for four dishes which were decidedly all the same kind; at all events it was impossible for the Judges to observe any distinction.

FRUIT TREES IN POTS.—For two Vines in pots Messrs. Lane and Son had very large plants in large pots bearing an abundant crop of fair fruit. Peaches in pots were very poor, and the same remark applies to Figs. For two Pine Apples in pots in fruit Mr. Hunter, Lambton Castle, staged some good examples of a seedling variety which promises well. They were, however, quite green and unripe.

FRUITERS' COLLECTIONS.—Among the collections of fruit open to fruiters only some good exhibitions were made, the fruit in many instances being very fine and in great quantity. For the largest collection the first prize of £20 was awarded to Mr. Mason, Dolton. Mr. W. Copeland, Manchester, who was second, had a collection nearly equally good. In his stand we observed two large and fine baskets of Duke of Buccleuch Grape. In the class for collections of fifteen kinds of fruits the first prize was awarded to Mr. Robert Jennings, Manchester; in his exhibition, however, there were only fourteen kinds, so that he ought clearly to have been disqualified. Mr. F. Stevenson, Altrincham, was placed second. It is greatly to be regretted that the collections of fruit which were entered for competition in these classes by Mr. Thomas, Jersey, did not arrive in time. We believe they were detained on the railway and only reached the show-ground late on the morning of the opening day, and were refused admittance without the knowledge of the Curator. Instead of being exhibited, therefore, they were sold in Manchester market.

VEGETABLES.

Not the least interesting, though perhaps not the most attractive, part of this great Show at Manchester, was the collections of vegetables sent from nearly all parts of England. These vegetables were exhibited in a large tent on the north side of the conservatory, extending nearly its whole length. There was also a supplementary tent in another part of the grounds adjoining the promenade or open space in front of the range of booths, which was set apart for the exhibition of Potatoes, of which there was a large and most interesting collection, and to which we shall refer again.

In the large tent adjoining the conservatory, the first thing that struck us on entering was a remarkably fine collection of vegetables shown by Mr. John Holder, of Cheltenham, to which the first prize was awarded. The wording of the schedule, "For the largest and most meritorious miscellaneous collection of vegetables, including all kinds" (open), left much to the individual judgment of the exhibitors, and we are glad the Judges did not give the prize to a merely overcrowded collection, but to one very meritorious, and having quite quantity and diversity enough to bring it within the true meaning of the schedule.

The vegetables which we remarked as particularly good were the Cauliflowers, Red Cabbages, Garlic, Celery, Cucumber (Holder's Dreadnought, a fine seedling of Mr. Holder's, which looks very promising, somewhat of the type of Blue Gown, but rougher in the spine, apparently a quick grower), Beet, Parsnips, Tomatoes, Mushrooms, Vegetable Marrows, and Custard ditto. The Potatoes were not remarkably good, at least we thought both the Early Rose and Red-skinned Flourball coarse though large. Paterson's Victoria was good. Amongst other vegetables in this collection we saw that useless introduction, the *Raphanus caudatus*, or Rat-tailed Radish: we had sincerely hoped we had seen the last of it, but we suppose in a collection for miscellaneous varieties some persons might be found to admire it. The second prize went to Mr. John Turk, Railway Cottage. In this collection the Onions were especially fine. We could have wished for better nomenclature; in fact, this was a desideratum in many cases both in fruit and vegetables, the names often carelessly written and badly spelt, on small torn pieces of paper. In this collection Nonpareil Cabbages were labelled as Non-perial, Capsicums as Capsicums, &c. Amongst the fruit, especially among the Apples, we noticed not merely bad spelling, but many dishes altogether incorrectly named. This, no doubt, is to a certain degree unavoidable, but correct nomenclature adds very much to the value of an exhibition, as many persons like to correct the names of their own fruits and vegetables by those exhibited at large shows, and we think it would be a good thing if competent judges were, after the awards are given, to correct any undoubted mistakes. The third prize in collections of miscellaneous vegetables went to Mr. R. Gilbert, of Burghley, from the Marquis of Exeter's garden. This collection was very nicely staged, the different kinds of vegetables being separated by the longer-growing kinds, such as Cucumbers, Celery, &c. Onions, Nuneham and Giant Rocca, very fine; Potatoes, Beaconsfield and Premier, good; Carrots, James's Intermediate, very good; Custard and Moore's Cream Marrow, Canadian Wonder Bean, and Veitch's Giant Cauliflower, all good. There were seventeen entries for the large collections of vegetables, but there were several absentees—so much so, that a large collection of French Gladioli was staged in the empty space, and though not to be compared with the English-grown Gladioli shown by Mr. Kelway, yet considering the season is nearly over for French Gladioli, there were many very interesting flowers sent.

The collections of fifteen kinds of vegetables followed next. Here the premier prize was very easily taken by a remarkably fine assortment of vegetables exhibited by Mr. G. Miles, gardener to Lord Carington, showing that Mr. Miles not only excels in forced fruit, as the reports of the South Kensington fruit shows so often remind us, but that he equally excels in that important department, vegetables. His collection comprised some wonderful specimens of Student Parsnip and Altrincham Carrot; also very fine Early White Naples Onion; Peas, Laxton's Superlative, no doubt a fine exhibition sort, and which, we are informed, is also good for the table, though in our opinion many of the larger-podded Peas are somewhat deficient in flavour: Celery, Leicester Red; Cauliflower, Veitch's; Cucumber, Blue Gown, were also good. The only fault we were inclined to find was with the Prince of Wales Potatoes, which seemed too coarse for the table. We may remark that this seemed to us too general a fault with the Potatoes in the collections of vegetables; with some few exceptions size seemed to have been sought for at the expense of quality. The other vegetables shown to complete Mr. Miles's number were Tomato Trophy, Artichokes, Vegetable Marrows, Brussels Sprouts, Yellow Malta Turnip, and Broad Beans, which were not over-good. The second and third prizes were taken respectively by Mr. John Holder, of Cheltenham, and Messrs. Copeland & Doran, Stretford. Out of nineteen entries there were thirteen that came forward.

In Class 77, for ten varieties of vegetables, there were thirty-one entries, and nearly all who made them came forward. The first prize was awarded to Messrs. Snowden & Son, Thirsk, and we hardly ever remember to have seen a more uniformly good assortment. We give the names. Carrot Long Surrey, Cucumber Marquis of Lorne, two of the best of the kind we ever saw; Cauliflower Veitch's Giant, Celery Wright's Grove, Tomatoes Trophy, Onions Nuneham, Beans Newington Wonder, very good; Peas Snowden's Nonsuch, a good variety; Marrows, Vegetable Cream; and last, but not least, Potatoes, Lapstone, the best dish of Potatoes in this tent. The second and third prizes again fell, as in the last class, to Mr. John Holder and Messrs. Copeland; but we need not enter into details of the varieties shown.

In Class 78, for six varieties of vegetables, there were again thirty-one entries, with very few absentees. Mr. Miles was again first, as he was in the fifteens; Sir P. Duncombe second; W. Skinner, Esq., Cheltenham, third. Mr. Miles showed nearly the same selection of vegetables as to sorts as in his fifteen, with the exception of the Potatoes, which, to our mind, were better than those in the fifteen, being fine samples of Ashleaf.

We pass over for the present Classes 79 and 80 for twenty-four and twelve varieties of Potatoes, as they were, as before said, in a separate tent. In the next, Class 81, for two Cauliflowers, there was a large entry, but the prize was easily won by Mr. Hunter, gardener to the Earl of Durham—another instance of a gardener successful both in fruit and vegetables.

In Cabbages, white, the prize was won by two huge specimens, which would have required nothing much less than a twenty-gallon copper to have boiled them in, and two cooks to have taken them out when boiled. The competition for Savoys was close, and the Judges must have had some difficulty in coming to their awards. The same may be said, too, with regard both to spring-sown Onions, for which there were nearly fifty entries, and for Tripoli, in which Mr. W. Skinner, of Cheltenham, gardener to H. Askall, Esq., carried off the prize with Large Red. For Turnips, six white and six yellow, there was a very pretty dish shown by Mr. A. Fallows, of Stretford, very small and very clean, to which was awarded the first prize, the second falling to Mr. J. Rylands, Warrington.

There was a remarkably good collection of Carrots shown, the first prize being adjudged to Mr. E. Smith, Cheltenham, for a short but even Carrot, very clean in the skin, called Nantes; the second to Mr. J. Turk for Long Red. The whole class was good. We cannot say the same for the next class, the Peas, for though there were about sixty entries, yet there were none of any particular merit; still it is somewhat late for good Peas.

The Dwarf Kidney Beans were good, the first prize being carried off by Mr. Lumsden, gardener to Lady M. Nesbit Hamilton, Sleaford. In twenty-four pods of Scarlet Runners there was also a large competition.

The Vegetable Marrows comprised, as usual, every size and quality from the huge Pumpkin Squash to the Vegetable Cream. This is always a difficult class to adjudge, and the Judges, wisely in our opinion, gave the prize to some medium-sized evenly-grown Marrows fit for present use.

For the brace of Cucumbers we may almost repeat our remarks. These were shown in every size and every quality—long and short, rough and smooth, dark green and light green: there were Cucumbers out of the fifty-three entries which would suit every taste. The first prize was won by a very smooth and round, and evenly-grown pair, shown by Mr. Fallows, of Stretford. Mr. John Heywood, of Stretford, was second; and Messrs. Copeland & Doran, of Stretford, fourth, and, oddly enough, these were the only exhibitors from Stretford, and each won a prize. Are the good people of Stretford particularly fond of salmon?

Classes 91 and 95, for Lettuces, were not good. In Class 96, for Celery, Red; and 97, for Celery, White, the exhibits were good and the competition close. The other exhibits of Gourds, Beet, and Leeks do not require much notice.

We will now turn to the Potato tent, which to our mind was the most interesting feature in the vegetable exhibition. Lovers of the æsthetic art might say there was not much to please the eye in a large tent about 100 feet by 50, devoted entirely to Potatoes in dishes, there being no less than 861 dishes in competition, and one hundred varieties shown by Mr. Harrison, of Leicester, not for competition; but unless all the dishes were cooked, there is no better way of judging the merits of Potatoes than by comparing the different qualities of sorts as shown from different localities. In Class 79, for twenty-four varieties of Potatoes, eight in a dish, there were thirty-two entries, but nine of them did not exhibit. The first prize was carried off by Lady Mary Hamilton, of Sleaford, gardener Mr. Lumsden. Second by Mr. Peter MacKinlay, Beckenham. Third by Mr. Richard Dean, of Ealing. The winning collection comprised the following:—Harrison's Red-skinned Flourball, coarse; Early Rose, Bresee's Prolific and Peerless, both coarse; Callao, a deep red variety; King of the Earlies, The Bloomer; Lapstone, good; Climax; Ashtop Fluke, very fine and good; Dunbar Regent, a fine-looking Potato; Carter's Maincrop, a fine-looking red variety, but we are informed of questionable quality; Victoria Paterson's, good; Prizetaker, fine; Paxton's Wonder, Prince Teek, Milky White, Willard, a very coarse-looking red; Jackson's Seedling, promising; Sandringham Kidney, Veitch's Improved Ashleaf, Dorrington Hero, the three last much of the same class of Potato. The above lot of Potatoes were on the whole fine, but seemed deficient in quality, especially the Americans, which were very full of eyes. In the second-prize lot, by Mr. Peter MacKinlay, of Beckenham, were Prince of Wales, fine; Late Rose, coarse; Hayes Kidney; Early Rose, rough; Bresee's Peerless, fine-looking; Salmon Kidney, good; Hundredfold, Climax, Bresee's Prolific, Ashtop Fluke, Duncan Seedling, red and coarse; Pioneer, a white Kidney; Early Emperor, red; Headley Nonpareil, showing signs of disease; King of the Flukes, and King, these were in our opinion quite identical, neither of them being King of the Flukes; Lady Parrot, Royal Albert, Lapstone, good; Wheeler's Milky White, Sextus, a very good-looking Potato, Parkes' Seedling, Reston Pippin, diseased; and Champion. The third prize was won by Mr. R. Dean, of Ealing, with a very interesting collection, comprising some of Mr. Fenn's seedlings, and some very high-quality Potatoes,

decidedly better in point of quality than the first two collections, though not so large. Among the best, Woodstock Kidney, Seedling of 1871, Fenn, English Rose, Rector of Woodstock, Onwards, all seedlings of Mr. Fenn's, with remarkably fine skins and small eyes. There was also a promising seedling of Mr. Dean's called Cottager's Red. Waterloo, Lapstone, and Yorkshire Hero were also very fine, though we are inclined to think Yorkshire Hero only an improved Lapstone, and doubt if it is really a variety, but only a selection. The worst two Potatoes in this collection were Scotch Blue and Surprise. Amongst others, King of the Flukes was the best we have ever seen of this sort, and a kind called Belgian Kidney seemed nearly identical with Salmon Kidney. Are they synonymous?

In the class for twelve varieties there were forty entries, of which there were twenty-six exhibited. Here the first prize was easily carried off by Mr. Dean, and we never remember to have seen a better quality of Potatoes exhibited. The varieties were a selection from those shown in the twenty-four, and we need not particularise, except to notice the very fine examples of Rector of Woodstock, Onwards, and Yorkshire Hero. The second prize was again adjudged to Mr. Peter MacKinlay for a collection which we liked better than his twenty-four, as some of the coarser ones were eliminated.

The collection of a hundred varieties of Potatoes shown by Messrs. Harrison & Sons, Leicester, was very interesting, but our space will not permit us to particularise further. Of one thing we were convinced, that Hundredfold is only an old variety, called Gleeson's Late, come up again under a new name. The two were shown near together in this collection, and we could not find any difference whatever. This Exhibition has more than ever confirmed us in our opinion that we need not go to America for new sorts of Potatoes, nearly every kind of American Potato exhibited being coarse, with deep-set eyes, or with a great number of protuberant eyes on the flat part of the Potato. They may be great croppers, but unless they are far better than they look we are gaining in quantity at the expense of quality; and if immunity from disease is aimed at, owing to stronger and more vigorous growth, we can only say that almost the first specimens of thoroughly diseased Potatoes we have seen this year were Red-skinned Flourball, which were pronounced proof against disease, and we do not believe any Potato has ever or will ever achieve the hoped-for pedestal of fame of being able to resist the insidious attacks of the "Peronospora infestans," and at all events we seem at present to be stepping in the wrong direction when the exhibition tables are filled with such sorts as Early and Late Rose, &c.

We must not omit honourable mention of a very large and fine assortment of vegetables shown by the Loughborough Horticultural Society in one of Mr. Perry, of Banbury's, greenhouses. We especially noticed the Cauliflowers, Veitch's Antuan Giant being very fine. The Onions were also very good, likewise the Potatoes. We append the following particulars furnished to us by Mr. Pickworth:—"There were thirty-nine different kinds of vegetables, all grown within a radius of three miles of Loughborough, and almost exclusively the productions of amateurs and artisans. As nearly as could be ascertained, the weight exceeded a ton. They were staged by Messrs. Smith, Hickling, and Mountney, of Loughborough; Mr. McLean, gardener to Col. Packe, of Prestwold Hall; and Mr. Lane, gardener to W. P. Herrick, Esq., of Beau Manor Park, President of the Loughborough Horticultural Society. Regret was felt at the small competition in this class, as the Loughborough Society sent their collection more to measure their strength than for pecuniary compensation. The expense incurred exceeded £20, all of which was met by the contributors, the Society's funds not being interfered with."

CUT FLOWERS.

Although fruit and vegetables formed the main feature of this grand autumnal Exhibition, the finest that has ever been held, yet with that wisdom which has for years marked the proceedings of the Manchester Botanical Society, flowers and plants formed by no means a contemptible portion of it. Liberal prizes were offered, and the result was the gathering together a fine collection of autumn flowers. Foremost amongst them, as acknowledged on all hands, was my favourite the Gladiolus. Mr. Kelway has many a time exhibited collections of his fine seedlings, but he never had such an opportunity of setting forth their excellencies as on this occasion. At one end of the avenue there was a mound, and the front of this formed a crescent; into this Mr. Kelway had inserted several hundreds of his seedlings at about a foot apart, and covered the whole surface with lawn mowings, and nothing could possibly be more effective, as tier above tier they rose, each standing separate, not one hiding the other, and many of them of singular beauty and excellence; while on the stands for competition he had placed some of his very finest. In the class for twenty-four he was, of course, first with Meyerbeer, Virgile, and the remainder his own seedlings, foremost amongst them being Xerxes, Helioid, Dunbar, Protherus, Helle, Lady Bridport, J. Thompson, International,

Una, Rosa, Zeta, and Canova. Mr. Witherspoon, Chester-le-Street, was a very creditable second, and I would draw especial attention to his collection for several reasons. In the first place, his garden is 2½ yards square, and yet he managed to show in a collection, and in twenty-fours, besides showing at Bishop Auckland last week; in the second place, with the exception of three flowers, his twenty-four were all Mr. Banks's seedlings bought at 20s. per 100; and in the third place, he had introduced the innovation of putting in Asparagus foliage to hide the naked stems, and I am free to confess the effect was good. I think he deserves immense credit for the zeal he has displayed in Gladiolus culture, and Mr. Banks will be surprised at the position his rejected seedlings have taken in Mr. Witherspoon's hands. In the class for twelves, Mr. Kewley put forth his strength, and exhibited some magnificent flowers, all, with the exception of one, his own seedlings. He had Orange Boven with sixteen flowers open, Orvil, Amarus, Mrs. Reynolds, and others, seven of them being awarded certificates. Lord Hawke was second with some grandly finished flowers—Le Titien, Lacépède, Horace Vernet (magnificent), Marie Stuart, Legouvé, Le Phare, Norma, Madame Furtado, Eloise, Margarita, and Eugene Scribe.

Next in grandeur to the Gladiolus—probably preferred by some—were the Hollyhocks, and here Lord Hawke was *facile princeps*. Probably twelve such spikes were never before exhibited, and with one or two exceptions they were all his own seedlings. Midnight and Leviathan were the exceptions. The seedlings were Vanguard, Golden Eagle, Excelsior, Mauve King, Oridamme, Eleanor, Isabel, Blanche, Talisman, and Lilae Rival. The second prize was taken by Mr. Harrison, of Darlington; and the third by Mr. H. Minchin, Hook Norton. In twenty-four cut blooms the same exhibitors occupied the same position. Lord Hawke's flowers were Red Cross Knight, Phryne, Harold, Walden Queen, Golden Eagle, Mr. Oates, Conquest, Goldfinder, Walden Princess, Seedling Blush, Talisman, Blanche, Majestic, Exhibitor, Formosa, Vanguard, &c. In six spikes Lord Hawke was again first, and Mr. Harrison second.

Dahlias were well exhibited by Messrs. Clark, Walker, &c. The best thirty-six comprised Sir Greville Smythe, Acme of Perfection, Guardian, S. Naylor, Thomas Hobbs, Ne Plus Ultra, In Memoriam, J. N. Keynes, Mrs. Boston, Chairman, Thomas Goodwin, Mrs. Dodds, Fanny Wyatt, Hebe, Vice-President, Criterion, Toison d'Or, Pearl of Beauty, John Standish, James Bennett, Chancellor, Annie Neville, Favourite, Lady Gladys Herbert, Baron Taunton, Yellow Boy, Delicata, Peri, James Cocker, and W. P. Laird. These were exhibited by Mr. Clark, of Leeds; and Mr. Walker, of Thame, was a good second. The two great competitors of late years, having retired—Mr. Keynes, of Salisbury, and Mr. May, of Bedale, the field is now open for other competitors.

It was not to be expected that Roses would be very good, nevertheless Mr. Prince, of Oxford, had a very fine box from his cultivated Briar stock, which were exceedingly good for the season. They were Mons. Laurent, Dr. André, La France, Sénateur Vaisse, Madame Lefebvre Bernard, Charles Lefebvre, Paul Neron, Madame de Ligneris, Comtesse d'Oxford, Annie Wood, Clémence Raoux, Madame Victor Verdier, John Hopper, Louis Van Houtte, Baron Haussman, Alfred Colomb, Emilie Haushburg, and François Michelon. He had also a most wonderful box of Paul Neron.

Asters were also well exhibited, and Messrs. Cole's collection of cut flowers was exceedingly fine, comprising fine bunches of *Masa coccinea*, *Allamanda cathartica*, *Odonoglossum grande*, *Erica austriana*, *Miltonia spectabilis*, *Isora Williamsii*, *Stephanotis floribunda*, *Statice profusa*, *Erica amula*, *Stanhopea grandiflora*, *Lapageria rosea*, *Aërides suavisimum*, *Erica Jackmannii*, &c.

BOUQUETS, &c.

There was in these classes a very good competition, and exceedingly well arranged were some of those which obtained the prizes. The first prize for wedding bouquets was taken by Mr. F. Perkins, Leamington, for one a little too large, perhaps, but very beautiful, in which *Pancretium illyricum* had been admirably utilised, with white *Camellias*, &c. Mr. Turner, of Liverpool, was second, and Mr. Yates, of Sale, third. The latter, however, was first for three ball bouquets, the most exquisitely tasteful I have, I think, ever seen; there was such delicate harmonising of colour, such absence of vulgarity or lumpiness, that they were really deserving of all praise. The same gentleman took first for three stands for the dinner-table, faulty in some respects—hiding the guests from one another—but yet arranged with so much elegance that it was necessary to overlook these defects. Mr. Cypher was second with three of the stands he generally uses; they were, of course, well arranged, but there was somewhat of heaviness at the base, and the flowers had been a little too long cut. Mr. Turner was third. Mr. Yates was the only exhibitor of a stand for the drawing-room; it was, however, marked by his usual good taste. In the plant cases for drawing-rooms, Mr. Pforsdorff, from Paris, took first with a case containing a collection of dwarf succulents, very lively and very effective. I have, I fear, outrun my space,

but I cannot conclude without bearing my humble testimony to the excellence of the arrangements, or without tendering my thanks to Mr. Findlay for the courtesy with which we were treated, and the manner in which all our wants were so admirably provided for.—D., Deal.

THE DINNER.

As already stated in our introductory remarks, the dinner was held on the evening of the opening day in the Hulme Town Hall. The Earl of Derby presided, supported by the Mayors of Manchester and Salford. After the customary loyal toasts

The CHAIRMAN (Lord Derby), remarked: I need not tell you that ours is not a political gathering [hear]. I need hardly add that it is not a gathering of a very formal or ceremonial kind [hear, hear], and I hope that fact will plead my excuse when, in compliance with the suggestions of those who are responsible for the arrangements of this evening, I pass over various toasts which, on a more solemn occasion, it is usual and might have been desirable to propose [hear, hear]. I do not think the members of the House of Lords and the House of Commons, of the army and navy, and of the clergy [hear, hear], will feel themselves particularly aggrieved because they are not called upon severally and collectively to answer for their healths [hear, hear]. If they are I beg to say in anticipation that the omission does not imply any disrespect to them [hear, hear]. I come, therefore, at once to that which, upon these occasions, is called the toast of the evening; and before I sit down I shall ask you to drink "Prosperity to the Manchester Botanical and Horticultural Society" [hear, hear]. I can propose that toast the more briefly because that prosperity which I wish for the Society is not now, as it might have been years ago, a thing to be wished and hoped for, but hardly to be expected. It has in a very great degree become, and it is becoming in a still greater degree, an accomplished fact [applause]. The Society has passed through many troubles, and undergone many difficulties—as most of us, whether individuals or institutions, do in the course of our days [laughter]; but I think that we see land at last, and that there is now before us a reasonable security that we shall not come to failure in the long run [hear, hear]. I dare say there may be many people to whom the idea of establishing a botanical society or holding a horticultural exhibition in the very heart of the Manchester district may seem—of course I am speaking of people a long way off—like an attempt to grow Grapes in Norway, or set up a cotton mill in a West India sugar island [laughter], for of course we must allow that the presence within a few miles of us of something like a million of population, nearly all of whom are engaged in trading or manufacturing pursuits, with an accompaniment of more machinery and probably more smoke than is to be found elsewhere in the same compass anywhere in these islands—that these are not circumstances which would promise well for the success of botanical or horticultural displays. But there are not many things impossible to human energy [hear, hear]. That is a doctrine which is pretty thoroughly impressed upon us in Lancashire, and just in proportion as the display and as the preservation of rare and beautiful specimens of horticultural skill is rendered difficult for us by the local circumstances of our position, just in the same proportion those who live in this neighbourhood are the better prepared to enjoy sights which contrast in so striking and marked a manner with those which are habitually before our eyes [applause]. I once heard a friend of mine say that there was one advantage of living in a great town, and that was that you thoroughly appreciated the country [laughter], which, he contended, rural residents never did or could do, because, being used to it, they took all the beauty and all the enjoyment of what was around them as simply a matter of course. Now, I do not go so far as that; but I think we may see in this case the operation of that universal law of nature which tends, as far as it goes, to lessen the differences of human conditions—the law, I mean, by which all advantages and all sources of enjoyment are keenly appreciated, just in the degree in which they are obtained with difficulty, and in which they are rarely available. Well, now, gentlemen, you will not expect me to argue about or to explain the general advantage which arises from exhibitions such as that which we have witnessed this morning. There are some things which are too plain for argument, and which illustration can only serve to make less clear. I suppose we may all take it for granted that the English people, in these days, are coming more and more to be inhabitants of great towns. That is, as I suppose, a necessary condition of our present industrial existence. Under the system of machinery now only beginning to be introduced, rural labour will be performed with fewer hands; the rural population, if it does not diminish, will probably, at any rate, not increase; and co-incidental with that state of things you will have the continual expansion of our great towns with a perpetual increase of manufactures and of trade; and you have, in addition, the creation of new urban communities, such as that of Barrow, in the north of this county—a process which is proceeding with a rapidity which seems rather to belong to a new

than to a very old country. It is, of course, open to us all to have an opinion on the subject whether that change is or is not an unmixed gain. For my own part I think that it involves some disadvantages of a very obvious kind both in a social and in a sanitary point of view; but whether we like it or not, that change is inevitable; and we have only to accept it, and to make the best of it we can [hear, hear]. If, for the majority of us, life within a town has become inevitable, what we have to do is to try to meet by artificial means the requirements of a more artificial existence [applause]. If we are shut out from the wild scenes of nature, or at least if we are compelled to go to longer and longer distances in order to find them, we may in some degree compensate ourselves by assembling, in a place like this, natural creations more choice, more beautiful, and more varied than nature unaided will ever show you within the limits of any country [applause]. We can make our selection out of all countries and all climates, and we can show to the natives of India and to the natives of tropical America, in what they would probably consider—I do not call it so—a damp and smoky suburb of a Lancashire town, a larger number of their own most exquisite products than any of them would probably have seen in their own countries in the whole course of their lives [hear, hear]; and to do this as far as we are able to do it is not, as I look at the matter, a mere *tour de force*; it is not a mere display of man's power over nature; it is a real, although it may be a comparatively humble contribution to the cause of general refinement and civilisation [applause]. A man need not be a fanatical worshipper of art in any one of its forms to believe, as I do believe, that no one could have a thorough appreciation of natural or artistic beauty, without being better for the existence of that feeling in his mind [applause]. And I take it that of all forms in which that feeling exhibits itself, there is none which comes so home to an average Englishman as that of a garden [hear, hear]. We are by habit, by tradition, and by temperament, an out-door people [hear, hear]. We like museums and picture galleries very well; but if we are to tell the truth we like our gardens, our forests, our commons, our parks, and our moors a great deal better [applause]. Even in crowded lodgings and in dirty streets you will see the evidence of that feeling. Where nothing better can be got at, you will see a few flower pots outside a window [hear, hear]; and the same instinct which puts these unfortunate flowers in that situation produces also an exhibition such as that which we have seen to-day [hear, hear]. I think, and I hope, that the time is not far off when every large town, and almost every small town also, will have its public garden, and will consider that having a public garden is simply a recognised institution and almost a necessity [hear, hear].

Foreigners—Frenchmen and Germans—are before us in that respect. Now I have often noticed that it is a way we have to be a little behindhand in matters of social improvement, and then we come up all of a sudden, and with a rush make up for lost time in a very few years [applause and laughter]. Well, I won't dwell here, because I am talking about what you know better than I do ["go on"] upon the mere utilitarian consideration of its being a desirable object to obtain an abundant and cheap supply both of vegetables and fruit. I am told by those who are more able to speak authoritatively than I can, that both might be much more abundant and cheaper than they are if horticulture were more generally studied than it is [hear, hear]. And obviously the art which aims to extract the very most out of a limited quantity of land by the application of scientific skill and of human and mechanical labour, is an art peculiarly suited to our conditions; labour, scientific knowledge, and mechanical skill being abundant, and land, as we know, being rather limited [hear, hear]. Of course I shall not speak of the increase in the supply of fruit as an important object, if you look at it merely as a contribution to the comfort and luxury of those who have many comforts and luxuries at their command; but there is another side to that question also. Go to any hospital and ask any doctor, and he will tell you how much relief of suffering might be obtained, and how much real good might be done, if, for instance, a cheap and abundant supply of Grapes were at his command [hear, hear]. So much for the general subject. You will expect me, probably, to say a word or two as to the position of the Society, in whose interest and by whose agency the exhibition of this day has been got up. The Manchester Botanical and Horticultural Society has reached a very respectable time of life. It was born in 1824. For many years it had a prosperous existence, I am told. In 1857 it began to find itself in that position in which many enterprising and energetic individuals have had the misfortune to be placed. The funds ran rather short, and some attempts at holding exhibitions on a large scale were not so successful as they deserved to be; and I believe between the date of 1857 and 1862 there were serious doubts whether it would be possible to continue the Society permanently. Then came a crisis; various efforts were made, I need not trouble you with the details, especially as I knew nothing about them a week ago, and shall probably remember nothing about them a week hence [laughter]; but the turn, as I am instructed, came in the year 1867. At that time it was

determined to adopt a bolder policy, and to hold a general exhibition, intended for the whole country, and not merely for a limited locality. That bold experiment having been tried, it completely verified the old popular saying that there is nothing so expensive as being poor, and that nothing succeeds like success [applause]. I am instructed that in these exhibitions the Society invested a great deal of capital, when perhaps it had not too much to spare. The result was triumphant. Their money came back to them with ample interest. The first large exhibition which was held produced a profit of something like £500; and in the last six years the result of following that policy has been that the debt, which at its maximum stood at £9000, has been reduced to £6500 [applause]. Well, contemporaneously with that, very great improvements have been made in the gardens, and especially in the increase and improvement of those houses which are intended for delicate tropical plants. Last year, as my brief has it, the receipts of the Society were £4000, and the expenditure was about £3500, leaving £500 to the good. The present exhibition is the first which has been held in the autumn, and I think it differs in various respects from its predecessors. I am told that the entries amount to 2400, a number which has never been reached before. I am assured by those who ought to know, that from a horticultural point of view this will be quite the most important exhibition which has ever been held in the northern parts of England [applause]. I suppose I ought to add, what I mentioned this forenoon, that about £5000 has been given in prizes in the course of the last six years. That, I need not say, is very great encouragement and a great stimulus to horticultural art in all its branches, and not only has it been a great encouragement to horticulture generally, but that large and liberal expenditure has resulted in great benefit to the Society itself [applause]. Now, I have only one word to add in conclusion. Everybody has got his crotchet, and I suppose I have mine. I have no great faith in any thing or any body, individual or institution, really getting on as he or it ought to do while he or it is burdened with a millstone of debt. I told you that the burden of debt upon this institution had been diminished, but it is still considerable. I have not spoken to any member of the Society upon the subject; and, therefore, in what I say I alone am responsible for what may be a misplaced suggestion. I don't at all know what the Council or the members of this Society would say if it were proposed to them that an appeal should be made to those who are interested in this matter to put them upon a thoroughly sound financial footing. I can only say, expressing my own opinion, that I think—considering their public character—considering that no member of the Society desires the slightest financial advantage from anything that is done in that way—and considering the useful nature of the work that they do, they might fairly and honourably accept any help that is offered to them in that way for the interest of the public and for the cause in which they are working. Now, I should not have thought it was a difficult thing to find twenty or thirty people in Manchester to each of whom the parting with £100 note would be an operation so familiar and so customary that they would hardly know they had done it [laughter]. I even venture to think that we have a few such in this room, and the practical conclusion to which I am leading is this—that if we are really interested, as I for one am, in the future and in the work of this Society, I think it is quite worth our while to consider whether we may not do something more effectual and more substantial in that line than merely making speeches about it or cheering the speeches which are made. I won't presume to pursue that subject further. I propose to you "Prosperity to the Manchester Botanical and Horticultural Society" [applause].

Dr. J. WATTS (Chairman of the Council) returned thanks.

The CHAIRMAN said, before proceeding to other business, he wished to intimate that the hint which he had ventured to throw out had so far borne fruit that six gentlemen had offered 100 guineas each if the debt of £6500 was paid off, and, in humble imitation of them, he offered himself as the seventh [applause]. He then proposed the toast of "The Exhibitors."

After the health of the Judges and other toasts, the meeting terminated.

CRYSTAL PALACE FRUIT AND GLADIOLUS SHOW.

THIS was held on the 6th and 8th inst., and although not so extensive as the autumn shows of years gone by, it was, nevertheless, an excellent and effective display, and welcome as supplying the long-felt want of a metropolitan autumn fruit show. Had the date been further on in the season, no doubt the entries would have been much more numerous; and another drawback was that the Show commenced on the last day of the Manchester Exhibition, so that it was impossible for exhibitors at the latter to place their productions in competition at the Crystal Palace. The setting-up of the fruit and flowers was very good, and the arrangements made by Mr. Wilson, the courteous Superintendent of Shows, were admirably carried out.

The best collection of fruit came from Mr. W. Coleman, gardener to Earl Somers, Eastnor Castle, Leebury, and consisted of magnificent Black Hamburg Grapes, very large in bunch, handsome in shape, not large in berry, but very even; and beautiful in colour and bloom; fine Muscat of Alexandria, a Queen Pine, Golden Gem Melon, Royal George Peaches, Pitmaston Orange Nectarines, Brown Turkey Figs, and Jefferson Plums. Mr. F. Deuxberry, gardener to the Earl of Darnley, Cobham Hall, was second.

In Pine Apples, the best three fruits of any variety came from Mr. H. Plummer, gardener to R. Thornton, Esq., Cannon Hill Park, Merton, the variety being Smooth-leaved Cayenne. Three fine Queens, not quite ripe, from Mr. C. Harris, gardener to C. Bailey, Esq., Llanfoist, Abergavenny, were second; and Mr. Eveleigh, gardener to R. W. Thornton, Esq., Frenowle, Sidmouth, was third with Black Prince not quite ripe, Antigua, and Smooth-leaved Cayenne. For a single fruit of any variety, Mr. C. Harris was first with an excellent Queen; Mr. M. Rochford, Page Green, being second; and Mr. T. Page, gardener to W. Leaf, Esq., Streatham Common, third.

In the class for three bunches of black Grapes, Mr. Coleman was first with splendid Black Hamburgs; Mr. Holliday, gardener to J. Norris, Esq., Bletchingley, second with good Muscat Hamburgs; and Mr. W. Gammon, gardener to C. Boosey, Esq., Bickley Park, third with Alicante.

For three bunches of white Grapes, Mr. Coleman was again first with large, well-ripened Muscat of Alexandria; Messrs. Lane & Son, Berkhamstead, second with the same kind, but not so ripe; and Mr. Cole, gardener to J. S. Budgett, Esq., Ealing Park, third. Mr. Gammon also sent good bunches.

For the largest bunch of any variety, Mr. Bones, gardener to D. McIntosh, Esq., Havering Park, Romford, was first with Black Hamburg, weighing 6½ lbs., large in berry, but red. Mr. Coleman was second with Black Hamburg, finely coloured, weighing 4 lbs. 10 ozs.; and Mr. Douglas, gardener to F. Whitbourn, Esq., Loxford Hall, Ilford, third with Mrs. Pince's Black Muscat, very meritorious, of the same weight, large in berry.

Of Peaches and Nectarines, there was a good display. Of the former the principal varieties shown were Royal George, Noblesse, Barrington, Walburton Admirable, and Late Admirable; of the latter *Violette Hâtive*, Pitmaston Pine Apple, Pitmaston Orange, and Downton. The first prize for Peaches was taken by Mr. Jones, of the Royal Gardens, Frogmore, with Barrington, very large and fine; the second by Mr. King, gardener to R. Loder, Esq., Slangham, Sussex, with Royal George, large and finely coloured; and the third by Mr. Joseph Smith, gardener to J. Swift, Esq., Eastbourne, with Late Admirable, very fine. Mr. Tillery, gardener to the Duke of Portland, Welbeck, sent large fruit of Walburton Admirable, and there were several good dishes of Royal George. For Nectarines, Mr. King, gardener to R. Loder, Esq., was first with fine examples of *Violette Hâtive*; the second place was taken by Mr. T. Frost, Bower Nursery, Maidstone, with richly-coloured fruit of Pitmaston Pine Apple; Mr. J. Smith, gardener to J. Swift, Esq., Eastbourne, being third with Stanwick.

Of Melons there was a good show. The best Green-fleshed was Hybrid Cashmere, from Mr. Burnett, gardener to Mrs. Hope, The Deepdene, Dorking; the second best, Beechwood, from Mr. Dedman, Bromley; and Mr. Holliday came in third. The other kinds shown in this class were chiefly Heckfield Hybrid, Cox's Golden Gem, Golden Queen, and Colston Bassett. For Scarlet-fleshed, Mr. Shaw, gardener to H. R. Price, Esq., Epsom, was first; Mr. Richbell, Tadworth, second; and Mr. Cole third.

Figs were few. Mr. Chisholm, Boughton Place, Maidstone, was first with Brunswick, large; Mr. J. Smith, gardener to J. Swift, Esq., second with Brown Ichia; and Mr. G. Munn, gardener to Mrs. Mecking, Richings Park, Slough, third with Brunswick.

Of Cherries about a dozen dishes were shown, and these, almost without exception, Morellos, and very fine. Mr. Sage, gardener to Earl Brownlow, Ashridge, was first, Mr. Deuxberry second, and Mr. Holder, gardener to W. Balston, Esq., third.

Plums were neither so numerous nor so fine as we have seen them at the autumn shows of former years. The best three dishes consisted of fine fruit of Victoria, Transparent Gage, and Jefferson from Mr. Douglas. Mr. Sage was an excellent second with Kirke's, Jefferson, and Goliath; Mr. J. Bolton, gardener to W. Spottiswoode, Esq., Sevenoaks, third, and Mr. Holder fourth.

The Dessert Apples made a fair show, but generally they were rather small. Mr. Holder was first for four dishes with Kerry Pippin, Cox's Orange Pippin, Devonshire Quarrenden, and Jefferson, a pretty red-streaked variety. The second position was taken by Mr. Jones, gardener to E. Purser, Esq., Wallington, with Ribston Pippin, Devonshire Quarrenden, Cox's Orange Pippin, and Nonesuch. Third came Mr. Jones, Frogmore, with Red Astrachan, Early Nonesuch, Peach, and Fair Maid of Windsor, a seedling, the fruit of a pyramidal shape, pale greenish yellow, flushed and marked with crimson next the sun, and with firm flesh. Mr. Frost, Maidstone, occupied the fourth place. R. Webb, Esq., Calcot, sent, among others, splen-

didly coloured fruit of the Red Astrachan, also a highly-coloured seedling called The Shah.

Kitchen Apples were fairly represented both as regards size and numbers. The best four dishes were shown by Mr. Holder, and consisted of Lord Suffield, Lord Derby, Blenheim Pippin, and Nelson's Glory, all of large size. Second came Mr. H. Prexler, 58, Effra Parade, Brixton, with Blenheim Pippin fine, Alexander, Manks Codlin, and Yorkshire Greening. The third and fourth prizes went to Mr. Jones, Frogmore, and Mr. Webb. Pears were few and generally not fine. Mr. C. Tivey, gardener to P. Gossett, Esq., St. Saviour's, Jersey, was first for three dishes with excellent examples of White Doyenné, Beurré d'Amanlis, and Louise Bonne. Mr. Holder was second, and Mr. Douglas third with Williams's Bon Chrétien and Beurré d'Amanlis, very good. A fourth prize went to Mr. Frost.

For the heaviest dish of twelve Mr. Tivey was again first with Beurré d'Amanlis, weighing 8½ lbs.; Mr. Whitaker, gardener to S. Williams, Esq., Putney, being second with Williams's Bon Chrétien, weighing 6 lbs. Mr. O. Goldsmith, gardener to Sir W. Farquhar, Bart., Polesden Lacey, was third with Catillac. Neither the last nor the other dishes were remarkable for weight.

Williams's Bon Chrétien, Jargonelle, and Louise Bonne of Jersey were almost the only kinds shown for flavour, except the first-prize dish, which was Beurré d'Amanlis from Mr. Tivey. Mr. Holder and Mr. Frost took the remaining honours with Williams's Bon Chrétien.

Of Vines in pots only two collections of four were shown; the best came from Messrs. Lane, and consisted of Alicante and Black Hamburg bearing freely. The second prize was awarded to Mr. Foreman, gardener to E. C. Nicholson, Esq., Herne Hill.

Among miscellaneous fruit, first we must notice a seedling black Grape, called The Artist, shown by Harrison Weir, Esq., Weirleigh, Brenchley, grown in a ground viney, and which is said to be very thin-skinned and good. Being unripe the Judges could not take notice of it, but as it is seedless, though occasionally having one stone, it promises to be valuable. Extra prizes were awarded to R. Webb, Esq., for a collection of Cob Nuts and Filberts; also to Mr. Jackson, gardener to G. Leveson Gower, Esq., Titsey, Limpsfield, for a collection of fruit. Mr. W. Paul, of Waltham Cross, exhibited Waltham Cross Grape, also his Winter Muscadine; whilst from Messrs. Rivers, of Sawbridgeworth, came a collection of Apples, Pears, Peaches, and Nectarines in pots, bearing profusely.

We next come to the Gladiolus Show, and though it is now late in the season for this fine autumn flower, Messrs. Kelway, of Langport, bring out fine spikes from their large collection, whether it is late or early. In the class for thirty-six spikes, distinct, they were awarded the first prize for a stand of grand spikes, mostly seedlings of their own raising—Victoria, Phenius, brilliant crimson, maroon-purple flame; Orceus, crimson purplish flame; Scrapis reddish, with a fine crimson feather; Robert Fortune; Meyerbeer, Schimène, Theodocus, &c. Mr. J. Douglas, gardener to F. Whitbourn, Esq., Loxford Hall, Ilford, was a very good second. His stand was composed mostly of seedlings and good spikes of Orphée, Virgile, Meyerbeer, Horace Vernet, one of the finest Gladioli in cultivation, Phœbus, &c. In the class for twenty-four distinct Messrs. Kelway were the only exhibitors, and had the first prize for a fine stand. Here their own seedlings were again prominent. The best of these were Pithys (first class certificate), orange scarlet with clear white throat, a grand flower; Hecamède, a fine yellow, far superior to Schiller; Valgins, a fine broadly-opened flower, rose, with distinct purple feather. Eugène Scribe was the only French flower in this stand.

In the amateurs' class for twelve spikes, distinct, Mr. J. Douglas was first with a good stand. Coral Caves, orange-scarlet feather and distinct maroon-purple throat, had a first class certificate. Orphée, Horace Vernet, Meyerbeer, Virgile, and Lacépède were fine. The Rev. H. H. Donbrain, Westwell Vicarage, Ashford, was second with a good stand; Harrison Weir, Esq., Weirleigh, Brenchley, Kent, was third.

The class for new sorts not in commerce was an interesting one. Messrs. Kelway were again first with six fine spikes. Rev. H. H. Donbrain, a noble flower, soft red with white throat pencilled reddish purple; Harrison Weir, salmon, with purplish crimson mark on the lip, and long spike; Mrs. Reynolds Hole, a fine white flower, with rosy purple throat and markings on the segments, had first-class certificates. Lord Hawke, Rev. R. Hole, and Lord Derby were also fine. Mr. J. Douglas was second. In this stand was Mabel Glass, a fine flower, ground colour bluish, heavily flamed and feathered purple, lower petals marked at the base with purple—this was also awarded a first-class certificate. Mr. W. Tillery, Welbeck Abbey, Worksop, Notts, had the third prize.

There was also a show of table decorations, in which fruit and flowers were combined. In the open as well as in the amateurs' class Mr. Hudson, Champion Hill, Camberwell, was first; Mr. Burley, Brentwood, and Mr. W. L. Duster, St. Mary's Cray, being second in the two classes respectively. For a centre-piece of Grapes and foliage the principal prize was taken by Mr. Bones.

For miscellaneous floral subjects Mr. W. Paul took the leading place with a fine collection of cut Roses, Geraniums, Gladioli, and baskets of *Euonymus flavescens* and *Remus Pelargonium*, one of the salmon-eyed section. Messrs. Carter made a great display of Gladioli; Mr. Turner had splendid stands of Dahlias, of which Ovid, noticed last week, had again a first-class certificate; and Messrs. Downie, Laird, & Laing sent a fine collection of Palms, *Dracenas*, cut *Phloxes*, Bicolor and other Geraniums, &c. Mr. Ley, Croydon, likewise contributed a collection. From Messrs. Dick Radclyffe & Co. came an effective display of Fern cases and similar adjuncts; and we may add here, though not belonging to the floral department, that Messrs. Criscuolo, Kay, and Co. exhibited very large Onions of the Tripoli varieties.

ROSE ISSUING FROM A ROSE.

I thought the enclosed would be interesting to you. It is William Griffith; the dark part in the stem was where there



was a bloom some six or eight weeks ago. The stem, as you will see, came out of the centre of the flower, and, as you will observe, produced the present flower. There were small leaves just above the dark part, the smallest next above the dark part, with another like it with three leaflets, one red like a Rose petal, the other two green; another leaf was all green. In June I had a flower on *Fulgens*, which produced a bud from

the centre of it that came out about a month after the first, but the stem from the centre of the first flower was only about 2 inches long; the second flower was quite perfect as a bloom, as was also the first.—GEORGE LEE, *Cleveland*.

[The leaves just above the dark part of the stem were very small, pinnate, and two or three of the leaflets partly rose-coloured. The stem, Rose, and leaves represented in our engraving issued from the centre of another Rose, which was borne where the letter A is placed.—Eps.]

THE CARNATION (*DIANTHUS CARYOPHYLLUS*).

The early history of this flower is shrouded in mystery, there being really no authentic record extant whereby we may be enlightened as to when or by whom the improved species was first introduced into Britain. While one recorder credits Germany, another Italy, as being its native country, it is likewise chronicled that Gerrard received it from Poland in 1597.

The species from which the present improved varieties in cultivation originated is said to be indigenous to England, where it has been found a habitant of rocks and old walls. Whatever its native country is of minor importance, sufficient that we know that it has been cultivated in Europe from time immemorial, and that its appreciable qualities have not degenerated, but continue yearly to improve. In early times, when the Carnation had comparatively few rivals with attractions to commend them to share the sovereignty of the garden, she was the recognised queen of summer and autumn, her insignia for this exalted rank being the brilliancy and diversity of colour, stately habit of growth, handsome symmetrical form of flower, united to refreshing sweetness of perfume. But of late years the Carnation, along with other hardy plants, has in a measure been in the shady side of popular esteem, and we now join the unanimous voice which recalls her to a place of honour in every garden.

Classification.—There are several distinguishable features which separate the Carnation into groups, by which we have what are designated Bizarres, Flakes, Picotees, and Sells or Cloves. Bizarres exhibit in their white petals, irregular stripes, and spots of two different shades of colour. Flakes are distinguished by being composed of two colours—the ground colour, and flakes of rose, scarlet, or purple. Picotees are determined by having a margin or lacing around the petals. Sells or Cloves have only one colour, either white, crimson, scarlet, purple, or other intermediate shades. Each division furnishes endless varieties, which are subdivided into the following:—Scarlet flake, pink flake, yellow flake, &c. The same rule is applied to describe Bizarres and Picotees, but applies to the lacing of the latter. In addition to the foregoing, we have the much-valued Tree Carnation in grand array. These are almost exclusively cultivated in pots, and will be treated of separately.

Propagation.—This is effected by layers and pipings when the object is to multiply approved varieties, and by seed for procuring new sorts. *By Layers*: The time to propagate by this means is just when the early flowers have expanded; and the method of procedure is first to have sifted through a fine sieve a mixture composed of river sand two parts, loam one part, and leaf mould one part. With this form a little mound around each plant to be operated upon; slope the mound down until it joins the base of the plant, so that the layers conveniently bend and lie to it without disjoining them. When completed, proceed further by taking the shoots intended to form layers, and cutting away the lower leaves. Then insert the knife about half an inch below the third joint, and make an incision into the centre of the joint, directing the knife up the centre of the stem. Cut away the extreme end of the tongue thus formed by the insertion of the knife. The layer is next bent down to the ground and fixed in position by means of a hooked peg, being careful that the incision is left open when fixed. When all the layers on the same plant have been operated upon, finish by putting a covering of the compost over them, and water well with a pot furnished with a finely-perforated rose. Their subsequent demands are only a watering occasionally, should the weather prove dry.

The afternoon of a hot day is perhaps the best time to perform layering, when the plants are rendered less or more flaccid by the heat of the earlier part of the day, and therefore more pliable than would be the case in the morning when they are glutted with the sap accumulated overnight. By the end of September the layers ought to be sufficiently rooted to have

them severed from the mother plant. Detach them by cutting close to the part where they are layered, retaining as much of the soil as will adhere to the roots, and allot each a pot according to the size of its roots. The soil for this purpose should be two parts rich loam, one of sharp sand, and one of leaf mould. Plunge the pots in a cold frame in coal ashes, and supply water enough to saturate the soil in the pots. Keep the sashes entirely up to admit air, but shade gently for the succeeding ten days in strong sunshine.

The commencement of November is quite soon enough to afford the protection of glass, and this only in sharp frost. Continue to supply unlimited ventilation—unless in frost—day and night all through the winter, remembering also that every blink of sun is acceptable, causing a quiet flow of sap in circulation, by which the health of the plants is improved. Under this winter treatment there is little to be feared from damping-off, or mildew, or any other malady, if the roots have made a proper move before frost sets in.

Insects.—When Carnations are exposed to a closely-confined atmosphere, it invariably follows that they are attacked by green fly. The first appearance of these should be the signal to effectually destroy them by a smart application of tobacco smoke, or by syringing overhead for a few days together with a weak infusion of tobacco water. There are other safe expedients—namely, puffing with Pooley's tobacco powder, or even dry snuff. Wireworm at the roots is assuredly the most destructive enemy to which this plant is subject, therefore it should be the cultivator's careful look-out first to ascertain that none exist in the compost before using it. Sometimes it is a difficulty to get loam quite clear of wireworm, as whole districts are often infested; but where they must be contended with, an effectual cure may be obtained by spreading the soil into a body of a foot deep some weeks prior to using it. Into every few feet of surface insert a piece of Carrot or Turnip, and after a few days, so that the worms have been attracted to the feast, look over the traps, and treat those caught to an exceedingly "warm bath." Continue daily to give the creatures your attention until the entertainment thus provided them is wholly forsaken, when it may be concluded that the last has been killed.

General Culture out of Doors.—That the Carnation may grow luxuriantly it must have an aspect sheltered from cold winds, free exposure to sunlight, a rich and perfectly-drained bed, that has been previously enriched with well-rotted cow manure, and the soil trenched at least 15 inches deep. The bed should contain a good per-centage of rich fresh loam taken from old pasture, which has been rotted in a heap and frequently turned before being mixed with the bed. The ground should be trenched in the autumn, and allowed to lie rough until early the following March, when it ought to be forked and levelled down, and the plants put-in in rows, 1 foot apart in the rows, and 14 inches between rows. Should severe frost set in after planting, the plants must be protected by means of hoops extended across the bed, and a covering of mats securely put over them. When the flower-stems have advanced in growth a bit, have them all secured to neatly-dressed stakes, tying them at intervals as they require, to prevent the wind breaking them; and should the weather prove dry and hot, an occasional watering of weak liquid manure will aid in improving the quality of the flowers. Stir the surface now and then, and keep the ground free of weeds.

As the blossoms approach opening, it will be found that a number of the more double kinds show a tendency to rend their calyx by being too severely distended. To obviate this it is necessary to tie a thread of matting securely around the calyx, which will be quite hid when the flower expands, and the character of the flower preserved.

Propagation by Pipings.—The general fault and reason for failure by this mode is the season being too far advanced before the pipings are put in; and it will be found that propagating by this mode can be turned into a success if the pipings are put into gentle heat at the time when the plant shows a disposition to grow, instead of waiting until the usual time for layering. In preparing the pipings they ought to have the lower leaves cleanly cut away close to the stem, and the shoot cut across below the second or third joint; and without allowing them to flag in any degree, have them inserted into a rather firmly-prepared bed of sand and leaf mould, with a thin covering of sand over the surface. A gentle bottom heat is essential, and the bed previously watered, but the superfluous water drained off. The house or frame must be kept both close and shaded, and moderately moist until the pipings are

rooted, which will, in all probability, be in three weeks or a month.

By Seed.—Sow the seed in October in well-drained pans in, light porous soil, and place in greenhouse temperature over winter; put the seedlings into small pots when they have reached a size making them capable of being handled; and, if necessary, in the spring, and plant out at the latter end of April, and the most of them will flower before September.

Tree Carnations.—These are best multiplied early in the spring, when they root with speed, and with few failures. The plants should be potted without delay, into sizes of from 4 to 6 inches diameter, according to the extension of the ball of soil adhering to them when taken out of the cutting-bed. Allow them generous diet, but the prevailing material in the compost must be fresh fibry loam; second to loam in importance is a sufficiency of properly-reduced cow dung; drain extra, and pot firmly without ramming. Repot as soon as the roots net the exterior of the ball, repeating the same again and again, to whatever size of pot the roots require to contain them. Have no thought of limiting the size of pot to induce the plant to flower; flowers will come by-and-by, and the bigger the plant the greater the success both in size of blossoms and in numbers.

SELECTIONS FROM THE BEST COLLECTIONS.

Scarlet Bizarres.—Admiral Curzon (Easom), Coriolanus (May), Dreadnought (Daniels), Duke of Wellington (Bragg), Lord Derby (Heap), Oliver Goldsmith (Turner), Splendid (Martin), William Pitt (Puxley).

Crimson Bizarres.—Black Diamond (Haines), Eccentric Jack (Wood), a magnificent flower of large size, finely marked; Graceless Tom (Wood), Hope (Puxley), pretty; Lord Raglan (Bowers), fine; Phidias (Wood), Rifleman (Wood), in crimson bizarres one of the most beautifully marked; The Lamplighter, another splendid flower, by the same raiser as Rifleman (Wood).

Pink and Purple Bizarres.—John of Gaunt (May), Master-piece (Schofield), Purity (Wood), Shakespeare (Puxley).

Purple Flakes.—Dr. Foster (Foster), Earl Stamford (Elliott), Florence Nightingale (Sealey), Mayor of Nottingham (Taylor), True Blue (Taylor).

Scarlet Flakes.—Annihilator (Jackson), Christopher Sly (May), Illuminator (Puxley), first-rate; Marshal St. Arnaud (Puxley), Mr. Battersby (Gibbons), one of the best; William Cowper (Wood), a clear and beautifully-marked flower.

Rose Flakes.—James Merryweather (Wood), Lord Belper (Turner), Mr. Martin (Elkington), Nymph (Puxley), Rosabelle (Schofield), Rose of Castille (Headly), Samuel Moreton (Addis).

Cloves.—Bride (Hodges), pure white, splendid flower, robust grower; Ghost (Turner), a lovely white; Hindoo (Turner), deep crimson, extra; Pioneer (Turner), salmon and scarlet; Purple Prince, extra; Scotch Clove, dark, neat habit; Napoleon III., brilliant scarlet, &c.; Old Crimson, rich maroon-crimson.—A. KERR.—(The Gardener.)

THE KENTISH FRUIT CROP OF 1873.

In a district like that which surrounds Maidstone the importance of a good fruit season is greater, perhaps, than that of a good crop of Hops, for although the money value of the latter may be larger, the community benefit more by the former in the increased labour the ingathering involves, as well as the advantages which large towns and remote and less favoured districts obtain by fruit being plentiful. As the present season has, on the whole, furnished us so far with better crops than either of the last two, a brief allusion to the causes which seem to have led to this result may not be out of place, especially as the spring was certainly not favourable to the fruit crop in general.

With the exception of Plums and Pears most fruits seem to be plentiful. To some it may appear strange that a season that has proved favourable to the Apple should not also have been so to the Pear and Plum, but such has not been the case. These fruits bloom earlier than the Apple and the Plum in particular, but severe weather may have told on them before the Apple was far enough advanced to suffer; for I find we had a succession of frosty nights following the 22nd of April, with occasional showers of snow, hail, and rain, also ice one-third of an inch in thickness on the morning of the 26th of that month. This, followed by a bright sun on the same morning, proved fatal to the Pear and Plum blossom, likewise doing much damage to other crops. The wonder was that anything escaped. Certainly grass and other herbage suffered as well as the fruit crop, and at the end of April everything might be pronounced late. Matters did not mend much in May. True, there were no severe frosts like that on April 26th, nor yet so disastrous

as that of May 12th, 1872, which destroyed Gooseberries even fit to gather; but a succession of dull ungenial days with slight frosts in places culminated in a sharp frost on the 11th, which would have been more serious in its consequences had the morning afterwards not been dull. As it was, doubtless it did a certain amount of harm, and it is very possible the scarcity of Apples in certain places or on certain trees may be traced to this source; but ungenial weather continued throughout the whole of May and up to June 20th, when by degrees it became somewhat warmer. Up to that date, and even later, everything presented a backward appearance. Wheat did not fairly come into ear until several days beyond the average time, and only two days earlier than in 1860; while grass and other crops were almost stationary until the middle of June, when rapid growth set in amongst all kinds of hardy vegetation which the dryness of May had kept back, and a tolerably good though late hay crop was the result. Most of the small fruits benefited in a like manner by the change of temperature.

Strawberries looked well throughout, thus proving that if that fruit can be protected from frost while in bloom it does not require so much sun for its growth as other fruits; in fact, it would appear that the Strawberry is better suited to a cool moist climate than to a dry warm one, and possibly will exist farther north than other fruits. This season has been one of the best I have ever known for Strawberries. Gooseberries have also been plentiful and good, but unusually late, some being scarcely ripe in the first week of August, when the birds began to carry them away; the crop has likewise been good. Red Currants have also in most places been good, and the foliage has escaped the attacks of insects, which is a good augury for next year. In some places, however, failures are spoken of. In some cases Black Currants have been bad, the fruit being covered with a sort of brown rust; it was also small; but I believe that generally a full average crop may be reported. Raspberries have, I think, been better in some previous seasons, yet the crop cannot be complained of; only the quantity grown round here is small as compared with that of other fruits, although equaling that of Strawberries, but both these fruits reach the market in better condition when grown near to it, hence their paucity around Maidstone.

We now come to the larger fruits; and omitting Cherries, of which I can only speak from the observations made by others, and which are very conflicting, I need only say that if 1873 has not been a Cherry year it has not been without them, the late kinds being tolerably plentiful, and I believe that a fair average crop of Cobs and Filberts may be reported; not so heavy as in 1870, but on the whole good. As to this, however, I speak with some diffidence, as there is a difference of opinion about them; but there is only one opinion about the crop of Pears, and that is, it is all but a total failure, both early and late kinds suffering alike from the severity of the season, so that there are in reality very few Pears, although there was no lack of bloom, and that, too, of a promising kind. Plums are also a thin crop, or rather irregular, for in a few orchards we hear of fair and even good crops, and in others there are none at all. In our own case we had too many last year to expect much this season, but we find others who had a failure last season have had one this year as well. The same remark holds good with regard to Damsons, there being a few in some places, a good crop in a few others, while the bulk of the orchards will not be worth looking over. In fact, Damsons seem more scarce than early Plums, both being irregular.

In addition to the above remarks it is pleasing to have to record the general good appearance of the trees, so that if all go well there may be hopes for another year. Reference to this matter reminds me that last autumn, or rather the latter part of last summer, was a favourable one for ripening the bloom buds, which I cannot but think has helped the Apple and the other fruits which survived the cold ungenial spring we had, for a well-developed flower, perfect and vigorous in all its parts, is not so likely to succumb to a moderate frost as a weakly imperfect one would be.

One more observation may be here made with regard to the fruit crop, and that is the increased breadth of plantations of Apples, Plums, Damsons, and small fruits to be found everywhere. Certainly new plantations of these fruits are more plentiful than those of Pears and Filberts. No doubt the planters have duly weighed the chances of a fluctuating market operating in their favour or otherwise. Damsons, especially, have been very extensively planted of late years, and would become a drug were it not for the increased demand for fruit. How far the foreign producer can compete with the home

grower it is difficult to foresee. Certainly in all early fruits he has the advantage, and when there is a failure supplies will doubtless be sent in from abroad whenever the price allows a margin of profit.

Another circumstance affecting fruit culture at the present day is that immense quantities are now boiled down for jam, or undergo some preparation for use. The jam trade has within a few years attained a position never dreamed of years ago, when that article was considered one of the luxuries which only the wealthy could indulge in. Now it is sold at a price less than half that of butter, with which it successfully competes, and jam-preserving houses exist in most fruit-growing districts. Ten after ten of jam is prepared, and a neighbour of mine alone supplied several tons of Strawberries during the past season for this purpose. So great has this trade become, that small fruits, Plums, and Damsons, are not likely hereafter to go to waste for want of buyers.—J. ROBSON.

THE BEAUTIFUL AND USEFUL INSECTS OF OUR GARDENS.—No. 9.

Many insects of the Hymenopterous order are very puzzling to the naturalist who has not time or taste to dip deeply into entomological lore; not that it follows, indeed, that he would be much the gainer, for our nomenclature at present seems inclined to go, as the printers say, "all to pie;" but ignorance is generally confident, and the man who knows nothing about distinctive characters calls an insect a bee, a wasp, or a fly, without being troubled with doubts as to the correctness of the name. On the other hand, the naturalist knows that there are, as in the order cited, hosts of species looking exceedingly like each other, yet widely separated in structure and habit. We have many species of bees and wasps, and some of these are not at the first or second glance recognised, while other Hymenoptera, and even some Diptera, resemble these insects superficially. Gardeners are, I find, mostly quite awake to the fact that there are various species of wild bees of different sizes, but some of them have yet to learn that there are numerous wasps besides the wasp better known than loved, so frequent a visitant in ordinary years, and whose portrait (in print) has certainly been drawn with too deep colours, mischievous though it is. We have bees of diverse habit, popularly called, as the reader is aware, Upholsterer-bees, Carpenter-bees, Tunnel-makers, &c.; and thus among the wasp tribes are there many species which, so far from being hurtful or annoying to the cultivator of flowers or fruit, are decidedly of service to him.

It may be noted in passing, that the stinging Hymenoptera will very seldom use their weapons from wantonness; still, in pursuing investigations among those species of insects we are not sure about, it is needful to be a little cautious. "O! here's a curious fly," said a friend of ours, seizing a flower lastly with an insect resting thereon, said insect being no fly, but a bee, and taking its departure abruptly after leaving the handler a token of remembrance. I was reminded of the Irishman who, in some tropical country, caught, with an exclamation of delight, what he took for a humming-bird, in reality, however, a stinging insect, and his next remark was, "Bless me, how hot his little fat is!" The warmth of skin caused by being stung, however, is often accompanied by a swelling which is not agreeable; the application of an alkali, or a fomentation, so as to dilute the virus, being usually a speedy cure.

The Mason-wasps visit gardens, not solely for the purpose of obtaining honey, though they have a *penchant* for that product, especially as yielded by cultivated flowers. They also seek larvae, not for their own benefit, but to supply their young with food, since, from their structure and the position in which they are placed, it is impossible that they can forage for themselves. The illustrious Ray is believed to have been the first who observed, or, at least, the first who recorded, this peculiarity; and the worthy naturalist Romie, whose rather crude and disconnected observations on various departments of insect life have been so freely made use of by his successors in the field, enters at some length into a description of the economy of some Mason-wasps as noticed by him at Lee and in its neighbourhood. Several species of the genus *Ammodia* are common enough in the counties of Kent and Surrey, delighting in the sandy soil, and no doubt frequenting similar ground in other English counties. It is usual to speak of the "nests" made by these insects, though possibly the designation is not quite appropriate, as in each burrow or excavation only one egg is deposited: hence the insect labours on day

after day until her stock of eggs is exhausted or her strength fails, and she herself becomes, perhaps, the prey of some larger animal. I write in the feminine, as it is only the female wasp that works thus for the next year's brood, the male insect being distinguished for no good quality that I am aware of, and, like other idlers of the insect races, it enjoys but a short life. Both sexes are rather fly-like than wasp-like in their appearance, the abdomen being lanky and the legs long and slim.

The boring operation is performed chiefly by the jaws of the insect, the legs not having sufficient power to dig, though they aid in scratching out the material that has been loosened. In compact sandy soil it is often hard work, and yet such ground suits the wasp's purpose better than that where the sand is too loose and liable to fall in. Réaumur, in his observations upon this or an allied species, ascertained that the wasps soften the part of the bank on which they are engaged by letting drop upon it some fluid from the mouth, and thus render the stuff more workable. The chamber and passage having been completed, and the walls smoothed-off, the wasp deposits its egg, and then darts away to obtain the first instalment of food. This is a caterpillar, most usually of some moth or saw-fly, though Rennie states that in the chambers he opened he found larvæ without visible feet, possibly of some fly or beetle. The first deposit having been made, a second journey must be undertaken, and with admirable precaution the wasp blocks the door of the cell with pebbles or fragments; it may be to prevent the escape of the captive, and also to keep out intruders, such as the Cuckoo-fly, which might seek a rearing-place for its own progeny in an abode it had not constructed. Also Réaumur thinks she does this to prevent the heat of the sun hatching her egg too suddenly. At all events, the opening and closing of the hole is done again and again until the needful complement of larvæ is obtained—sometimes as many as a dozen, occasionally only half that number. These unfortunate individuals are immured much in the fashion of human wretches in the hold of a slave ship of other days, and thus "cabin'd, cribb'd, confin'd," they wait in darkness their turn to be eaten! With what has been called "crud instinct" the wasp almost always selects larvæ that are full grown, and therefore so far plumped-up as not to be likely to die of inanition. Of course, with regard to those particular larvæ, as they are full-fed, it might seem that the horticulturist was not much advantaged by their removal, and yet he is, in another aspect of it, since they would many of them, if not removed by the wasp, appear as moths the following spring. The young wasp-grub or larva emerging from the eggshell soon begins to reduce the dimensions of the conveniently-placed coil of larvæ, and being duly fattened (unless some sly parasite has eaten out its vitals, which does occur now and then), spins a cocoon, and by-and-by comes out as a Sand-wasp in its turn.

An amusing account has been published from the pen of Mr. W. Hewitt concerning the doings of the Hairy Sand-wasp (*Ammophila viatica*), a species that stores up spiders and not caterpillars. Therefore it can hardly be reckoned as a "friend" to the gardener, inasmuch as spiders, with very slight exception, are not among his foes—indeed, rather helpful to him. In liveliness this wasp exceeds its relative, for we are told that "these insects seem all velocity and fire. The spiders lie under the leaves of plants and in dens under the dry little clods. Into all these places the Sand-wasp pops his head. He bustles along here and there, flitting his wings and his whole body. Ever and anon he crouches close among the little clods, as a tiger would crouch for his prey. He seems to be listening or smelling down into the earth, as if to discover his prey by every sense which he possesses. When he finds the spider he dispatches him in a moment, and seizing him by the chest, commences dragging him off backwards." This narrative has a tinge of the imaginative, yet it may be accepted as true in the main. *Tripoxylon figulus*, a smaller wasp, of dark hue, and clad in silky down, is also a spider-hunter, and this insect has been seen to seize with singular dexterity a spider that was resting upon a web, and bear it off without entangling its own wings.

Carpenter-wasps there are also of the genus *Tripoxylon*, which form their nests in the stems of rosaceous plants (see *figs. 1, 2, 3, and 4*); they may be detected on the Bramble and wild or cultivated Rose. *Tripoxylon (Odynerus) alter-*

natum is almost sure to manifest itself by the round hole left at the end of the stem or branch. In this instance we have several cells, not a solitary one, and for each small grub there is due provision made by the mother insect. As flies are



Fig. 1.
A species of *Tripoxylon*.



Fig. 2.
Nest of *Tripoxylon* in the stem of a Bramble.



Fig. 3.
Larva of *Tripoxylon*.



Fig. 4.
Pupa of *Tripoxylon*.

selected, especially certain of those that are troublesome in the orchard, we are gainers by the labours of this wasp. The nest, or series of cells, is so planned that the new brood emerges in the reverse order to that in which the eggs were laid, so that the later-hatched are not interfered with by those that are mere forward. Other Carpenter-wasps perforate dry posts, and, under an arrangement very similar, also kill and lay-up flies.

The Hornet (*Vespa Crabro*) is regarded with terror which is almost ludicrous, and the statement is frequently repeated that "three hornets can kill a horse." If such a thing could be true, it is certain that the hornet is not accustomed to attack the equine race, nor man, unless provoked thereto; and, what is rather comical, people sometimes rush off in a fright from a supposed hornet, when, in reality, the object they see is most harmless, belonging to the *Sphix* family, of which some members have a close resemblance to bees and hornets. Nearly related to the wasp, it is yet one of the most determined foes of that insect, though it will not disdain to touch ripe fruit. The lesser species, agile, and provided with a sting as it is, has no chance of making a successful resistance, and is crunched up by the hornet much as a lion would seize a kid—at least, not precisely so, since the hornet only sucks the juices of wasps, and casts the carcasses away. The nest of the hornet (*fig. 5*), is rarely or never placed beneath the ground,

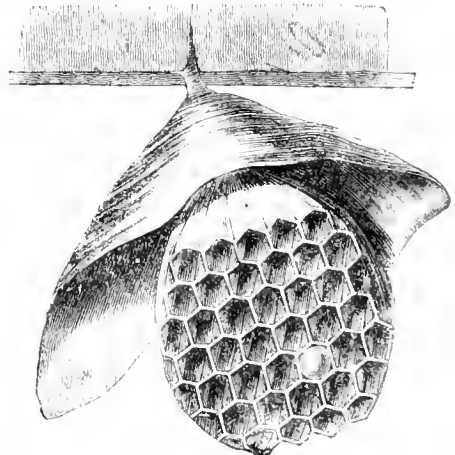


Fig. 5.—Hanging Hornet's nest.

the insect preferring to resort to rotten trees, which supply material for the structure. This is generally coarse, and swung from some secure point of suspension; Réaumur exhibits a figure of one looking like a pear in shape, with a raised dome. That our information about the habits of the hornet is but scanty is quite explainable by the character of the insect, which does not invite intimacy. The old ladies of

the community live through the winter, and some four or five in concert start the colony of the next season. An ordinary hornet's nest is seldom found to contain more than about 150 individuals, size making up for numbers.—T. R. S. C.

FLOWERS FOR OUR BORDERS.—No. 16.

LARDIZABALA BITERNATA.—BITERNATE-LEAVED LARDIZABALA.

Of deciduous climbers, whether hardy or half-hardy, there is, happily, no deficiency in our gardens; but the number of evergreen climbing plants hitherto available for general cultivation is so limited, that when we have named the common Ivy we have exhausted the list. To this valuable climber, which, although possessing few claims to beauty, is deservedly esteemed for its utility in covering walls and concealing other objects offensive to the eye of taste, the *Lardizabala biternata* will prove a formidable rival; for it appears to be equally hardy, produces its beautiful dark green glossy foliage in great abundance, and has, moreover, the additional recommendation of bearing flowers of a singularly interesting character, which in the case of the fertile blossoms, are succeeded by an edible fruit.

It is a native of Chili, growing as far south as Concepcion, whence it was sent by George Thomas Davey, Esq., of Valparaiso, to Messrs. Veitch, of Exeter.

The specific term, *biternata*, does not appear to be very happily chosen; for, although some of the leaves are biternate, they are more generally simply ternate, especially in the flowering branches, and occasionally they are tri-ternate. The leaflets are often quite entire at the edge, but sometimes spinosely-toothed, of a dark green colour above, but paler and veined on the under surface.

The *Lardizabala biternata* is an illustration of the dioecious class of plants; it is, in fact, both dioecious and polygamous; for, although the flowers of the plant represented in our figure produce stamens only, those of the fertile plant, which has not, we believe, been yet introduced to this country, yield both stamens and pistils; it differs also from the sterile plant in its one-flowered peduncles. These solitary flowers are succeeded by a many-seeded berry, which is sold in the markets of Peru and Chili. The pulp is said to be sweet and grateful to the taste. Its stems yield a very strong fibre, which is made into cordage.

The blossoms of the male plant are borne in drooping racemes, hanging from the axil of a leaf, the peduncle or flower-stalk bearing at its base two large heart-shaped bracts; and it is remarkable that these occur at the axil of the leaf, even where there is no flower-stalk. The calyx is formed of six fleshy sepals, arranged in two series, three of the segments being external to the others when in the bud. The calyx is the most highly-coloured portion of the flower, the petals being comparatively inconspicuous, and of a thin membranaceous mealy texture. The six stamens are united by their filaments into a column (monadelphous), and bear six oblong, incurved, pointed, two-celled anthers, which open at the back.

With regard to the propagation of the plant, it may be effected both by cuttings and layers, in any ordinary soil. It will flourish in any situation not too much exposed to the sun,

but appears to prefer shady places; and as it grows rapidly, when well established its merits as a substitute for the Ivy will, doubtless, soon be universally recognised.

In Peru, where it occurs as well as in Chili, it is called by the Indians *Aguilboguil* and *Guilbogui*; in Chili, its native designation is *Coquil-vochi*. Two other species are described by botanists, *L. tri-ternata* and *L. tri-foliata*, which appear to differ from the *L. biternata* in not producing an edible fruit.

The plants of the order *Lardizabalaceae*, although few in number, are all of interest; they were formerly included with the *Menispermaceae* or *Cocculus* tribe, to which the narcotic berry known as *Cocculus indicus* belongs, but are now classed apart, their many-seeded berries distinguishing them from the plants just referred to.

The order *Lardizabalaceae* commemorates the services to Natural History of Michael Lardizala, of Uribe.—(*Thompson's English Flower Garden, Revised by the Author*).

FLOWER SHOW AT ALTON TOWERS.

Few places in the county of Stafford have done so much to cultivate and encourage a practical love of plants and flowers as the Alton Floral and Horticultural Society, and fewer still whose labours have been rewarded by so great a merd of genuine success. Its autumn exhibition on the 28th ult. was characterised by all the elements requisite for a consummation of its cherished desires—an increase in the number of exhibits, an improvement in the quality thereof, and a larger assemblage of those desirous of seeing what scientific knowledge and industrious patience could achieve than could have been expected while Jupiter Pluvius dispenses his meteorological favours so freely.

Especially prominent in the all-England class was the fruit, and, as is always the case at this Exhibition, it stood far above everything else for attractiveness. There was a wealth of Black Hamburgh and Muscat Grapes, the chief prizes for which were won by Mr. Silcock, gardener to Sir C. Shakerley, Somerford Park, Cheshire; while the Peaches of Mr. J. Turner, gardener to Basil Fitzherbert, Esq.; the Nectarines of Mr. Bannerman, gardener to



Lardizabala biternata.

Lord Bagot; and the Pine Apples of Mr. Miles, gardener to Lord Carrington, sorely tempted the visitors. Florally the Dahlias took the palm, those shown by Mr. Painter, of Smallwood, Cheshire, and Mr. J. Sheldon, Derby, well deserving the first prizes awarded for twenty-four and twelve respectively; though relatively the Roses were scarcely inferior, the thirty-six of Messrs. Paul & Son, Cheshunt, the twenty-four of Messrs. Perkins & Sons, Coventry, and the twelve of Mr. Samuel Eyre, Leek, being much superior to the collections shown by their opponents. The plants were most effectively arranged on a pyramidal circular stage in the centre of the show-tent, the Roses being placed round the base; the collection of ten exhibited by Mr. T. Rabone, gardener to the Earl of Shrewsbury, which took the premier prize, included magnificent specimens of *Bougainvillea glabra*, *Saccolabium guttatum*, *Caladium bicolor*, *Corypha australis*, and *Peristeria elata*, the first-named Orchid being especially well-grown. For the Fuchsias, Mr. Chitty, Uttoxeter, took the first prize, as did Mr. Walker, gardener to Capt. Dawson, Barrow Hill, for *Geraniums*, *Ferns*, and *Petunias*.

The Judges were Mr. George R. Tillyard, gardener to the Earl of Yarborough, Brookley Park, Lincolnshire; Mr. Temple,

gardener to the Earl of Aylesford, Paekington Hall; Mr. Brown, gardener to Earl Howe, Gopsall Hall; and Mr. Wilson, nurseryman, Warwick, their awards giving general satisfaction. About four thousand visitors were present, from Birmingham, Northampton, Derby, Leicester, Sheffield, Barton, and the Staffordshire Potteries.

MESSRS. BACKHOUSE & SON'S, YORK.—No. 2.

In resuming my notice of my visit I feel more than ever, on reading what I have already written, how very inadequately I have described my impressions, and how little it can give people an idea of the beauties of the Alpine Garden; still I may do something in noting some of the beauties that I saw, as there are, I believe, many who value these flowers and would be glad to introduce them into their gardens. It is not essential that they should be in an alpine garden, as many of them are suitable for herbaceous borders. Fragrance is not wanting in some of these flowers; nor are curious forms wanting, for suitable places have been made for hardy Orchids. Here, for instance, is the grand *Cypripedium spectabile*, the great American Lady's-slipper, with stems 2 feet high and showy white flowers, and our native one *C. Calceolus*, and *C. pubescens*, another American species. *Orchis latifolia* Traunsteineri with brilliant purple flowers was also to be seen, and *Opuntia Rafinesquiana* was flourishing. *Senecio argenteus* is well known for its pretty silvery foliage; but a fine orange-flowered one, *abrotanifolius*, was also very conspicuous. Of course the graceful forms of Ferns were not wanting, and many which we are in the habit of considering as only fit for the greenhouse were here flourishing in the open air. I shall hope to give a list of the best Alpines I know.

But deeply interesting as the Alpine Garden is with its gems and beauties of all descriptions, and wonderful as is the collection of alpine plants in pots, perhaps the most unique spot about the place is the Fern Valley, in which are cultivated about seventy or eighty kinds of *Hymenophyllum*, *Trichomanes*, and other Filix Ferns. I do not know the exact measurement of this charming fernery, but I believe that 120 tons of rough sandstone were used in its construction. The entrance to it is through the private grounds, for reasons which will be clear to everybody who knows the nature of this lovely tribe, and who can appreciate the tender care with which they are nurtured. It is about 9 or 10 feet deep, and narrow. The roof is of thick glass and iron; and the fernery is in two divisions, one for those belonging to tropical climates, and the other for hardier species. But the division is not absolute. There is simply a stone arch without any door to it. The far end, which is reserved for the tropical species, is heated by a warm tank. The heated air rises from this and reaches the stone arch; here it is met by a cool current from the other portion of the house, which passes underneath the heated current, and the result is that a condensation of vapour is produced, which results in a continued dripping and a most beautiful deposition of the finest dew, which no sprinkling or syringing with a rose however fine could effect, and the plants live in the very atmosphere most suited to them. Here were flourishing in the greatest luxuriance from ninety to a hundred species of *Trichomanes*, *Hymenophyllum*, &c. Here, for instance, one sees a lovely mass of the beautiful *H. tumbridgensis*, and there another of *Trichomanes radicans*, one of the lovely native species, which thrive here as well as in their native habitats. Amongst the more beautiful and curious of the *Hymenophyllums* were *scabrum*, with fronds 10 or 12 inches long and very finely divided; *puleherrimum*, well deserving its name; *demissum*, with bipinnate fronds, very finely divided; *caudiculatum*, with broad fronds, with the ends lengthened-out into fish-like points, like some of the native Ferns; *dilatatum*, with broad bright green fronds; *cruciatum*, most beautiful—so beautifully transparent are the fronds of this species, that I could see to read the smallest newspaper print through it!—*fusiforme*, a native of Chili, which Mr. Backhouse thinks one of the finest yet advertised. Then amongst the *Trichomanes* were, besides *radicans*, the very curious reniforme with its large kidney-shaped fronds of a bright green colour, the sori standing all round the edge of the frond, giving it a remarkable and handsome appearance; *Insepnatium*, a dark green climbing species with sessile fronds; and probably nowhere can the species be seen in such perfection as here, for, while rejoicing in moisture, it does not like syringing; *alatum*, very handsome, the fronds growing from 9 to 10 inches high; *anceps*, very large and fine; *membranaceum*, a dwarf climbing species from the West Indies, and very handsome.

But I must stop, for what is the use of adding a number of names, which will only be travestising some first-rate catalogue? All I can say is that I had no conception of the extreme beauty of these plants when grown in the state of perfection here seen, and that a more pleasing sight it would be impossible for a Fern-lover to have his or her eyes gratified with: and that, as far as I myself am concerned, it is in very deed *diverta notanda*. And what shall I say of the *genius loci*? Those who know aught of James Backhouse know him to be a man of science as well as a thoroughly good gardener. He, with his late father, were amongst the favoured few who had the opportunity of seeing the grand solar eclipse of 1851 from the top of one of the highest points of the Fille Fjeld in Norway; and in a short paper he has recorded his feelings on the occasion, while in his dining-room hangs a strange weird-looking picture, in which he has placed on canvas his record of a sight which so few can witness. Need I say that he loves his plants? What stories I might tell of his clever tracking of rare native plants, and of the enjoyment of seeing his perseverance crowned with success! But he has other and higher qualities than these, and pleasant was the interview we had on greater matters. Gentle and loving as he is, he is well fitted to preside over scenes such as I have faintly attempted to portray, where some of the loveliest plants, minute though many of them be, experience his tender care—plants which show that not merely the grandest but the smallest of Nature's productions have been perfected by the same Almighty Hand. Meetings such as these are helpful to all who want rightly to fight the battle of life, and who would desire to cherish friendship on its highest and worthiest ground. And so farewell, good friend! Long may you preside over spots so congenial to you, and may your efforts be crowned now and ever with success.—D., *Deal*.

PRESERVING GRASSES, FERNS, AND FLOWERS.

GRASSES should be gathered early in July, if we desire them to retain their bright hues without the aid of art. Gathered then, tied up in large bunches, and hung away in a dark closet, they come forth at our bidding, fresh and green as when plucked. Now, by brook-sides or in shady places, we can find graceful Grasses, which will prove additions to our winter bouquets, but they will lose their colouring, and require a dip into "Judson's green dye." Dye them again, and they will last for years. Wild Oats, Feather Grass, and all their various species are very ornamental in winter, and mingled with the Everlasting Flowers—*Aeroclinium*, *Xeranthemum*, and the white, yellow, and crimson *Helichrysms*—they vie with their more perishable sisters, whose glories are on the wane. We have just arranged two small vases for the coming winter. The brilliant pink and white *Aerocliniums* add much to their beauty. The white *Helichrysms* can be dyed a brilliant purple or scarlet with Judson's dyes, and exquisite bouquets can easily be manufactured. These "everlasting" flowers should be gathered as soon as the outer leaves open. Tie them up in bundles as you pick them, and hang them up, flowers downwards, to dry. Treated in this way, the stems are straight and more easily used. They can be hung to dry in one's chamber, not requiring a darkened place. Most of these flowers are allowed to remain too long upon the bushes, and their beauty is spoiled. As they become dusty under the frequent sweepings of carpets, we dip them in cold water; their petals close entirely. We dip the Grasses also, to cleanse them, else they will acquire a dingy hue.

Many persons like crystallised Grasses. These are easily made by dissolving 1 lb. of alum in one quart of boiling water, suspending the Grasses just over the steam—not to touch the water—and as it cools, the crystals gather. Grasses need not be dried before they are crystallised. A few of them mingled with the green Grasses and brilliant-hued flowers light up well.

Ferns are much sought after for floral decorations. Their feathery plumes, pinnated leaves, and graceful forms are very beautiful. They differ from the Grasses, for those gathered late in the autumn retain their colours better than the fresh Ferns of June. The sap has hardened in their leaves. We have gathered them late in November, when they were surrounded by snow, and they have kept green all winter. The running Fern is a lovely decoration for walls and pictures. Its flowers add much to its grace and beauty, but it fades quickly, and by Christmas but a faint green remains. Dip them in Judson's dye (following the directions given on the bottle for dyeing ribbons), and you will keep their lovely colour. After they have been thoroughly pressed in heavy books, then

dye them, spread on paper to dry in the shade, and then press again. Thus treated, they will last for years. Maidenhair, the most graceful of our Ferns, soon loses its colour; but dyed, it is an addition to every collection of Grasses or Ferns.

Parsley Fern is very beautiful; its soft, feathery leaves are always sought after. These, if gathered late in the autumn, will retain their colour much better. The Male Fern, with its stiff stems, if well pressed, looks beautiful. We mingle it with the many-coloured leaves of autumn, or we pin it to the wall paper, around pictures, or over lace or muslin curtains, and its effects are charming.

The branches of the Sumach, gathered soon after the frost has appeared, or even before, press perfectly, and keep their colours finely. If varnished with map varnish they never fade. Branches of this tree interspersed with the Ferns are very ornamental. We have made exceedingly pretty crosses from its leaves, sewing each one separately over the other on a pasteboard cross. Anchors and stars can also be made of its lance-shaped leaves. Thus suspended over engravings or curtains, they are very ornamental, and are easily dusted—an essential in the eyes of a good housewife.

Bunches of dyed Mosses are to be purchased of all seedsmen in the cities; we dwellers in villages cannot avail ourselves of them if we would; but we can make them even prettier than those exposed for sale. Gather the Mosses, pick out all the *débris*, cleanse from dirt, and dry in the sun; then dip into Judson's dye, spread on papers to dry by fire or sunlight. We gathered last year a very finely-fibred Moss, dyed it a lovely green, and saved some of the original colour to mingle its brown hues with it. Then we took the "hoops" from an old skirt, tied them together, and on the circle tied wreaths, which city friends said "surpassed those displayed at the shops."—(*Farmers*.)

REPOTTING ORCHARD-HOUSE TREES.

I OBSERVE that Mr. Douglas, who is a most successful cultivator, says (page 180) that he repots as soon as the fruit is off. I wish he would state how far he disturbs the roots in repotting. Where a larger shift is required, the earlier a plant is shifted the better; but most of your readers will understand repotting to mean the operation as described in Rivers's book, which, if carried out to the extent recommended by him, would probably injure the plant permanently, if not kill it. Such mutilation of roots and removal of soil seem safe only when the plants are preparing for rest. Of course, much may be done by syringing and shading.—G. S.

PYRAMID AND BUSH FRUIT TREES.

THE Apple, Pear, Plum, and Cherry alike, in these forms in the past two seasons as well as the present year, have not come up to the expectations which I, and no doubt others, had formed in consequence of former years' experience. Lately it cannot be said that they have been prolific in anything but wood. Those trees which I have seen have made more wood in the last three seasons than I have before noticed in double the time. Even with summer pruning or pinching it has been hard work to keep the strong growths in check. No sooner are the shoots stopped than they start again with redoubled vigour. Reports which we have from various parts tell no better tale. Nature, as it seems, in the matter of fruit trees is given up to growth, and when we look at this state of things how can we expect it to be otherwise? Let us go back a little. Were not 1868, 1869, and 1870, hot dry seasons, the climax being reached in 1870, when the crop of fruit was remarkable, especially in the case of trees grown in the forms now under notice? The whole tendency of those seasons was to induce fruitfulness; and did we not allow the trees to bear so fully and so well in 1870, that the effects are not yet effaced from them in 1873? I particularly noticed in 1870 that the trees had little beyond fruit-bearing shoots or spurs, and had so few spurs to develop into fruit-buds another year as to give but faint hopes of continued fruitfulness. The spurs, from the heat and dryness of former seasons, had become fruit-buds, and the result was their extinction on blossoming. A tree which bears a heavy crop one year gives but a small one or none at all the next. It is considered due to the heavy crop, but I am inclined to think it is rather the consequence of the majority of the spurs in the previous year forming fruit-buds. Were we to thin the fruit we should have it finer, but after we have allowed the blossom to expand, and the fruit to set, what

good is the thinning as regards next year's fruiting? It may at first thought appear to be of but small utility. The tree has no spurs, or but few, to mature as fruit-buds; but the fact is that in every spur from which we remove the fruit we set free the means of forming spurs which, if they do not turn into fruit-buds the season in which they are called into existence, they will not if fruit be allowed to be borne thereon, and these in the next or some future season will produce blossom and fruit. By allowing a tree to bear as much as it will we cut off its means of forming spurs not only for the next but also future years' bearing, but by judicious and continued thinning of the fruit, never allowing the tree to overbear itself, we provide for a number of spurs being formed in each season, and it is on those we have to depend for the fruitfulness of the tree from year to year.

The past two springs have not been favourable to the blossoming and setting of fruit trees, but though this in itself is sufficient to account for the indifferent out-door fruit crops, it is, nevertheless, not so easy to explain that whilst our bush and pyramid trees are unfruitful, the standard trees are bearing good crops. This applies, however, to standards of some age. How is it that the more aged of the standard trees are bearing, whilst those that are young are on a par with the pyramid and bushes, not having borne fruit in the two last seasons? I conclude, therefore, that these years have been exceptional; they have been seasons conducive to growth, and when such occur our prospect of fruit is not great, for no matter how often and well we may pinch or stop, the trees seem bent on growth, and summer pruning will not check it, and induce the formation of fruit-buds; or if they do form, they are not well developed, so that the blossoms do not set. It is known that with strong wood, though the trees may produce blossoms, these do not set, or drop off at an early stage. All kinds of reasons are given for the trees not bearing, but I find that when Nature smiles we have fruit abundantly, when she frowns man's art is useless to stay her ways.

It has been contended that working on dwarf stocks also dwarfs the graft or scion, and conduces to early fruitfulness. In some instances we have abundant evidence that trees on dwarf stocks are prolific of fruit at an early stage or age; but whether we use a free or a dwarfing stock, the effect is to give to the trees a prolificacy, which in some kinds soon ceases, whilst in others it is permanent. Every tree placed on a foreign stock is temporarily more prolific, and because we have fruit at an early age we are apt to attribute the result to the working on a dwarfing stock. This, however, coupled with the frequent transplanting to which young fruit trees are subjected, though it contributes to early fruiting, is not permanent in some, and, I may safely say, a majority of kinds. They soon overcome the influence of the stock and the early transplantings, and are given up to growth or to fruitfulness just as Nature dictates.

I have made these observations apart from root-pruning or biennial or triennial lifting. I believe the fertility of the trees to be dependent more on that than on any influence of the stock on the graft. Root-pruning or lifting tends to check growth and to age the tree, and so does grafting or budding, but the effect in either case is, as I have observed, but temporary; yet as we cannot always be grafting, if we mean our trees to continue bearing we must have recourse to root-pruning and lifting if we wish to keep them fruitful and of a reasonable size. After all, then, there is not much difference between trees on a free and those on a dwarf stock, the ultimate result is in what we make the trees by the culture pursued. Root-prune or lift a standard tree every alternate year, and we find it fruits as well and as regularly as the same kinds on a dwarfing stock, as a bush or pyramid. Take Lord Suffield Apple as an example. It bears early and regularly whether it is on the dwarf stock in the pyramid or bush form, or on the free stock as a standard. On either it is prolific—a regular bearer. It needs no lifting nor root-pruning on either stock or in either form. But this is a solitary instance. Cox's Pomona, Hawthornden, and others could be named in proof of the early and constant fruiting not being due to the influence of the stock. It is the nature of the variety. Another example, but to the contrary, may be found in the Hlenheim Orange or Pippin. What is the good of the dwarf stock to it? The tree will not bear on it unless the roots are hacked every second or third autumn, but grow it does, and it refuses to fruit until it has a head quite as large as the standard on the free stock. Summer-pruning does not mend matters. It is the nature of the subject to attain some goodly proportions ere

it produces fruit of note. Root-pruning will afford us fruit on either stock whilst the tree is young. Why, then, attribute an influence to the stock which it does not possess?—G. ABBEY.

STONES IN POTS.—I agree with the writer (page 175) that stones are beneficial, and impede the soddening to which fine soil not filled with roots is subject. But I think pieces of broken brick are better still, because their porous nature gives more hold to the roots, and they also act as a reservoir of moisture.—G. S.

NOTES AND GLEANINGS.

In addition to the exhibitors mentioned last week, Messrs. Dick Radclyffe, & Co., of High Holborn, London, obtained a medal of merit at the VIENNA UNIVERSAL EXHIBITION for seeds and horticultural tools.

— A HANDSOME specimen of the CAMBERWELL BEAUTY (*Vanessa Antiopa*), was caught in the grounds of J. S. Oxley, Esq., on August 28th, by Mr. G. Hodder, gardener, Spring Well, Clapham Common.

WORK FOR THE WEEK.

KITCHEN GARDEN.

THE weather still continues favourable to the growth of the autumn crops, the whole of which, when necessary, should now be kept well earthed-up. Young weeds will now be making their appearance in abundance where seeds have been allowed to ripen and fall during the summer. The whole of the garden, when it is possible to do so, should be gone over and scuffled with a Dutch hoe on a fine warm day, so that the young seedlings may die. Prepare ground for the main spring crop of *Cabbage*; it should be highly enriched with manure, as the plants will remain in the ground sixteen or eighteen months. A quarter on which Onions have been grown is very suitable for this purpose. Prick-out the young *Cauliflower* plants as soon as they are sufficiently large to fix in the ground. Some may be pricked into a sheltered border and some into frames. The *Cucumber* plants in the forcing house must now be carefully attended to; every means must be used to keep them free from insects and in a healthy vigorous state. When the plants get firmly rooted give them a little manure water every alternate time with clear water. Prick some of the *Cabbage* varieties of *Lettuce* into a frame to come-in for winter use; also continue to plant-out strong plants of the *Brown Cos* for autumn use. Pull-up those *Onions* that have done growing, and house them in a dry state. They should be sorted before being laid away in the root-cellar, and the thick-necked ones used first. Thin the plants of *Spinach* to about 9 inches apart. If obliged to step in among them, loosen-up the soil after the thinning is completed. Take the opportunity of thinning the *Turnips* as soon as they have made a rough leaf or two. Should slugs attack them, which is not unfrequently the case at this season, sprinkle two or three times a-week, about nine in the morning, with soot or lime.

FRUIT GARDEN.

Peaches and Nectarines should be looked over every day and the fruit gathered before it is dead ripe; if placed on shelves in the fruit-room with soft tissue or silk paper underneath them, the flavour will be better than if allowed to hang too long on the trees. After gathering what fruit is ripe, the trees may be sprinkled with clean water in the afternoon of a fine day, but unless in extreme cases it would not be advisable to water now any more at the roots, as the sooner the growing tendency can be stopped and the maturing process completed the better. If the heavy autumn rains, which we may expect before long, could be thrown off the borders by tiles puddled with clay, or by boarding, &c., we should suffer less from severe winters than if the borders, allowed to get dry in July and August, have been deluged with rain at the end of September and in October. Unless the borders are particularly well drained, a second growth will take place, the vessels of the wood will be charged with a superabundance of watery fluid, and if a severe winter ensues, black and brown-spotted, cankered, gummy, and dead wood in the spring will be the consequence. Some Apricot trees are having their leaves slightly dotted with mildew, but instead of watering at the roots the leaves might be syringed with sulphur and water.

FLOWER GARDEN.

Carnation-layers which are rooted may now be potted. Pinks should also be bedded-out when well rooted. Keep *Chrysanthemums* neatly tied-up, and at all times prevent their rooting through the bottom of the pot. China Roses may now be propagated by cuttings with facility. Gather ripe seeds, and pull-up those plants in the borders which have done flowering, and of which seed is not required. The lawn, which has lately been but little trouble, will now require to be frequently mown. Turf

may now be laid down. Keep *Dahlia*s securely tied to strong stakes.

GREENHOUSE AND CONSERVATORY.

From this time to the end of October there will be a good deal of potting for furnishing gaities for the conservatory. *Tropeolum tricolorum* and others should now be potted to come in in April. *Lilium longilorum* and *eximium*, the latter only a slight variety of the other, to flower early in June should now be potted; also the beautiful varieties of *Lilium lancifolium*, to flower next July, should now be in pots, but October is time enough to pot all these if they are not wanted before their usual time. By way of experiment all these and others should be kept back as long as possible, in order to have fine flowers. The spring-flowering *Cyclamens* are very desirable plants. They should now be potted, and in the summer be gradually allowed to get dry, in order to be stored away for the winter. Plants of this genus should always be marked with their names, as they are apt to be confused; and as some of them are at rest while the others are in full growth, it may happen that they might receive wrong treatment. The earliest crop of *Hyacinthus*, *Narcissus*, *Tulips*, &c., should now be making root freely in the new pots, and very soon the whole host of *Iridaceæ* must be looked over and arranged for potting. There are few in this order that will do for forcing, but by potting some of them early in September, others late in the autumn, their flowering season may be prolonged, and so with *Oxalis versicolor* and *cernua*; kept near the glass in a stove or forcing pit, they would be in bloom by the middle of March. The *Oxalis cernua* has flowers of as fine a yellow as those of the *Allamanda cathartica*. Violets must soon be potted and placed in frames for forcing.

STOVE.

Many useful plants in that section which flowers in winter and early spring in the stove may be brought sooner into flower by checking their growth about this time. This is done by diminishing the usual quantity of water and by keeping the house drier; others of the same sort may be encouraged to grow as late as they will, in order to succeed these. Every pot plant should be looked over, one by one, at any time when the weather is bad during this or the next month. It is not enough, however, that the outside of the pots and the surface of the soil are cleaned over; the soil must also be turned out of the pots, worms looked after, the drainage relieved from the sediments which the summer waterings have washed down among the crocks; and if the pot is at all covered with green slime, do not use it, but take a dry clean pot of the same size, then add to the surface a little fresh soil of the same nature as that already in the pot.

PITS AND FRAMES.

Continue to propagate plants as fast as possible, and if those that are already rooted can be hardened-off, so as to have a fortnight or three weeks' exposure before they are housed for the winter, it will be all the better for them. Stocks sown at the beginning of August will now be of a fine size for potting. Fill the pots with good open compost, not too rich, and put two plants in a large 60, or three into a large 48-sized pot. They should afterwards be placed in a frame, and shaded until they are established. Auriculas and some of the more delicate Alpine plants should be placed in the frame, so that they may be protected from wet, which is far more injurious to them than cold. Rooted slips of *Verbenas* may now be taken off the plants in the open ground and potted into small pots; this will save the trouble of striking.—W. KEANE.

DOINGS OF THE LAST WEEK.

In last week's Doings it was stated that the weather was favourable to the spread of the Potato disease, and it has now appeared on the tubers on the farm at Loxford. They dig about an acre or more every day, and sort and weigh the crop, so that there is ample opportunity of knowing exactly how many tons are grown on each acre. Within the last two or three days two tons of diseased tubers have been dug from an acre.

FRUIT AND KITCHEN GARDEN.

There are some exceedingly fine *Coe's Golden Drop Plums* approaching to ripeness on an east wall, but as fast as the fruit gets to a certain stage it is attacked by *wasps and flies*. Several nests of the former were found in the immediate neighbourhood, and no time was lost in having them destroyed. The bluebottle flies are also very numerous. We find the best way to preserve the fruit is to cover the trees entirely with close netting, nailing the material closely along the top of the wall, and likewise making it secure at the bottom. Some oblique cordon Pear trees on a low wall are bearing an excellent crop of very fine fruit; the young wood had been cut or pinched-back twice during the season, and having again grown out, it was cut-back for the last time this year. This constant stopping of the young wood will cause the production of fruitful buds, and is on some soils preferable to root-pruning.

On the 5th inst. we made a sowing of *Onions*, *Lettuce*, and *Cauliflower*. As regards the Onions, in many gardens they are

so much attacked by the maggot that it is not possible to obtain a crop of sound bulbs. Where this is the case, sow in the first week of September. The varieties we prefer are Deptford, White Spanish, and James' Keeping. As regards Lettuce, we confine ourselves principally to one variety, Hicks's Hardy White; it has not failed to stand well over the winter with us during the last three or four years. It is a valuable Cos Lettuce, resembling in many respects the Paris White, but harder and of larger growth. We have not yet determined which are the best sorts of Cauliflower for our light soil. We have sown Early London, Walcheren, Lenormand's and Erfurt Dwarf Mammoth. Excellent heads are obtained from this sowing about the end of May and up to the middle of June. Later than June it is waste of ground to plant Cauliflowers in our garden—that is, it is useless to try to obtain heads after June. The present sowing will be planted in hand-lights in October, on ground trenched 2 feet deep. We have harvested the Onion crop; that from the autumn sowing was taken-up about the second week of August. We pull the bulbs up and lay them on the ground to ripen for a few days; they are then tied-up in large handfuls, and in wet weather the best are tied to ropes and hung-up in a dark close shed, where they keep well. Where there is a loft to spread them out it is a good plan to do so, and labour is saved.

We are gathering nice dishes of Peas from Alpha, though it is badly mildewed now. We tried Blue Peter in comparison with Little Gem, and thought the first-named superior in every respect to the last. Blue Peter is the best dwarf Pea, and can be confidently recommended. It so highly pleased my employer that he desired me to save all of it we had sown for seed, as he wished to grow it in the fields.

FRUIT AND FORCING HOUSES.

Until this week we have not had any fires in the *Cucumber house*, but the temperature has fallen to 50, and it is no longer safe to be without. We fancy that a low night temperature predisposes the plants to disease—at any rate, we cannot obtain well-shaped fruit unless a minimum of 60 be maintained in the house. Thrips is very troublesome to us, but we get rid of it on its first appearance by fumigating with tobacco; several smokings are necessary to destroy this pest. We recommend Telegraph as the best and most useful winter Cucumber which is yet in the trade.

CONSERVATORY AND PLANT STOVE.

We have been charmed with the *Lilies* in the conservatory this year; they are now in full beauty, and will continue so some time longer (we do not have them under glass except for a few weeks in the spring when they are starting into growth; they have the shelter of a cold frame until the shoots come in contact with the glass); as the flowers fade we either place them in a vinery or place the pots on their sides out of doors until the leaves turn yellow and fall off, when we shake the roots out of the soil and repot them. *L. auratum* requires to be carefully handled, and the bulbs should not be disturbed more than is necessary. It is more tender than any of the other sorts, and will not do well if the pots are saturated with water in the autumn. Of course we do not mean by this that it is not hardy, as it stands out all the winter in the Rhododendron beds, and flowers well every year if left undisturbed.

We were rather late this year in putting in the cuttings of *Phlox decussata*, the autumn-flowering herbaceous species. Many of the plants in 5-inch pots are now flowering, and are also useful in the conservatory. *Double Zonal Pelargoniums* are doing good service. The plants we have are now adorned with the finest trusses we have yet seen. The cuttings were put in late in the autumn last year in boxes, turned out of the boxes in the following March into 4½-inch pots, and shifted at midsummer into others 7 inches in diameter. Victor and Marie Lemoine are the best two; the former is scarlet, and the latter a soft clear rose. What about the double white sent out in the spring at a high price? We attend as many flower shows as most people, but have not yet seen it exhibited. We looked over the plants and removed all decaying leaves and flowers. In the case of the double varieties the trusses soon become unsightly if decaying flowers are not immediately removed from the centres.

In the stove a night temperature as near as possible to 65° is maintained. A lower minimum would suit some plants, but would not be beneficial to *Nepenthes* and some of the *Orchids*. We have looked over the *Orchids*, washed those requiring it with soft soap and water to remove insects; and in the case of such genera as *Vanda*, *Saccolabium*, &c., have surfaced the pots and baskets with fresh sphagnum. Our cool *Orchids* have been in a cold frame under a north wall until now; they were placed there early in June. They have now been removed to the house, where they will remain all the winter. Amateurs and others only having a small extent of glass should know how easily these fine plants can be grown. *Odontoclossum crispum* (Alexandre), *Mastodia Harryana*, and many of the finest species are as easily grown as *Pelargoniums*. Plenty of moisture in the atmosphere and at the roots is all they require.

FLOWER GARDEN.

Owing to the heavy downpours of rain and chilly nights the plants in the flower beds are not looking so well as they did a few weeks ago; we are careful, however, to make the best of them, as if the flower beds are allowed to become untidy through the accumulation of decaying leaves and flowers, it is a continual reminder that summer is over. The wet weather has caused *Verbenas* to make young growths, so that we shall be able to obtain cuttings suitable for striking in a week or two. At the same time all the other bedding plants will be put in, such as *Cuphea platycentra*, which is seldom grown now, but is a very distinct and pretty plant for the flower border. *Salvias*, *Heliotropes*, *Alyssums*, and other subjects of a like nature are put into a dung-frame from which the heat is almost gone. *Fansies* sown early in August have been planted out in boxes, the plants about 3 inches apart; they are now strong, and will be planted out in permanent beds as soon as the ground is ready for them. *Roses* have given a very good second bloom this year, but mildew has been prevalent, and has caused it to be not so good as it would otherwise have been.—J. DOUGLAS.

TRADE CATALOGUES RECEIVED.

T. Bunyard & Sons, Maidstone, Kent.—*Select List of Dutch Flower Roots.*

Milligan & Kerr, Dumfries.—*Select Catalogue of Dutch Flower Roots, Fruit Trees, Roses, &c.*

Hooper & Co., Covent Garden Market, W.C.—*Catalogue of Autumn Bulbs, &c.*

W. Rollisson & Sons, Tooting, London, S.W.—*Catalogue of Cape, Dutch, and other Bulbs, Roses, &c.*

R. Parker, Exotic Nursery, Tooting, Surrey, S.W.—*Catalogue of Hyacinths and other Bulbous Roots, Alpine and Herbaceous Plants, Fruit Trees, &c.*

Ant. Roozen & Son, Overveen, near Haarlem, Holland.—*Catalogue of Hyacinths, Tulips, Crocus, and other Dutch and Cape Bulbs.*

Barr & Sugden, 12, King Street, Covent Garden, London, W.C.—*Autumnal Descriptive Catalogue of Bulbs and Plants for Winter, Spring, and Summer Flowering.*

Dowrie, Laird, & Laing, Stanstead Park, Forest Hill, London, S.E., and 17, South Frederick Street, Edinburgh.—*Descriptive Catalogue of Dutch Flower Roots.*

Dick Radclyffe & Co., 129, High Holborn, London.—*Autumn Catalogue.*

Sontag & Co., 1772, Folsom Street, San Francisco, California.—*Wholesale Catalogue of Californian Tree and Shrub Seeds.*

TO CORRESPONDENTS.

* * We request that no one will write privately to any of the correspondents of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed *solely* to *The Editors of the Journal of Horticulture, &c.*, 171, Fleet Street, London, E.C.

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

N.B.—Many questions must remain unanswered until next week.

AMERICAN BRAMBLES (*J. G. B.*).—The kind to which you refer must be the New Rochelle or Lawton. Apply to some of our leading nurserymen, who could, no doubt, procure it.

BRIDAL DOUQUETS (*Constant Reader*).—You may obtain them at any price, from half a guinea to five guineas and upwards.

BACK WALL FOR LEAN-TO VINERY (*J. C. H.*).—The best and cheapest substitute for brickwork for the back wall of a lean-to vinery, is a strong framework of deal scantling, faced inside with match-boarding, and outside either with weather-boarding or slates, filling the hollow space with dry sawdust.

HEATING A PIT (*Puzzled*).—A pit in three divisions for Melons, Cucumbers, and other plants cannot be heated with efficiency by a single furnace and flue. Cut through the old flue at the partition of 1 and 2, continuing the part in No. 1 around that division, or else causing it to return upon itself to a suitable shaft near the furnace, which should, of course, be outside the pit. Deal with the flue in the other divisions in a similar manner, making another furnace for it, and you will not only be able to apply heat to your Melons and Cucumbers without affecting the plants in No. 1, but you will avoid the great waste of heat, and therefore of fuel, that is quite unavoidable with your present faulty apparatus.

WHITE SCALE ON ACACIA ARMATA (*F. M. M.*).—The branch you enclosed to us is attacked by the white scale, which is not easy of destruction. We have found placing the plants out of doors after the growth is complete, and allowing them to remain exposed as long in autumn as is safe, a good mode of freeing the plants of this pest. Another method is to syringe them with water at a temperature of 110°, the surface of the pot being covered with moss about 3 inches thick, and over this some canvas large enough to

cover the pot, which canvas must be slit up the centre to the stem of the plant and secured to it, and also around the rim of the pot, the object being to keep the hot water from reaching the roots. Laying the plant on its side, syringe it well with water at the temperature above named, turning the plant over and over again, so as to reach all the parts with the hot water. This repeated a few times will soon rid the plants of the pest. It must not be dipped in the water, but have it syringed on.

PRIMULA JAPONICA LEAVES INJURED (G. C.).—The leaves are eaten or perforated by some caterpillar or weevil, which you may probably find at work if you examine the plants after dark with a lantern: or dust the plants with snuff or tobacco powder both on the under and upper sides of the leaves. We should remove the plants to a cold frame, plunging the pots in ashes to the rim, and give air freely in mild weather.

PEA CULTURE AND SELECTION (Amateur, Dublin).—The average duration of the Pea season is about four months, or from June to September. Occasionally they may be had at a somewhat earlier or later period, but not with any degree of certainty. The following selection may be depended upon for a good succession, sowing them in the order in which they are named. Laxton's Alpha, Kingealer, William L., Champion of England, Ne Plus Ultra, British Queen, Premier. Monthly sowings to be made in January, February, and March, and fortnightly sowings in the next three months. Two or three later sowings of Alpha and Kingealer may be made with good results in a favourable season.

APPLES AND PLUMS FOR SUCCESSION (Orchardist).—*Dessert Apples.*—Red Joannette, Irish Peach, Early Harvest, Reineette Jaune Hative, Devonshire Quarrenden, Kerry Pippin, Ross Nonpareil, Pitmaston Pine Apple, Margil, Pine Golden Pippin, Wyken Pippin, King of Pippins, Golden Reineette, Cox's Orange Pippin, Old Nonpareil, Scarlet Nonpareil, Golden Pippin, Boston Russet, Ashmead's Kernel, Cornish Gilliflower, Reineette Van Mons, Court of Wick, Calville Blanche, Pitmaston Russet, Melon Apple, Hubbard's Pearmain, Mannington's Pearmain, Keddleston Pippin, Reineette du Canada, Lord Burghley, Sturmer Pippin, Golden Pippin, Lodge-more Nonpareil. *Kitchen Apples.*—Manks Codlin, Hawthornden, Duchess of Oldenburgh, Cox's Pomona, Beauty of Kent, Cellini, Gloria Mundi, Lord Suffield, New Hawthornden, Mere de Menage, Adam's Pearmain, Afrifrust, Striped Keefing, Bedfordshire Foundling, Brabant Bellefleur, Northern Greening, Bess Pool, Gooseberry. *Dessert Plums.*—Royale Hative, Green Gage, Demiston's Superb, McLaughlin's, Kirke's, Purple Gage, Bryanston Gage, Cox's Golden Drop, Late Rivers. *Kitchen Plums.*—Victoria, Mitchellson's, Prince Englebert, Gisborne's, White Magnun Bonum, Cox's Late Reil, Shropshire Damsel. The whole of the foregoing kinds of fruit are arranged in the order of ripening.

GERANEACEOUS PLANTS (G. Yvatan).—We know of no work devoted to the description. "The Cottage Gardeners' Dictionary" includes them, detailing the description, management, &c.

SHRIVELLED GRAPES (G. A.).—They indicate deficient root-action; the roots are too dry, probably. We cannot give a decided opinion without more particulars.

GRAPES DISEASED (M. F. W.).—Your Grapes are shrank. Encourage more foliage by allowing the leaders and laterals of the Vine to lengthen, and apply fresh soil to the roots.

GRAPES MOLDY (B. M. of Co.).—They are destroyed by the well-known parasitical fungus, *Oidium Tuckeri*. The Vine should have been thoroughly and repeatedly dusted with flowers of sulphur as soon as the fungus was observed. Apply the sulphur now, and as soon as the leaves are off burn them, and lime-wash the whole house and Vine with flowers of sulphur in the wash. Then prune the Vine; again dust it with the sulphur, and next year look out in time for the *Oidium*.

STOVE IN GREENHOUSE (A Garden Novice).—If the gases arising from the mineral oil burnt in the stove you name can by a tube be conveyed into the open air, no injury will be caused to the plants, otherwise the gases will injure all, and kill some of them. Over so small a structure you might apply a cover at night, which would greatly aid in excluding cold.

CUTTING BOX EDGINGS (South Hants).—If cut or clipped every year it is best done during moist weather in June, and if much of the Box is to be removed it should be cut during moist mild weather in April or early in May.

LAKE GOOSEBERRIES, STRAWBERRIES, AND RASPBERRIES (Thos. Thomas).—On your light soil you will need to manure heavily, and mix it well with the soil in trenching, or it may be placed between the top and bottom spit, and the surface should be enriched by surface-dressings. *Gooseberries:* red—London and Clayton; yellow—Catherine and Lovell; green—Shiner and Stockwell; white—Autographist and Queen of Tramps. *Strawberries:* Dr. Hogg and Cockscumb. *Raspberries:* Carter's Prolific and Yellow Antwerp.

PROPAGATING BEDDING PLANTS, GOLDEN FEATHER PYRETHRUM (J. F. C.).—The propagation of bedding stock may be deferred till the first week in October, provided you can then afford a lively temperature, and guard carefully against the effects of damp. We would, however, remind you that severe frosts occasionally prevail before that period. Do not hastily discard the Golden Pyrethrum, we have no substitute for it of equal excellence. As you wish for variety, we recommend *Mesembryanthemum cordifolium variegatum* and *Polemoniumeruleum variegatum*, both distinct and excellent plants. *Stellaria graminea aurea* is of very dwarf habit, and has golden-coloured leaves. There are some good circles of it in Hyde Park.

MOSSY GROWTH ON A DOG ROSE (M. C.).—It is caused by Cynips rose, also called *C. Belegaris*, and *Rhodites rose*, one of the Gall-forming insects. It deposits its eggs in a bud of the young shoots of the Dog Rose and Sweet Briar. The grubs or larvae hatched from these eggs produce those galls, or lumps, covered with green and reddish fibres looking like moss, so frequently found.

ROYAL VINEYARD GRAPE NOT SETTING (L. Lonsdale).—If you examine the small berries you will find no stones in them, but in the large berries you will. When the flowers are expanding you should shake each bunch gently every morning about ten o'clock. It sets well with us treated in this way. Occasionally we draw our hand gently down the bunches, as a small globe of moisture gathers on the stigma of this sort, and unless removed fertilisation cannot take place.

GRAPES CRACKING (Novice).—Two correspondents complain of this. It is caused by too much water being applied to the roots either naturally or artificially at the wrong time. If the Vines are moderately dry at the roots when the Grapes are swelling for the last time, and they are well watered, in numerous instances, though not always, many of the berries will crack.

SELECTING SEED POTATOES (Idem).—It is not a good plan to select the small Potatoes for seed. Medium-sized well-shaped tubers should be selected.

We spread ours out on the floor of a loft to dry them, and if convenient leave them there until planting time.

FIRE AND WINDOW IN FRUIT ROOM (A Constant Subscriber).—We would certainly have a window in the fruit room, and a fire is necessary to keep out the frost. We use a small stove in our fruit room, and have not yet seen one better adapted for the purpose. It is in the form of a cylinder, is made of strong sheet iron, and is 21 inches deep by 6 wide. Patent fuel is used; it is only charcoal prepared in a special manner. The stove is registered as Joyce's patent, and is made at 255, Oxford Street, London.

TRAINING CORDONS (E. L.).—Train the cordons as you propose.

DWARF ROSES (Idem).—The strong young shoots which are thrown up from the base of Hybrid Perpetual Roses, as a rule should not be pinched back, as the shoots will produce a cluster of flowers. Cut away a portion of the old wood annually to prevent the bush from being crowded. The best time to do this is in February or March.

WINTERING BEDDING GERANIUMS (Idem).—Cuttings struck in August will keep better through the winter than old plants with your limited accommodation. It will require much care to preserve even the young plants in cold frames. We have answered the maximum number of questions; you should not ask more than three. Write again, and say for what purpose you require the plants.

FILBERT (G. A.).—The common Red-skinned Filbert, to be had of any nurseryman.

SEEDLING VARIEGATED GERANIUM (W. W. W.).—There is a variegated *Stella* in commerce very similar to the leaves you have sent.

NAMES OF FRUITES (E. Pond).—*Borovitsky (Centurion).*—The Apple is Duchess of Oldenburgh. (*R. L. E.*)—No. 1 is the White Summer Calville; No. 2, Sugar-loaf Pippin. Dr. Hogg would be obliged by grafts of the former in autumn.

NAMES OF PLANTS.—We again have to state that we cannot undertake to name Ferns without fruit, or from small portions of a frond. (*J. H. B.*)—See above. Your Geranium is a florists' variety. (*M. R.*)—See above. (*T. S.*)—A monstrous form of *Silene Armeria*. (*J. B. M.*)—Ferns shortly. (*C. L.*)—*Maurandya Barclayana*. (*T. u-years Subscriber*)—The white one is a double-flowered variety of *Hibiscus syriacus*, the *Althea frutex* of gardeners; the other is some near ally, which we cannot determine from specimen sent. (*T. P.*)—1, *Solidago Virgaurea*; 2, *Saponaria officinalis*. (*A. D. No. 6.*)—It is the *Potium Sanguisorba*, Lesser Burnet, or Salad Burnet. It is thus noticed in our "British Wild Flowers":—"The name is Gaelic, and refers to the brown colour that so markedly tinges the superior parts of the plant. Jamieson in his Scottish Dictionary quotes a couplet from Douglas's translation of Virgil, where Burnet is employed as the name of a brown colour.

"Behaldam thame so many divers hew,
Some peirs, some pale, some burnet, and some blew."

It is synonymous with the French brunette; and in Anglo-Saxon there is the Brun-wyrt, or Brown-wort. The leaves when bruised smell and taste like the paring of a Cucumber. Gerard says, "It is pleasant to be eaten in salads, in which it is thought to make the heart merry and glad; as also being put into wine, to which it yeeldeth a certain grace in the drinking." It is certain that the leaves and seeds are mildly astringent, and have in modern days been employed as a remedy in dysentery. It forms a herbage relished and beneficial to sheep and cattle." (*T. P.*)—We cannot undertake to name plants by leaves only.

POULTRY, BEE, AND PIGEON CHRONICLE.

CHICKENS FAILING IN AUTUMN.

SMALL marvel if, when human beings are bothered about their costume, when the thermometer falls 22° in twenty-four hours, that fowls, having no variety of wardrobe to go to, show the rapid change by unmistakable signs of having caught cold. For many years at this season we are inundated with letters telling us that chickens that have hitherto been lusty and growing, have all at once become dull, that their combs are dark, that they turn from their food and appear to give up. Writing in THE JOURNAL OF HORTICULTURE, we always shudder when we approach a subject akin to flowers, shrubs, trees, or even vegetables—we fear to commit ourselves. Nevertheless, it strikes us they feel the first change in the weather just as certain plants do, and as the first frost nips the Geraniums, Nasturtiums, Heliotropes, and all of that nature, so the chickens used to the glorious sun and the dry grass feel the absence of the one and the damp of the other. The simile may be continued: as we in the heat of summer sit with doors and windows open, but on the approach of winter, or at the first change of temperature, close first the door, then the windows, and at last light the fire, so the chickens require more shelter and better food. We breed many hundreds of chickens, and up to this time they always roost out. In past years, September has been a hot month, we have found the first fortnight in that month among the hottest times of the year. This year there is a change; half the human beings have caught colds, so have the chickens. We increase the quality and the quantity of the food. We catch them at night when at roost, and put them in the houses they are henceforth to inhabit. We are sorry to see a growing disposition to feed on rice and potatoes. Both are bad. The first induces poverty of blood and low condition; the second invariably produce disease of the liver, causing that which is known as a great delicacy, the "foie gras." However delicious it may be when it has passed through the hands of the "artists" at Strasburg, it is by no means a pleasant symptom among the inhabitants of a farmyard or a cottage poultry-yard.

The best food for poultry is ground oats; but that does not mean the ordinary oatmeal. It means the whole of the oat

ground with stones dressed for the purpose, so fine that the husk and corn form a smooth dour that will when wetted work into a paste or liquid. The ordinary ground oats when slaked with water mix as though they were made-up partly of chaff. Fowls will not eat this latter, but they are greedy for the former. They do better on it than on any other food. It makes the best morning and evening meal. The midday one may be Indian corn or whole barley; or, better still, the scraps from the house, pieces of fat, the meat from beef-tea or mutton broth; the dry skin of any joint, the knuckle of shoulder or leg of mutton chopped small and thrown down, are all excellent food. For small chickens these may be added to chopped egg, bread and milk, and such like. They will not grow so fast as their predecessors have done. The nights are getting longer, the days shorter, the sun has less power. The difference is not felt so much in the middle of the day, but the mornings and evenings are cold, they require to be fed at dawn and sunset, and these two meals should be the best of the day. All chickens that have not left the hen, or those that do not yet roost with the adults, should be got under cover every night. Exception may be made sometimes in favour of the hens under ribs, but they should be so placed that they are safe from cold winds and driving showers. It will likely be said, Thousands of chickens are reared without all this trouble; granted, but we only hear of the survivors, and know nothing of the unfortunates who die in the process. Our object is to give such advice as shall prevent disappointment. We feel sure we have done so, and we have endeavoured to carry out our unvarying rule of making all plain, and advising only that which we have ourselves tried.

PUBLISHING JUDGES' NAMES.

I AM also of Mr. Wright's opinion that Judges' names should be published before the closing day of the entries, and of late I have taken the determination not to show unless I know the gentlemen's names who are to officiate. My reason for so doing is simply because the opinions are so different. For instance, I have a pair of birds of a certain class which I have shown with great success under several good Judges—the same birds have been entirely passed over by other well-known gentlemen, whereas birds I do not like in certain points took the honours; and as I have birds of the same class to suit those gentlemen also, I can suit them all.

I do not mean to intimate that the latter Judges are not efficient gentlemen, only their opinion differs, and they prefer certain points the former reject, and *vice versa*.

In answer to several letters I wrote to secretaries of shows a few days before the entries closed, the schedules being published too long beforehand to mention the Judges' names, I always had for reply that the committee were not quite decided as to their selection, but that gentlemen of well-known character were sure to officiate; and the consequence was that they lost my entries. My opinion is, that if committees cannot publish the Judges' names with their schedules, they should do so through the Journal as soon as they decide.—A. A. VANDER MEERSCH, *Tooting*.

ALTHOUGH I never exhibit fowls I take great interest in them, and on perusing Mr. Wright's letter in your last week's Journal, it appeared to me that publishing the Judges' names at poultry shows would in no way assist breeders to attain the desired knowledge—viz., the proper standard to aim at in breeding for exhibition, but that whilst Judges held such diametrically opposite opinions as those mentioned in Mr. Wright's letter, it would simply tend to start two or more classes of the same breed, each said to be perfect specimens, according to whichever Judge they chose to follow. This I consider would undermine much already accomplished. In my opinion the remedy would be for all Judges to award by one recognised standard, then I should say that most of the in-and-out judging now complained of would be done away with.—SPECTATOR.

WITH reference to, and in connection with Mr. Wright's communication on page 181, I would direct the attention of poultry exhibitors and breeders to another matter which appears to me to be of paramount importance. Of my own knowledge, more dissatisfaction arises from the incompetence or peculiar fancy of the Judge than from the mistake of an admittedly good Judge, an accident which distresses the Judge fully as much as the losing exhibitor. But why should there be any difference of opinion between really good Judges? or why should any point be left to their fancy? To me it appears most anomalous, that such a number of persons should be found willing to submit their birds to competition and adjudication when there is no recognised standard of excellence to bind the Judge. It is not only very convenient for Judges that there is not such a standard, and that many points should be left to their taste or discretion, but it is eminently unsatisfactory to exhibitors, unless, perhaps, to those favoured few who know exactly what the Judge likes, and naturally take advantage of the knowledge; but it is equally

convenient to unconscientious persons who, when getting rid of their faulty birds, are ever ready to shield themselves under the pretence of "disputed points."

Judging at poultry shows will never give anything like general satisfaction until there is a recognised standard of excellence—a standard, too, in which the points will be much more numerous and with a higher figure set to each than in the old standard. Armed with such, amateurs would soon be sufficiently skilled to deal with experts, and any intelligent fancier after a year or two's experience might give satisfaction as a Judge. Besides, a recognised standard would have another merit—it would keep points from shifting, a matter which causes much annoyance at present. If what I have endeavoured to set out above is true, it surely would not be expecting too much of the gentlemen who are at present at the head of the list of Judges, to sink any differences of opinion that may exist between them, and unite in publishing a standard which, I have no doubt, would be hailed as a boon by every true poultry fancier.—O. P. H. Z.

DEALERS AS EXHIBITORS.

THE letter which appeared a few weeks ago from the pen of Mr. L. Wright was read with much interest and attention by all poultry exhibitors, and must have carried conviction to the minds of every disinterested and impartial observer of the controversy. Merit is the one thing needful, whether in the pen of the dealer or amateur, at our poultry exhibitions, and merit ought to and must bear off the palm of victory. By excluding dealers from exhibiting, in most cases if not in all we should be excluding merit also; but at the same time it is an incontrovertible fact that when they do exhibit they are sure to take almost all the prizes, "for what is the use of showing," as "OBSERVER" truly said, "when Mr. Fulton is sure to be there?" One way of moderating, if not removing the grievance, would be to confine each exhibitor, be he either dealer or amateur, to only one entry; for then amateurs, knowing that they would stand some chance of obtaining at least a second or third prize, would take courage and send their birds, and thus the number of entries would be largely increased. Although at first sight this plan would seem to injure the pocket of the dealer, yet in the long run he would be a gainer. He would be able to transact much more business than he does at present, and the increase in the returns of his business would amply compensate for the loss he would sustain by not being able to take more than one prize. The greatest amount of dissatisfaction and grumbling is caused, not by dealers exhibiting, but by their carrying all the prizes away.—A. T. W.

ALDBOROUGH AND BOROUGHBIDGE POULTRY SHOW.

THE pretty little town of Boroughbridge was *en fite* on August 22nd, when the Show was held, and the receipts at the gate were just double the amount taken last year. The poultry on the whole were very good, but the adult birds showed the effects of the season in their ragged plumage. *Dorking* chickens were a very good class. The first-prize pen had only the advantage of age to secure its position, the second being in many respects better, but much younger. *Spanish* were a treat to see. The first-prize cock was in splendid condition, his face being so white and smooth. In *Brahma* chickens a pen of very fine Lights secured the first honours against their darker brethren, and if they are kept growing will be difficult to beat. In the Variety class a splendid pen of Crève-Cœurs, very large and in good condition, were first, and Black Hamburgs second.

Turkeys and *Geese* were very large and good, and the Aylesbury *Duck* classes such as we seldom see at the largest shows. In the Variety class *Widgeons* were first, and *Muscovy* second.

Pigeons were very good, the most noteworthy being the Carriers, Trumpeters, and English Owls. The prize *Rabbits* were all Lops with good ears, which measured well.

We published the awards last week.

ALFORD POULTRY SHOW.

Few committees can boast of so successful a first attempt at carrying out a poultry show, every attention being paid to the most minute detail that could ensure popularity. Two very large tents were provided, the one being devoted exclusively to poultry, the other containing a well-arranged display of Parrots, Cage Birds, Rabbits, and domestic Cats. The latter portion of this collection was much improved in appearance by Mr. Billett providing with the pens a bright-coloured plush ottoman for each cat, which in every instance formed a favourite and very comfortable resting place for the animal exhibited. Unfortunately it proved very wet early in the morning of the 2nd, but as the day wore on the clouds broke, and a bright sun soon rendered everything as pleasant as possible. A general feature of the Show consisted in the majority of the old birds, from

moulting, being in woeful show trim, but the great bulk of the chickens were not only well grown, but also in admirable feather. For this simple reason we must confine our remarks more particularly to chickens.

Among these a grand pair of Brown Red *Game* claim especial mention; they were shown in the hardest feather, well matured, and the cockerel only very recently dubbed. Mr. Tickner, of Ipswich, was successful with a pen of Golden-pencilled *Hamburgs*, sent in exquisite condition. In the *Cochins*, both White and Partridge-feathered were very excellent, but the Buffs were as decided inferior. A very well-feathered pen of Brown *Lophorns* were much noted, as being so rarely met with; and a very strange-looking pen of White chickens, the product of a cross between the true Frizzled and Silky fowls, were decidedly a curiosity, though as yet barely ready for public exhibition. The show of Aylesbury *Ducks* contained many very large specimens, but faulty bills were the rule. The Rouen *Ducks* were a very fine class, but, strange to say, no fancy waterfowl were exhibited.

Pigeons were a fair collection, but not numerous; White Pouters, Black Carriers, Foreign Owls, and very superior Barbs, being among the most prominent varieties.

The finest breed of *Rabbits* shown were the Lop-eared ones, though some specially good Angoras and Silver-Greys were in general competition in a class open to all other breeds.

A very attractive portion of the Show consisted of Parrots of many rare varieties, singing birds both foreign and British, and a very interesting couple of Long-eared British Owls. These Owls were soon claimed, as, being shown in the most perfect feather, and from their rarity in confinement, they will doubtless be transferred to some public collection.

Poultry and Pigeons were judged by Mr. Edward Hewitt, of Birmingham; and Mr. J. W. Harrison, of Spalding, awarded the prizes in all the remaining portions of the Show.

DORKINGS.—1, J. Watts. 2, W. Hughes. 3, W. Roe, jun. *Chickens*.—1, W. H. Robson. 2, J. Watts.

BRAMMAS.—*Dark*.—1, W. E. Garner. 2, Mrs. E. Fryer. 3, J. M. Atkinson. c. A. Canty. *Chickens*.—1 and 2, Rev. J. Richardson. 3, W. Whiteley, hc, M. James.

BRAMMAS.—*Light*.—1, I. Natsy. 2, R. Concy. *Chickens*.—1, Rev. H. W. Hutton. 2, P. Haines. 3, W. King. hc, W. King; S. F. Hulme. c. J. Watts.

COCHINS.—*Engl.*.—1, T. Lienesley. *Any except Buff*.—1 and 3, R. S. S. Woodgate. 2, W. Whiteley.

GAME.—*Black Red*.—1, G. F. Clare. 2, W. Robson. *Any variety except Black Red*.—1 and 3, F. Sales. 2, G. F. Clare. c. R. Chapman.

FRENCH.—1, J. Lewis. 2, B. Hibbert. 3, I. Natsy.

SPANISH.—1, G. G. Thompson. 2, Mrs. Martin.

HAMBURGS.—*Golden-spangled or Pencilled*.—1, W. K. Tickner. 2, G. Gumbis.

BARNDORF OR CROSS.—1, J. S. Bond. 2, R. Concy. 3, F. Saul.

BANTAMS.—1, F. Sales. 2, G. F. Clare. hc, A. Canty.

ANY OTHER VARIETY.—1, R. S. S. Woodgate. 2, W. Leigard. *Chickens*.—1, A. Canty. 2, W. Whiteley. 3, S. F. Hulme. hc, J. Watts. hc, W. G. Waters; T. Lienesley; G. E. Cresswell; R. Robson; I. Natsy; R. Concy; Mrs. E. Fryer; O. B. Porter.

SELLING CLASS.—1, J. Walkerley. 2, J. Brown. hc, J. Sellers. c. T. H. Dows.

DUCKS.—*Rouen*.—1, J. Watts. 2, W. H. Robson. hc, T. M. Derry. *Aylesbury*.—1, W. F. Dunn. 2, W. H. Robson.

PIGEONS.

CARRIERS.—1, H. Yardley. 2, R. Ashton.

POUTERS.—1, R. Ashton. 2, H. Yardley.

FANTAILS.—1, J. Loversidge. 2, W. H. Tomlinson. hc, J. Loversidge; H. Yardley.

ANY OTHER VARIETY.—1, L. Allen. 2, H. Yardley. hc, W. Larkins; R. Chapman.

SELLING CLASS.—1, T. H. Dows. 2, R. Foster. hc, R. Foster; W. Larkins.

CAGE BIRDS.

RABBITS.—*Lop-eared*.—1, P. C. Stanley. 2, F. J. Smith. hc, R. T. Grantham; J. C. & H. Elwis. c. A. Teesdale. *Any except Lop*.—1, E. S. Smith. 2, F. J. Smith. hc, H. E. Glew; E. S. Smith. c. E. S. Smith; G. Foulds.

CANARIES.—1, S. Tomlin. 2, B. Atkin. hc, W. Harwood. c. T. C. Johnson.

PARROT, PARROQUET, OR ANY FOREIGN BIRD.—1, G. F. Clare. 2, C. Eoad. hc, J. S. Atkin; A. B. Douglas. c. E. L. Crowthier.

LINNET, MULE, OR ANY OTHER FINCH.—1, C. Bond. 2, Mrs. Baugh. c. J. Wilson; C. Bond; H. Willson.

THRUSH, BLACKBIRD, LARK, OR ANY OTHER CAGE BIRD.—1, Mrs. Martin. 2, L. J. Brakenbury. hc, J. S. Atkin. c. F. L. Wass.

CATS.—*English*.—1, J. E. Baumber. 2, — Mountain. hc, L. J. Brakenbury; T. J. Wood. c. D. Sowden; G. North. *Foreign*.—1, Miss I. M. Bradley. 2, — Rowle.

HYDE POULTRY SHOW.

The great feature of the Hyde Show was its general excellence. Nearly the whole of the most noted prize pens were entered, but some were not by any means in perfect feather, as they were moulting heavily. A somewhat serious drawback caused some pens to arrive too late for competition. By the 7.55 A.M. train from Manchester a considerable number of entries were expected, both of dogs and poultry, and it was arranged for the Judges to arrive by the same train. At the Hyde Junction, however, an accident occurred; the engine, tender, and a portion of the wheels of a first-class carriage leaving the rails at what are called the "facing points;" and the engine embedded itself to the very axles, and entirely blocked both lines for about four hours. Except the fright consequent on a great noise and heavy jolting, the passengers, as well as the poultry and dogs, were none the worse for the mishap, and, under the circumstances, permission was granted to the Judges to walk down the line a mile and a

half to Hyde to fulfil their duties, whilst the Committee, with praiseworthy dispatch, sent conveyances by road for those unexpectedly delayed on the railway.

The birds were nicely penned around the walls of a mill, but the light being what is called a "back light"—that is, coming through the pens at intervals from the windows behind the pens, could not display the poultry to the best advantage. The *Cochins* and the *Erahmas* were admirable, and of *Hamburgs* very rarely has there been such display. The *Game* were few, but really good. *Bantams* were a fine collection, a pen of real Silver-faced ones being worthy of note. *Geese*, *Ducks*, and *Turkeys* were all that anyone could desire. The comfort of the whole of the poultry was well provided for.

DORKINGS.—1, J. Robinson, Garstang. 2, J. Walker, Rochdale.

COCHINS.—*Engl and Cinnamon*.—1 and 2, W. A. Taylor, Manchester. *Any other variety*.—1, W. A. Taylor (Partridge). 2, T. Aspdon, Church (Partridge).

BRAMMAS.—*Dark*.—1 and 2, T. F. Asdell, Cowley Mount, St. Helen's. hc, J. F. Smith, Sheffield. *Light*.—1, T. A. Deen, Marden, Hereford. 2, H. Chawner, jun., Uttoxeter. hc, Rev. N. J. Raley, Newbury.

GAME.—*Black-brasted Reds*.—1, Howarth & Lever, Woolford, Bury. 2, Tomlinson, Woolford, Bury. *Brown-brasted Reds*.—1, E. Bell, Burton-on-Trent. *Any other variety*.—1, E. Bell (Duckwing).

HAMBURGS.—*Golden-pencilled*.—1, J. Robinson. 2, T. Edwards, Barnton, Northwich. hc, J. Downess; R. H. Ashton, Mottram. *Silver-pencilled*.—1 and 2, J. Robinson. hc, J. Downess, Newchurch.

HAMBURGS.—*Golden-spangled*.—1, G. & J. Duckworth, Church. 3, N. Marlor, Penton, Manchester. hc, J. Robinson, Lindley, Otley; J. Downess; N. Marlor. *Silver-spangled*.—1, J. Robinson. 2, J. Robinson. hc, J. Robinson; J. Robinson; A. Ludlam, Mottram.

HAMBURGS.—*Black*.—1, J. Robinson. 2, J. Downess. hc, T. Walker, Denton (2). **SPANISH.**—1, J. Leeming, Broughton, Preston. 2, Furness & Suddall, Kewten-stall. c. J. Nash, Walsall.

CRETE COCKER.—1, J. Robinson. 2, G. W. Hibbert, Godley, Hyde, Manchester. **HUCDANS.**—1 and 2, G. W. Hibbert. hc, E. Williamson, Henllys, Berwick.

POLANDS.—*Black with White Crests*.—1, J. Boyle, Manchester. 2, R. Jones, Neath. *Any other variety*.—1, J. Fearnley, Lorton, Newton-le-Willows. 2, J. Robinson.

ANY OTHER VARIETY EXCEPT BANTAMS.—1, Rev. A. G. Brooke, Shrawardine Rectory, Shrewbury (Malays). 2, E. Walton, Horceliffe, Rawtenstall. hc, R. S. S. Woodgate, Pembury, Tunbridge Wells.

GAME BANTAMS.—*Black-brasted Reds*.—1, T. Barker, Hill End, Burnley. 2, W. F. Addie, Preston. hc, G. Booth. *Any other variety*.—1, J. W. Brockbank. 2, R. J. Hartley, Altrincham.

BANTAMS.—*Black or White*.—1, W. A. Taylor. 2, R. H. Ashton. hc, E. Walton. c. R. H. Ashton. *Any other variety*.—1, E. Walton. 2, R. Wharam, Hyde.

DUCKS.—*Aylesbury*.—1 and 2, J. Walker. hc, S. Dronsfield, Werneth, Old-bury; T. Tomlinson. *Rouen*.—1, J. Walker. 2, G. R. Goodfellow, Hyde. *Any other variety*.—1, J. Walker. 2, G. S. Sainsbury, Devozes (Black East Indian).

GEESE.—1 and 2, J. Walker. hc, J. & W. Rostron, Levenshulme, Manchester; J. Greaves, Stockport.

TURKEYS.—1, Rev. N. J. Raley. 2, J. Walker.

SELLING CLASS.—1, E. Smith, Rochdale. *Cock*.—1, R. Newbitt, Epworth. 2, W. Birch, Barnade, Coventry. *Hens*.—1, R. Newbitt. 2, J. Nash. hc, W. Warburton, Hyde; W. Birch.

PIGEONS.

CARRIERS.—*Cock*.—1, H. Yardley, Birmingham. 2, E. Horner, Harewood, Leeds. *Hen*.—1 and 2, E. Horner.

POUTERS.—*Cock*.—1 and 2, E. Horner. *Hen*.—1, E. Horner. 2, J. C. Boothby, Stockport. hc, H. Yardley; E. Horner.

TUMBLERS.—*Short-faced*.—1, J. Fielding, jun., Rochdale. 2, E. Horner. hc, H. Yardley. *Any other variety*.—1 and hc, J. Fielding, jun. 2, H. Yardley.

TUMBLERS.—*Long-faced.*—1, L. Allen, London. 2, J. Watts, King's Heath, Birmingham. *Any other variety*.—1, W. A. Hyde, Ashton-under-Lyne. 2, J. Watts.

BUNTS.—1 and 2, H. Yardley.

JACOBS.—1 and hc, E. Horner. 2, T. Newell, Ashton-under-Lyne.

FANTAILS.—1 and 2, J. F. Loversidge, Newark.

DRAGONS.—*Blue*.—1, H. Yardley. hc, J. Watts. hc, E. Horner. *Any other variety*.—1, Mrs. Hunt, Hyde. 2, J. Watts.

ANTWERPS.—*Short-faced*.—1 and 2, G. B. Goodfellow. hc, A. Justice. *Long-faced*.—1, R. White, Manchester. 2, G. B. Goodfellow.

OWLS.—*English*.—1, E. Lee, Nantwich. 2, J. Walker.

LOCAL CLASSES.

GAME.—*Cock*.—1, W. Warburton. **HENS.**—1, W. Warburton.

HAMBURGS.—*Gold and Silver-spangled*.—1, Ashton & Booth, Broadbottom. 2, J. Mayers, Denton. *Gold or Silver-pencilled*.—1, H. Smith, Hyde. 2, Ashton and Booth.

BANTAMS.—1, R. H. Ashton. 2, Miss H. A. Wharam, Hyde.

ANY OTHER VARIETY EXCEPT BANTAMS.—1, J. Mayers (Black Hamburgs). 2, D. Potts, Hyde (Houdans).

DUCKS.—1, G. B. Goodfellow.

JUDGES.—*Poultry*: Mr. E. Hewitt, and Mr. Richard Teebay. *Pigeons*: Mr. F. Esquilant.

TODMORDEN POULTRY SHOW.

The fourth annual meeting of the Vale of Todmorden Agricultural Society was held on the 6th inst. The entries, considering that it is so late in the season, were very good in all departments; in poultry and Pigeons they amounted to about 350. The management of all was exceedingly good, and the pens, which were on Turner's principle, placed in single tier looked exceedingly well, while the birds appeared quite comfortable.

Game were divided into five classes, and all were young birds, some of which were very good; among them were the first-prize single Brown Red cockerel and the pair of Brown Reds. In single pullets a grand Pilo was first, closely run by a capital Brown Red. The only other birds worthy of special notice were the first-prize Duckwings, which are, doubtless, one of the best pens that have been shown of late. The only exception in the age of the fowls was in *Brahmas*, of which there was one adult class containing some good old birds, and the young birds were also very good and forward. In *Cochins*, Buffs were first

and Partridge second. *Dorkings* were a good lot, but the oldest chickens were much out of condition, the first-prize pen being young, but very good in all particulars, and all were Dark Greys. The first-prize *Spanish* were forward and in good condition, but the rest very late. Golden-pencilled *Hamburgs* were very good, forward, and in brilliant plumage; but some of the best birds in this section were the Golden-spangled, especially the pullets, which may fairly be termed perfect. Silver-pencilled were not so numerous, but the two winning pens were very good and close in point of merit. The first-prize Blacks were *Hamburgs* in all points, and such as will be difficult to beat. Of *Bantams*, Game were a good lot, the first being Black-breasted Red, the second Pile, and a very handsome pair of Brown-breasted Reds were highly commended. In the next class were but two noteworthy pens, the first being pure white-ground Silver Sebrights, and the second Blacks. In *French* only the first-prize *Crève-Coeurs* were of any note, but these were forward and good. With the exception of the Malays, in the Variety class it was difficult to find a pen fit for the prize, but these were a grand pair.

Ducks in all classes were exceedingly good, the *Aylesburys* being of immense size and of the purest quality, and every pen was noticed, as also most of the *Rouens*. In the Variety class for Ducks the first were *Vidua* Whistlers, and the second *Brazilian*. *Geese* were a grand lot, Greys being first and Whites second; and the *Turkeys* were large, but sadly out of feather.

The poultry in the district competition was very good in some of the classes, the *Cochins* and *Game* being among these; and in Ducks three prizes were awarded, the first being for *Rouen*, the second for *Aylesburys*, and the third for *Black East Indian*.

The *Pigeon* classes were well patronised, but in some the birds were only of ordinary merit; this remark applies to the *Pouters*, with the exception of the first-prize Reds. In *Carriers* Duns were first and Blacks second, and the *Almond Tumblers* were pretty good. In the next class for *Tumblers* *Black Mottles* were first and *Blue Beards* second, both pairs being *Short-faces*. *Fantails* were only of ordinary merit, but the *Dragoons* were a fine class, the two winners being *Blues*, and embodying all the grand points of this variety. *Barbs* were good, Blacks being first and Duns second. There were three good pens of *Red Jacobins*, but the rest were very poor. *Antwerps* were a large but irregular class, both pairs of winners being Duns, the first *Short-faces* and the second large useful *Long-faces*, while there were many good pens faulty only in eye, which was of a sickly yellow. Of *Turbits*, only the winners good, and both pairs were *Blue*. *Trumpeters* were moderate. *English Owls* were a large class with few good pairs except the winners, the first being *Blue*, with capital heads, but somewhat small, while the second were *Silvers*, large, but not so good in head and gullet. *Foreign Owls* were good, *Blues* being first and Blacks second. Of the *Blue Rock* little can be said, except that they were all common dovecock birds, but the prizes were awarded. Of *Nuns* there were only three pairs, but good. In the Variety class *Black Brunswicks* and *Hyacinths* won the prizes.

The *Rabbits* were not numerous, the prizes, as in *Pigeons*, not being good, but some of the specimens were excellent. In *Lop-ears* the first was a *Grey-and-white*, 22 inches by 4½, the second being *Fawn-and-white*, 21 by 4½. *Angoras* were all good and well shown, and the *Himalayan* also a neat lot. The *Silver-Greys* were one of the best classes. The Variety class contained some grand Dutch, the first prize being awarded to a *Grey Rabbit* of that variety, and the second to a splendid *Belgian Hare Rabbit*; many of the others were highly commended.

GAME.—Any colour.—Cockerel.—1, W. Ormerod, jun., Todmorden. 2, W. Tillotson, Coates, Barnoldswick. Pullet.—1, C. W. Hetherley, Mablethorpe. 2, E. Dyson, Halifax. *he*, J. Mason, Worcester. *c*, W. Ormerod, jun.; W. Tillotson.

GAME.—Black Bird.—Chickens.—1 and 2, W. Ormerod, jun.; Brown or any other kind.—Chickens.—1, W. Ormerod, jun. 2, T. Byson. *he*, W. Tillotson. *c*, F. Walton, Rawtenstall. Any other variety.—Chickens.—1, T. Dyson. 2, F. Walton.

BRAMA FOOTRA.—Dark.—1, J. Bowness, Newchurch. 2, H. Lacy, Hebden Bridge. Any colour.—Chickens.—1, J. H. Pickles, Brinkdale, Southport. 2, H. Lacy. *he*, J. H. Pickles; J. Watts, Birmingham.

COCHINS.—Gold.—1 and 2, C. W. Keighley, Keighley.

DORKINGS.—Chickens.—T. Bridles, Earby, Skipton. 2, T. Statter, Whitefield. *he*, J. Walker, Rochdale; J. Robinson, Garstang; J. Stott, Healey. *c*, T. Statter.

SPANISH.—Chickens.—1, H. Wilkinson, Earby, Skipton. 2, E. Brown, Sheffield.

HAMBURGS.—Gold-pencilled.—Chickens.—1, W. A. E. Clayton, Keighley. 2, J. Bowness. Gold-spangled.—1 and 2, J. Hall, Starkesteads. *he*, T. May, Wolverhampton. Silver-pencilled.—1, H. Smith, Keighley. 2, J. Robinson. *c*, J. Bowness.

GAME.—Black.—1, J. Robinson. 2, H. Stanforth, Worsborough, Barnsley. Black.—1, J. Robinson. 2, C. Silgwick. *he*, J. Bowness.

BANTAMS.—Game.—Chickens.—1, G. Noble, Stamcliffe, Dewsbury. 2, W. F. Entwistle, Westfield, Bradford. *he*, W. F. Entwistle. 2, E. Walton. *c*, W. Dawson, Whiby. Any other variety.—Chickens.—1, E. Walton. 2 and Extra, R. H. Ashton, Mottram. *he*, W. Dawson.

FRENCH.—Chickens.—1, H. Feast, Swansea. 2, J. Helliwell, Hebden Bridge. *c*, R. Whitehead, Barnley; J. H. Fielden, Todmorden.

DUCKS.—Any other variety.—1, 2, and *he*, H. B. Smith. *c*, J. Walker. *he*, F. E. Rawson, Thorne; B. Consterdine, Littleborough; W. Penny.

TRUCKERS.—1, J. Walker. 2, F. E. Rawson. *c*, W. Sefton, Blackburn.

LOCAL CLASSES.

COCHINS.—Chickens.—1, R. Bowker, Todmorden. 2, J. Dearden, Hebden Bridge. *he*, A. Sutcliffe, Featherstall, Littleborough.

BRAMAS.—Chickens.—1, B. Consterdine. 2, B. Cockerof, Hebden Bridge. *he*, J. Dearden.

BANTAMS.—Chickens.—1 and 2, W. Dawson. *he*, T. Greenwood, Todmorden.

HAMBURGS.—Chickens.—1, J. Sutcliffe, Hebden Bridge. 2, J. H. Fielden. *he*, F. E. Rawson. 2, B. Consterdine. 2 and *he*, W. Ormerod, jun.

DUCKINGS.—1, C. Holt. 2, J. Mitchell, Stanfield; J. Trickett, Waterfoot. *he*, R. Hutchinson, Littleborough; J. Utley, Rochdale; S. Witham, Todmorden; J. Trickett.

ANY OTHER VARIETY.—Chickens.—1, J. Mitchell. 2, R. Hutchinson. *he*, J. Jackson, Matherhole, Todmorden.

PIGEONS.

POUTERS.—1, J. Nelson, Hexham. 2, E. Horner, Harewood, Leeds.

CARRIERS.—1, J. Stanley, Blackburn. 2 and *he*, E. Horner.

TUMBLERS.—Almond.—1, E. Horner. 2, F. Moore, Burnley. Any other variety.—1, B. Consterdine. 2, W. Sefton, Blackburn. *he*, J. Lawton, Staley Bridge; E. Horner. *c*, W. Lamb, Brothorpe, Rochdale.

DRAGONS.—1 and 2, W. Sefton. *he*, J. Watts; A. E. Binns, Matherhole, Todmorden; W. Sefton. *c*, G. Robinson, Portsmouth.

FANTAILS.—1, P. R. Spencer, Hereford. 2, J. F. Loversidge, Newark. *he*, J. F. Loversidge; E. Horner.

BARBS.—1, J. Stanley. 2, E. Horner. *he*, J. Lever, Todmorden.

JACOBS.—1, W. Dugdale, jun., Burnley. 2, W. Sefton. *he*, E. Horner.

ANTWERPS.—1, J. Stanley. 2, H. Jennings, Allerton, Bradford. *he*, R. E. Haslam, Bolton; H. Jennings; C. Hopwood, Rochdale; J. W. Colinson, Halifax; J. Stanley; E. Horner.

TRUMPETERS.—1 and 2, E. Horner.

OWLS.—English.—1 and *c*, J. Thresh. 2, R. A. Simpson, Halifax. *he*, S. E. Kettlewell, Oldham; R. White, Manchester; J. Barker, Stile, Todmorden; E. Horner. *he*, R. White, Manchester; J. Barker, Stile, Todmorden; E. Horner. *he*, R. White, Manchester; J. Barker, Stile, Todmorden; E. Horner.

BLUES.—1, M. Utley, Walsden. 2, J. Crabtree, Ewood, Mytholmroyd. *he*, F. Fielden, Walsden; J. Crabtree.

NUNS.—1 and 2, E. Horner. *c*, J. Watts.

ANY OTHER VARIETY.—1, W. Lamb. 2, P. R. Spencer. *he*, J. Watts; W. Lamb; E. Horner.

SELLING CLASS.—1, W. Sefton. 2, W. Hey, Littleborough. *he*, W. Sefton. P. R. Spencer; W. Holt, Cadden, Todmorden. *c*, R. White; S. Witham; W. Dugdale, jun.; J. Howorth, jun.

RABBITS.

SPANISH.—1, J. Boyle, jun., Blackburn. 2, J. Chappel, Dewsbury. *he*, J. E. Crossley, Halifax.

ANGORA.—1, S. Ball, Bradford. 2 and *he*, J. W. Harling, Burnley.

HIMALAYAN.—1, F. Peters, Hull. 2, S. Ball. *he*, S. Ball; J. Boyle, jun. *c*, J. Butterworth, Rochdale.

SILVER-GREY.—1, S. Ball. 2, J. Boyle, jun. *he*, J. Boyle, jun.; W. H. Hewerdine, Hull. *c*, H. White.

ANY OTHER VARIETY.—1 and 2, J. Boyle, jun. *he*, R. Leggot, Thorne, Doncaster; S. Butterworth, Rochdale; J. Irving, Blackburn; H. E. Gilbert.

SELLING CLASS.—1, S. Brierley, Easing, Rochdale. 2, J. Boyle, jun. *he*, S. Utley; J. W. Harling.

The Judges were Mr. E. Hutton, Padsey, and Mr. J. Dixon, Bradford.

KENT AND SURREY FANCY RABBIT SOCIETY.

The thirty-first half-yearly Show of the above Society was held at Mr. J. D. Allatt's, Montpellier Tavern, Walworth Road (near Walworth Road railway station), on the 8th inst., when some very fine specimens were exhibited. A handsome silver cup of the value of five guineas was given for the longest-eared Rabbit. The following are the awards:—

Prize.	Length	Width	Age	Weight
1st. Mr. Jennings. Black-and-white Doe (Silver Cup)	23	5½	4 21	5 10
2nd. Mr. Terry. Black-and-white Doe	23	5½	4 7	9 6
3rd. Mr. Hyatt. Black Buck	22	5½	3 12	9 0
4th. Mr. Staig. Black-and-white Doe	21	5½	5 10	6 0
5th. Mr. Woods. Yellow-and-white Buck	21	5	4 5	6 0
6th. Mr. Mihill. Tortoiseshell Buck	21	4	7 14	8 0
7th. Mr. Woods. Blue-and-white Doe	21	5	3 21	7 0
8th. Mr. Woods. Grey-and-white Doe	21	5	5 3	9 0
9th. Mr. Byford. Grey Doe (Self-colour)	21	5½	6 23	8 0
10th. Mr. Terry. Blue-and-white Doe (Weight)	21	5	7 0	9 10
11th. Mr. Inman. (Dutch) Blue-and-white Buck and Doe (Best Foreign of Any variety).				

JUDGES.—Messrs. Byford, Heath, and Hyatt. Supernumeraries, Messrs. Jennings and Clark.—W. H. Webb, Secretary, 115, Albany Road, Camberwell, S.E.

INGENUITY IN A PIGEON.—The following facts (having been witnessed by myself) may, perhaps, be considered worthy of insertion in your Journal, as bearing on the subject of "Perception and Instinct in the Lower Animals," which has lately been brought into such prominent notice. On the Richmond Road (Surrey), at about a mile from the town, stands an old roadside inn, except "The Black Horse," owned by one R. Ketley. Attached to the house are a number of domestic Pigeons of various breeds, chiefly Pouters. Having occasion to wait for my pony to be harnessed at this inn a few years since, my attention was directed by a gentleman, a resident of the neighbourhood, with whom I was acquainted, to the strange conduct of one of these birds. A number of them were feeding on a few oats that had been accidentally let fall while fixing the nose-bag on a horse standing at bait. Having finished all the grain at hand, a large Pouter rose, and flapping its wings furiously, flew directly at the horse's eyes, causing that animal to toss his head, and in doing so, of course shake out more corn. I saw this several times repeated; in fact, whenever the supply on hand had been exhausted. I leave it to your readers to consider the train of thought that must have passed through the

Pigeon's brain before it adopted the clever method above narrated, of stealing the horse's provender. Was not this, indeed, something more than mere instinct? — RICHARD H. NAPIER, *Upton Cottage, Bursledon, Southampton.*—(Nature.)

BEES AT MANCHESTER SHOW.

THE bees and honey at this great Show were for four days surrounded by an admiring and ever-changing crowd of people. Indeed, the masses of visitors were so great during the last two days of the Show that not one in six could come near the bees. Perhaps the most meritorious thing produced in the whole Exhibition, including fruit, vegetables, &c., was a Crystal Palace of honeycomb weighing 87 lbs., belonging to Mr. Breen, of Arwick, Manchester. It took the first prize offered for the best glass super. Mr. Pettigrew called it a Crystal Palace, and valued it at £10: and one of the Judges bought it on the spot at that price. Several excellent glass supers were exhibited, one weighing 40 lbs. took the second prize, it was owned by Mr. Bethell. The wooden supers were not quite filled. Mr. Withnell, of Burton-on-Trent, came to the front here, and Mr. Lee, of Bagshot, took the second place.

For the heaviest and best hive filled by a swarm of this year Mr. Breen, of Manchester, took the first prize with a Pettigrew hive weighing 84 lbs. and Mr. Withnell came second with a bar-frame hive. For the most ornamental hive Mr. Cooke, of Denton, near Manchester, took the first prize and Mr. Wrigley, of Rochdale, came second; and Mr. Young, of Burton, had the best observatory or unicomb hive.

Two medals were offered for the best collections of empty bee hives and supers and bee furniture. Mr. Lee, of Bagshot, with a very neat and unique collection carried off the highest medal; and Mr. Yates, of Manchester, took the second medal. Extra prizes were awarded to Mr. Wood for a collection of bee produce and bee furniture, sent from Denmark; and to Mr. Aston for drone traps, &c., which he brought from Shropshire.

Mr. Pettigrew, who did not compete, exhibited a live weighing 108 lbs. and a glass super weighing 28 lbs., both filled by a swarm obtained on the 21st of May; also a Crystal Palace of honeycomb 20 inches high, weighing 40 lbs. When Mr. Pettigrew suggested this bee and honey Show, he hoped to be able to place on the exhibition tables thirty or forty big supers with a view to give a stimulus and impulse to bee-keeping, but this season has been a most unfavourable one for honey-gathering in the neighbourhood of Manchester, indeed it is the worst for bees that has been there experienced for twelve years.

MOVING STOCKS, UNITING BEES, &c.

WE have had many inquiries of late in the pages of this Journal on the subjects indicated above, which leads me to offer a few hints as to the best mode of carrying out the several processes in question.

Let me begin with the moving of stocks, which not infrequently is a necessity at this time of year, as well as on or before Lady-day. To move bees without due precautions to more or less short distances is always a work of some peril, as the poor insects when not made acquainted with the change rarely find their way home again. They dart forth as usual—at least, all the older ones—without reconnoitering the new position of their hive, and after a day's, or a few hours', foraging, without suspicion of danger, they fly naturally to the old well-known stance, only to perish in their weariness, after a few flights hither and thither in the vain attempt to find their home again: therefore all care should be taken to give the bees some warning of the change before they leave the hive in the morning. This will reduce the risk of loss of their valuable lives; and the loss will be diminished in proportion to the care and pains taken. We think the following plan will be found to answer in every case and under all circumstances at whatever time of year the removal of hives takes place, and whatever be the distance to which they are carried. The principle can be adopted in the case of all hives of wood or straw. Prepare a shallow box, say 18 inches square and 2 or 3 inches deep. Let it have a bottom board with roomy entrance-way, and alighting-step in the usual place. Over it fix a large board if necessary, so as to be suitable for all your hives of whatever shape. Cut a sufficient hole in it towards one side in such a manner that the bees must pass down into the empty box below to get into the open air. The hole had better be so cut in the board as for its outer edge to fit with the side of the box over the passage into the outer air. In this way the bees will pass in and out with the least difficulty, and yet be arrested by the obvious change that has taken place in respect of their mode of exit. We should recommend the removal of each hive separately after an interval of a day or two.

As to uniting bees, one caution is of great importance. It is of no use attempting to unite hives in the same garden, save such as are side by side. You may very safely unite three or

four such stocks together, taking care to place the united stock in the centre of the lot. It is a good plan to approximate the hives that are to be united as near to each other as possible some days beforehand. The simplest method of union has been already given in replies to correspondents. It consists merely in driving the bees of two or more stocks into a common empty hive towards the close of the day, and then dashing them out on the ground in some open place close to and in front of the stock which has been chosen for their permanent dwelling. It must be borne in mind, however, that a valuable Italian queen must be hunted for (should such a queen preside over one of the stocks to be united), and given to the bees after their reunion. It is safest to give her to the bees in a queen cage, introduced from above among the combs. Of course the other queen or queens must be caught and destroyed after they have been driven into an empty hive. We are in the habit of dashing them out again and again upon the ground till we have secured the queen. We should not hesitate, however, to drive the hive with the Italian queen first, without catching her, and then, after driving and catching the other queens separately, unite them all by a final dash-out upon the ground. Some recommend, by way of further precaution, the sprinkling of scented syrup over the whole mass of united bees. This we think unnecessary, and at this time of year even dangerous, owing to the probability of its confounding the whole apiary by attracting robber bees from every quarter. All such operations should be done in the full daylight, although towards evening care is important, particularly when the bees are so poorly off for honey as they are now, for their scent and appetite for syrup of all kinds is at present unusually keen.

Feeding on a liberal scale, but always at night, should follow immediately after the union of hives has taken place; for as the consumption of honey is very rapid, at such times you might find your hive in a starving state before many days are over. But, indeed, no time is to be lost in feeding all weak hives that are designed to remain till spring, whether they be united stocks or otherwise. More than half the stock of bees in England will perish this autumn without immediate attention. Every effort should be made now to secure them effectually. Let there be no discouragement allowed. A series of lucky years may be drawing near, which will more than compensate for all losses and disappointments.—B. & W.

OUR FIRST "SWARMING."

NOT to experienced apiarians do I relate the story. I would humbly beseech rather that they please to not listen. But if among lady bee-keepers there be one who knows as little practically of "natural" swarming as did I on the morning of May 27th, 1873,

"To her my tale I tell."

The morning was cold, cloudy, breezy, and I said to my sister Nellie, as we rose from the breakfast table,

"We shall not be able to divide the bees to-day, I fear."

"Will it matter?" she asked.

"Oh no," I replied, serenely and confidently. "They will not think of emigrating under a week; their preparations are but just begun, and in cool weather they are better off as they are."

As the morning advanced the wind died away and the sky cleared. At noon it was bright, warm, and still. I noticed at this time that the bees at one hive were very quiet—scarcely a bee in sight—while at the other they were humming merrily. The first-mentioned being the strongest colony, I wondered a little at their inactivity; its real meaning was clearly apparent some hours later, especially after re-reading a forgotten passage from Langstroth—"If in the swarming season but few bees leave a strong hive when other colonies are busily at work, on a clear, calm, warm day, we may look with great confidence for a swarm, unless the weather proves unfavourable."

An hour or so after noon, thinking that the bees were making an unusual and unnecessary amount of noise, I stepped to the door to see that at this but recently so silent a hive, there was now quite a commotion. Many bees were whirling about and over the hive, while others were pouring forth in an unprecedented way as to numbers and hurry. Come forth in a very large stream they could not. The evening before having been cold and stormy I had shut the fly-holes and somewhat contracted the lower entrance; and as the morning had been cloudy and the bees quiet, no change had as yet been made. Now, as I stood gazing on them, spell-bound at my first surprise, there flashed across my mind the query, "Are they swarming?" But it was only to be at once dismissed. For didn't I know that they were not ready to swarm? Hadn't I looked into the hive but a day or two before, and found in the most advanced queen cell only an egg?

My second and accepted thought was this, that the sudden warm sunshine had given a general impetus to honey-gatherers and young bees to go forth, and that the unusually narrow doorway excited and troubled them.

Still there was no cessation to the steady outward flow, and in larger and yet larger circles around and about the hive. *Something* must be wrong!

"Nellie!" I cried piteously to sister in the next room, "I don't know what is the matter with my bees!"

She hurried to the door. "Why, they're swarming!" she exclaimed with decision.

That settled it. She spoke as one who knew, and my own rejected first impression came back with overwhelming conviction. They were swarming. What should I do?

I had no course of action marked out, because I had long before determined that my bees should not swarm. Most excellent care would I take to prevent that in these great woods, where, if they went beyond the clearing, it might be impossible to follow or to find them. I had a vision of them now, sailing off over the tree-tops beyond my reach, and I felt—I felt only that they must be stopped! now at once!

Suddenly I remembered to have somewhere read that the queen often does not come out before a third or half of the swarm has emerged. It was then possible, it might even be probable, that she was still in the hive. If so, she should either stay there or be captured at the entrance.

Seizing a pail of water I rushed forth hatless, veilless, and gloveless into the midst of the throng of runaways, and began sprinkling them as they emerged. But first, with curious and absurd inconsistency, seeing how much faster they wanted to come out than was possible, and pitying their crowded discomfort, I voluntarily bent down and opened a fly-hole, and so had two streams pouring forth instead of one. (Nellie will never forget, or cease to laugh at me for that performance, I fear.) They beat against my dress, they whizzed by my ears, brushed my hair, grazed my cheeks, but I stood my ground, trying to watch both openings at once for the queen, and sprinkling the water more and more copiously as I saw that it produced no effect. I was beginning to despair, for many bees were washed down, and I didn't care to drown them, much less did I wish to risk drowning my queen. Just then came a happy inspiration.

"Hand me that wide board, quick! quick!" I cried to Richard, who is a little afraid of bees. He cautiously shored it within my reach. Holding it so as to throw a shadow over the entrance I continued the sprinkling. The effect was magical.

"It is going to be something of a shower after all!" "The sun is under a cloud, and it rains faster than ever!" Telegrams of this import must have been sent through the hive in a twinkling, for all at once there was a sudden, an entire stop to the outward rush.

Then for the first I ventured to draw a long breath, and then, too, I began to question doubtfully, if it had not been a very foolish and useless, as well as an unsafe proceeding? Was the queen out or in? The bees that had been washed down were picking themselves up rapidly, and I soon became convinced she was not among them.

But over our heads quite an army of bees were whirling and swarming, now this way, now that. Once we accompanied them half way across the woods, then back to the vicinity of the hive. Suddenly they separated widely and came down to the ground, very evenly scattered over a large surface. I knew that they had missed and were looking for their queen, and I wondered if their anxiety could be half as great as mine. Rising again, they again seemed starting for the woods. But immediately returning, once more they sprinkled themselves far and near over the ground, somehow, Nellie suggested, giving one the ridiculous impression of "going down on their hands and knees" to make an effectual search. Evidently it was to them in some way a satisfying one, for all now rose as by one accord, and came hurrying back to the hive, pouring in as fast as possible, and covering the whole front with a black sheet.

So soon as all had settled, we lifted the hive from its stand, and placed an empty hive in its stead. Then, after arranging the frames and putting in two combs of brood and honey from the old hive, we (Nellie and I) began a careful search for her missing queenship. To our joyful surprise it was not a long search. We found her as composed and dignified in demeanour as though nothing had happened, and with very little trouble we transferred her to the new hive. We found several queen cells, the most advanced containing the tiniest of worms.

It was then, I think, that I for the first time discovered that I had forgotten my bee-veil. Of course I walked into the house for it at once.

The rest of the work, the appointment of the remaining bees—every bee was at home—was a somewhat perplexing business. However, I used all the judgment I had, and if the division was not made quite as well as the bees could have made it, everything has seemed to go exactly right with the new colony thus far. With the old colony, too, all was well until—but that belongs to another chapter.

Perhaps someone as inexperienced as myself may be interested to know that from first to last the bees were on their very best behaviour, nobody was stung.

We found a nucleus from the other hive the same afternoon;

and on the whole satisfactory as this experience had been to me, I felt no desire to repeat the same with another swarm, and in conclusion would say that I do not venture to take the responsibility of advising any lady bee-keeper to take the course of action above described.—(Correspondent, *American Bee Journal*.)

ROBBER BEES.

I SHALL be glad if you can inform me of any remedy to prevent robbers from entering my hives. I fed my bees last Saturday afternoon from the outside (not a good plan, as I have found out), and I think there must have been a stranger helping itself too, for a short time after they had taken it all in I saw them pulling one or two about on the floor-board, but I thought no more about it. On going to look at the bees the next morning I was surprised to find a great number outside guarding, and over a hundred that they had killed on the floor, and a few robbers trying to dart in through them. They have been trying to get in ever since. I have picked up the dead bees, and counted about 280. The robbers come from a person's apiary about a quarter of a mile off. I saw in last week's *Journal* about stocks dying in August of starvation, and I think his bees must be starving from the way they try to get in; they keep my bees from working, besides killing the others. I have made the holes smaller. Can anything else be done? What is the average weight to be allowed for a swarm with combs and stored pollen? To what age does a queen bee generally live?—P. RAINFORD.

[You have done right by contracting the entrances of your hives; but if the robbers still force their way in, you must make the holes so small that only one bee can get through at a time. If this do not prevent the attack of the assailants you had better remove your hives within doors for a few days, giving the bees plenty of ventilation, putting them back again on their old stands. Do not feed them while in confinement. It is very bad practice to feed in front of the hive, particularly at this season of the year. Are you sure that your own hives are strong in population? It is not always that starving bees are the worse robbers, but the strongest and best-provisioned colonies very often make war on their weaker neighbours. A stock should weigh from 15 lbs. to 20 lbs., exclusive of the hive, to make it safe for the winter, though it will sometimes do well with less. Queens may live four years, but probably three years is about the average duration of their lives.—EDS.]

METROPOLITAN RABBIT ASSOCIATION.—There is to be a grand show at the Montpellier on Monday, September 22nd, 1873, where all the metropolitan Rabbit societies have combined to show their best Rabbits against each other for a silver cup of the value of five guineas, besides several other money prizes. It is expected to be one of the best shows ever exhibited in London.

OUR LETTER BOX.

WINGS IRREGULAR (A. B.).—Many people suffer in the way you do. There is a twisted flight that is incurable, but we do not imagine yours to be one. We have several Brahma cock chickens, large well-grown birds, and after a run or any other exertion they drop their flights, but they always get them up again. The incurable case we mention above is hereditary. That of which you complain is often the result of weakness.

BRAHMAS WITH SWOLLEN FEET (H.).—Have the rough stones raked off the ground. The feet of fast-grown cocks are very tender, and their bodies are heavy. If you cannot rake the stones off choose some more favourable spot, and shut the cocks up by themselves. Anything is better than getting them humble-footed, which is sure to happen.

INFLUENCE OF PARENTS ON COMB AND LEO COLOUR (J. G. L.).—When two birds of different breeds are mated together, some of the produce generally present a mixture of both, while others are to all appearance pure specimens of the breeds to which their parents belong. You will, however, be able to choose chickens possessing the points you wish to perpetuate, and by mating them again to pure birds, you will probably succeed in breeding that which you want.

BANTAM WATERY-EYED (J. W.).—We hardly know what you mean by a watery eye. If there is any swelling with it, it is a cold, and should be seen to. The best plan is to wash it with vinegar and water, and to give a stimulant—some bread and strong ale, adding thereto a couple of pills of camphor, each the size of a garden pea. If it be only a watery eye we should still use vinegar and water.

EXHIBITING SILVER-GREY DORINGS (W. D.).—A class for "Coloured Dorings" comprises Silver-Greys, Cuckoos, and all but White. "Any other variety" should mean White. Where there is a class for Silver-Grey, the prize list generally states "Coloured Dorings other than Silver-Greys." As a rule, the Silver-Greys are not so heavy as the others, and the Whites may stand a good chance against them. Nine pounds is a good weight for a White Dorking cock, and 7 lbs. for a hen.

CHICKENS NOT FEATHERING (A Subscriber).—Your feeding is not good enough. If you have no grass run you must get some seeds of growing grass, like a lark's turf, only much larger; you must give them daily. Feed them on ground oats or barley-mead mixed with milk, some hard-boiled egg chopped fine, and bread crumbs soaked in milk. Leave off Indian corn, sharps, and rice.

COCKERELS AND CHICKENS FALLING (J. S.).—Boiled potatoes are had food, and have a tendency to cause disease of the liver. We advise you to give them some stimulant in the shape of bread and ale, and to feed on ground oats if you can get them; if not, on barley meal night and morning, with some whole corn in the middle of the day. From all falling ill at the same time, we should expect they picked-up something that disagreed with them. If you have reason to think we are right, give each bird a table-spoonful of castor oil. Rice is bad food, and has a tendency to cause very low condition, and, consequently, vermin. Alter your dietary. Give them some bread and milk in the morning, afterwards some chopped egg, also coarse cooked meat and pieces of fat cut small. Let the ribs be in a dry place, well open to the sun, and let the chickens have dust in which to dust themselves. The younger chickens if fed in the same way, are suffering from the same disorder. Give them strong camphor water to drink, and in bad cases give a pill of it to each chicken. We never hear of gapes, and if there is the slightest symptom of them, we have recourse to camphor, and have never known it fail.

FOWLS FOR EGGS AND CHICKENS (Bar).—We believe the Shanghaes will answer your purpose very well, but we prefer Brahmans. They are not better layers than the Shanghaes, but they are better table fowls. Both are very hardy.

BRAHMA-WEAK-LEGGED (A Subscriber, Wexford House).—Feed your fowls well, give them ground oats twice per day, any rough cooked meat you may have chopped up small. If you have no ground oats give them barley meal. They have somewhat outgrown their strength. Keep them in a dry place lest they should get cramped.

FOWLS FOR A THREE-ACRE GRASS RUN (Amateur).—Where fowls are kept on a comparatively small space, we always advise one breed. This saves much labour and painstaking, the fowls do better, and the produce is more valuable if at any time the stock is to be sold. Paradoxical as it may appear, fifty fowls will do half as well again if they have free run over three acres, as they would if they were divided into two twenty-fives, and confined to an acre and a half each. We do not think you can do better than keep Brahmans. They are very hardy, they are not large eaters, they are good layers, sitters, and mothers. To produce eggs profitably you must have them in the time of scarcity—that is, the winter. At that season few if any hens lay, but pullets do. Just as it has been said all that is not military is civil, so some people say all that are not cocks are pullets, only as distinctions of sex. Laying belongs to a certain age. As soon as the pullet has attained to hen's estate she begins to lay, whether it be November or May. Some allowance may be made for the time of year. Chickens grow faster and attain maturity earlier in the spring and summer than in winter. Thus it should be no great difficulty to arrange for a constant supply. Some breeds lay earlier than others. The earliest we know are Brahmans and Cochins. We have known these to begin at sixteen weeks. It is not desirable, as they always become in consequence stunted, and nature appears exhausted before she attains her prime. As a rule, you may look for eggs from these two breeds between twenty and twenty-four weeks old. Depending on these facts, you will easily see that to insure eggs at the scarce and therefore valuable time of year, you will have to arrange accordingly. February pullets lay in August; March pullets in September; April pullets in October; May pullets in November, and so on. The best food you can give is ground oats, if they are to be had, slaked with water; if not, barley meal. This supplies the morning and evening food. The mid-day repast should be of whole corn, barley, or maize, varied with such scraps as may be got together in a house. All stimulants and spiced food should be avoided. The difference between Light and Dark Brahmans exists only in colour.

MRS. F. CHESHIRE'S CHICKEN APPARATUS (Mrs. Hope).—We do not know where it can be purchased, nor any book in which it is described. Mrs. C. will, perhaps, send us information.

INSURING BIRDS (E. K., jun.).—We know of no insurance office that would insure either the life or safety of a bird for any sum either small or large.

CRENCESTER SHOW.—Mr. T. A. Dean had an extra second prize for Light Brahma chickens.

PIGEON GOING LIGHT (J. M.).—From your description we make no doubt that your Pigeons have the disease termed by the fancy "going light," in other words, consumption. The best remedy is cod-liver oil; give a teaspoonful every night. There is a way of administering it which will not soil the feathers, that is by passing down the throat cod-liver oil capsules. Dip them in water for a minute, and then they will go down the easier. Give them as you would cram a young Pouter with beans. Give one night and morning. You can buy them of most chemists cheaply. You can also give your birds bread crumbs, and milk to drink. Others give bread soaked in ale, but we believe the best thing is the cod-liver oil.

TURBITS' CROWNS (R. E. H.).—"Shell-crowned and peak-crowned in Turbits." In the former case the tuft of feathers at the back of the head is in the form of a shell—that is, hollow on the side nearest the head, and larger than the peak crown. The shell-crown, correct in Nuns, is not proper in Turbits. The peak-crown is formed by the feathers rising from the back of the head in a horizontal line with the eye and beak, which terminate in a prettily-pointed curvature a little above the head.

ENGLISH AND FOREIGN OWLS (Idem).—The former were, until late years, the only Pigeons known as Owls. They are birds of fair size, in colour blue or silver, the blue peculiarly beautiful, and called "Powdered Blue." The Foreign or African Owls are much smaller, and of exquisitely delicate appearance, and are though seen of various colours, perhaps the Whites are the best and most fairy-like.

CUMULETS (Idem).—Cumulet, Volant, or White-eye, a cross-bred bird, probably between a Tumbler and an Antwerp. They have clear white eyes, and the few we have seen exhibited were throughout of a light colour. We attach little value to these birds. A Pigeon with a new name, however, finds purchasers with those desirous of a change.

WASHING PIGEONS (Idem).—Put a pan of water in the sun and they will wash themselves, and be clean if the loft is perfectly clean. You may take a sponge and wash the larger feathers lightly with soap and water if they need it.

BOTTLE-FEEDING (F. C. H.).—We cannot tell what was wrong in your manipulation. No muslin came to hand. Was your bottle perfectly upright when inverted on the zinc over the hive? We have often proved that with the use of coarse net and zinc, pure water will not lose a single drop after the bottle is once inverted. Of course some runs out in the act of inverting. The interposition of perforated zinc alone, without any muslin, is sufficient

to prevent the fluid from running out. Some bee-keepers advocate bottle-feeding in this way: A piece of glass is laid over the mouth of the bottle, and withdrawn when the latter is in position on the perforated zinc; no liquid will drip through. To prove the truth of this assertion we have just tried the plan with a bottle of water, and not a single drop fell after the withdrawal of the glass. Your pickle-bottles should have straight necks, with rims but little projecting. We cannot tell the weight of your box. If wasps still enter your hive we fear the population must be weak.

DAIRY FARMING (Orchardist).—By sowing Italian Rye Grass now you will obtain a supply of fodder next April. An attempt to maintain two dairy cows upon the produce of an acre of land will, we think, result in failure. From our own experience we conclude that two acres of land highly cultivated are requisite to provide one cow with sufficient food to enable it to yield a full supply of milk, from the cream of which 12 lbs. of butter may be made weekly; and the yield of an underfed cow will proportionally fail both in richness and quantity. In Cheshire, where the cows generally may be said to be stall-fed in winter, about three acres of grass land are considered necessary to provide summer pasturage and winter fodder for each cow. The "Handbook of Dairy Husbandry" (Longmans) contains much valuable information on the subject.

METEOROLOGICAL OBSERVATIONS,

CAMDEN SQUARE, LONDON.

Lat. 51° 32' 40" N.; Long. 0° 8' 0" W.; Altitude 111 feet.

DATE.	9 A.M.		IN THE DAY.						Rain.	
	Barometer at 32° and Sea level.	Hygrometer.		Direction of Wind.	Temp. of Soil at 1 ft.	Shade Temperature.		Radiation Temperature.		
		Dry.	Wet.			Max.	Min.	In Sun.		On Grass.
1873. Sept.	Inches.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	In.	
We. 3	29.992	57.0	53.2	S.W.	59.1	64.3	46.0	115.1	41.1	0.295
Th. 4	29.963	55.8	53.2	W.	57.9	65.2	45.0	111.2	40.6	0.618
Fri. 5	29.993	55.9	51.3	N.W.	57.5	60.3	44.2	111.9	38.1	—
Sat. 6	29.999	53.0	47.8	N.W.	56.8	59.8	44.6	111.8	40.5	—
Sun. 7	29.894	52.2	48.9	W.	56.2	61.2	45.3	91.4	41.1	0.462
Mo. 8	29.773	51.7	43.9	N.W.	55.7	63.5	44.1	115.9	37.4	—
Tu. 9	29.822	58.1	53.5	S.W.	55.3	62.8	45.5	93.1	38.9	0.142
Means	29.931	54.8	51.0		57.0	62.4	45.1	107.6	39.7	0.957

REMARKS.

- 3rd.—Fine early, rain at 10 a.m., showery all day; very heavy rain for a short time about 2 p.m.
 - 4th.—Rather dull at 9 a.m., fine at noon, showery afternoon, very fine evening.
 - 5th.—Rather dull day, with sprinkle of rain, and cold for the season.
 - 6th.—Again dull, cold, and cheerless, but not rainy.
 - 7th.—Rather heavy morning, fine at noon, then clouded over; rain soon after 4 p.m., heavy rain at 6 p.m. and rainy night.
 - 8th.—Fine till noon, then cloudy for a short time; slight shower in evening.
 - 9th.—Fine morning, clouding at noon; rain soon after 3 p.m., continuing and increasing till the evening, the latter part of which was moonlight, and altogether bright and pleasant.
- A very cold week for the time of year, the temperature being about that of the first week in October, and colder than any week since May.—G. J. SIMONS.

COVENT GARDEN MARKET.—SEPTEMBER 10.

We have still a full supply of both home-grown and foreign produce with the exception of Nuts, Cobs and Filberts having slightly advanced this week. The prices of fruit generally have been fairly supported. Hothouse Peaches and Nectarines are over; those from the open walls are of fair average quality. Grapes are very plentiful; more than enough for the trade, and with a few exceptions deficient in colour.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples.....	1	0	1	6	Mulberries.....	1	0	0	0
Apricots.....	doz.	0	0	0	Nectarines.....	doz.	4	0	8
Cherries.....	1/2 lb.	0	6	0	Oranges.....	1/2 100	10	0	29
Chestnuts.....	bushel	0	0	0	Peaches.....	doz.	4	0	8
Currants.....	1/2 sieve	2	0	3	Pears, kitchen.....	doz.	0	0	0
Black.....	do.	0	0	0	Pears, dessert.....	doz.	2	0	3
Figs.....	doz.	0	6	2	Pine Apples.....	lb.	3	0	6
Filberts.....	lb.	1	0	6	Plums.....	1/2 sieve	2	0	4
Gooseberries.....	quart	0	0	0	Quinces.....	doz.	3	0	0
Grapes, hot-house.....	1/2 lb.	0	5	0	Raspberries.....	lb.	0	0	0
Lemons.....	1/2 100	10	0	20	Strawberries.....	1/2 lb.	0	0	0
Melons.....	each	2	0	5	Walnuts.....	bushel	10	0	16
					ditto.....	1/2 100	2	0	26

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes.....	doz.	3	0	6	Mushrooms.....	pottle	2	0	4
Asparagus.....	1/2 100	0	0	0	Mustard & Cress, punnet	0	2	0	0
French.....	0	0	0	0	Onions.....	bushel	3	0	6
Beans, Kidney.....	1/2 sieve	2	0	0	Parsnips.....	quart	0	6	0
Cobs.....	lb.	1	6	0	Parsley per doz. bunches	0	4	0	0
Broccoli.....	bundle	0	9	1	Parsnips.....	doz.	0	9	1
Cabbage.....	doz.	1	0	1	Peas.....	quart	0	8	1
Capsicums.....	1/2 100	1	6	0	Potatoes.....	bushel	4	0	6
Carrots.....	bunch	0	6	0	Kidney.....	do.	0	0	0
Cauliflower.....	doz.	9	0	6	Round.....	do.	0	0	0
Celery.....	bundle	1	6	2	Radishes.....	doz. bunches	1	0	1
Coleworts.....	doz. bunches	2	6	4	Rhubarb.....	bunches	0	6	0
Cucumbers.....	each	1	6	0	Salsify.....	bunches	0	1	8
Endive.....	doz.	0	0	0	Savoy.....	doz.	0	0	0
Fennel.....	bunch	6	3	0	Scorzoneria.....	bundle	1	0	0
Garlic.....	lb.	0	6	0	Sea-kale.....	basket	0	0	0
Herbs.....	bunch	0	3	0	Shallots.....	lb.	0	3	0
Horseradish.....	bundle	3	0	4	Spinach.....	bushel	2	0	3
Leeks.....	bunch	0	9	0	Tomatoes.....	doz.	1	0	2
Lettuce.....	doz.	1	0	1	Turnips.....	bunch	0	3	0
					Vegetable Marrows.....	0	1	0	3

WEEKLY CALENDAR.

Day of Month	Day of Week	SEPTEMBER 18—24, 1873.	Average Temperature near London.			Rain in 48 years.		Sun Rises		Sun Sets.		Moon Rises.		Moon Sets.		Moon's Age.	Clock after Sun.	Day of Year.	
			Day.	Night.	Mean.	Days.	m.	h.	m.	h.	m.	h.	m.	h.	m.				h.
18	TH	Kettering Horticultural Show.	68.2	46.5	57.4	19	42	af	5	6	af	6	36	1	35	5	26	6 0	261
19	F	Day breaks 3.45 A.M.	67.3	45.3	56.3	21	43	5	4	6	47	2	51	5	27	6	21	262	
20	S		68.0	44.0	56.0	20	45	5	2	6	57	3	5	6	28	6	42	263	
21	SUN	15 SUNDAY AFTER TRINITY.	66.4	45.6	56.0	24	46	5	0	6	7	5	16	6	●	7	3	264	
22	M	Virgil died B.C. 18.	66.4	44.7	55.6	21	48	5	57	5	16	6	28	6	1	7	24	265	
23	TU	Boerhaave died, 1738.	66.3	45.7	55.9	22	50	5	55	5	25	7	39	6	2	7	45	266	
24	W	Length of day, 12h. 1m.	66.1	43.5	54.8	19	51	5	52	5	36	8	51	6	3	8	5	267	

From observations taken near London during forty-three years, the average day temperature of the week is 66.9°; and its night temperature 45.0°. The greatest heat was 81°, on the 20th, 1843, and 24th, 1832; and the lowest cold 32°, on the 20th, 1840. The greatest fall of rain was 1.21 inch.

HOUSE SEWAGE A SAFE AND MOST VALUABLE FERTILISER.



OUR contemporary *Medical Notes and Queries*, referring to our previous remarks on this important subject, observes—"The well-known experiments of De Saussure undoubtedly demonstrate that the roots of plants are endowed with a certain power of selection, under particular circumstances and conditions; but—and we speak with the clear remembrance of the late Professor Lindley's expressed views on this subject—

their import must not be overrated, and certainly do not support the extravagant statement hazarded by THE JOURNAL OF HORTICULTURE, that 'the roots of plants never absorb anything prejudicial to the plant's health.' Many known facts in vegetable physiology are inconsistent with such an idea. If plants are absolutely indifferent to noxious matters brought into relation with their absorbing surfaces; if they absorb only what, and so much as, is good for them and compatible with their highest condition of health (and this moderation is implied in the statement that nothing 'prejudicial' is ever absorbed), why cannot an unlimited supply of artificial manure be given to plants without their being injured by it? If they will only absorb what they require, the remainder, surely, will pass away and do no harm. But is this the fact? Of course we know that practically it is not so, and that it is as necessary to regulate the quantity, as it is to attend to the quality, of the manures given to plants."

The reply to this is obvious. Our observations apply to the roots, not the surfaces. Cultivators have "to restrict the quantity" of the manure applied to the roots of some plants they cultivate, because, if fruit or seed is the object to attain, and an excessive quantity of manure is applied, the plants become overluxuriant, and produce an excess of leaves instead. If leaves or stems only are required, as in the instances of Grass, Rhubarb, Asparagus, Cabbages, and some others, the manure applied need not be so restricted. Now, that overluxuriance is caused solely by the roots absorbing the manure and the plants *digesting* and assimilating it. If the digestion was deficient there would be no overluxuriance.

When we said that "the roots of plants never absorb anything prejudicial to the plant's health," we were considering healthy roots growing in a suitable soil manured with sewage or any other usual fertiliser, and then, we repeat, the roots do not absorb anything prejudicial. If the spongioles of the roots are paralysed or killed by an injurious soil or the application of poisons, then we are quite aware the roots lose the power of selection. We published the following on that result some years ago.

"Soils containing obnoxious ingredients are certain introducers of disease and premature death. An excess of oxide of iron—as when the roots of the Apple and Pear get into an iron red gravelly sub-soil—always causes canker to supervene. In the neighbourhood of copper-

smelting furnaces, not only are cattle subjected to swollen joints and other unusual diseases, causing decrepitude and death, but the plants also around are subject to sudden visitations, to irregular growths, and to unwarmed destruction; and a crop once vigorous will suddenly wither as if swept over by a blast. There is no doubt of this arising from the salts of copper which impregnate the soil irregularly as the winds may have borne them sublimed from the furnaces, and the experiments of Sennebler have shown that of all salts those of copper are the most fatal to plants.

"That they can be poisoned, and by many of those substances, narcotic as well as corrosive, which are fatal to animals, has been shown by the experiments of M. F. Marcei. The metallic poisons being absorbed are conveyed to the different parts of the plant, and alter or destroy its tissue. The vegetable poisons, such as opium, strychnia, prussic acid, belladonna, alcohol, and oxalic acid, which act fatally upon the nervous system of animals, also cause the death of plants."

Our contemporary next observes—"THE JOURNAL OF HORTICULTURE disposes of our reference to forced Rhubarb having the flavour of horse dung, by saying, 'We know both in that and in forced Sea-kale that it is occasioned by the gases emitted by the fermenting dung;' and that 'the reek may be always removed by peeling off the thinnest film of the epidermis.' Admitting this—which we do only for the sake of the argument—surely it proves our case; for if a plant can absorb gas it can absorb fluid, and neither could find their way into the epidermis except through the cellular system of the plant. We have ourselves smelt the sewage odour very strong from the fresh-cut stalks of Cabbages; and Mr. Smece, in the *Standard* of September 5th, states that he has been informed, 'by the medical officer of one of our largest establishments, that he has known Parsley to take up the flavour of gas tar so as to be useless'—a remarkable instance of the absorption of foreign matters by growing plants, which, according to THE JOURNAL OF HORTICULTURE, never takes place.

"How can such facts be reconciled with the preternatural powers of absolute selection and rejection attributed to plants by THE JOURNAL OF HORTICULTURE?"

The "facts" have no relation to the powers of "selection and rejection" possessed by the roots of plants. Those powers as possessed by the roots in relation to the manure in the soil are all that we are contending for. That the reek of fermenting dung or of gas tar will penetrate the epidermis of a plant, or of the human skin is certain, but it is usually removable, as we originally stated, by washing.

As to the odour of sewage being smelt in the fresh-cut stalks of Cabbages, we venture to state that the same odour would be perceived in any similarly luxuriant Cabbages, whether that luxuriance was caused by sewage, guano, or any other fertiliser.

Medical Notes and Queries concludes, as is no more than we expected, temperately and wisely by saying, "The mere fact that in very many cases sewage matter

has been applied without typhoid having been transmitted, affords no conclusive argument upon the question. As we said before, "It is no good argument to say that many persons have used sewage-grown produce without having typhoid fever. The question is, Can the fever ever be transmitted in this way?" This point seems to us to be worthy of further investigation."

We agree in so thinking; but cultivators and consumers may continue to grow and to eat sewage-manured vegetable produce with great equanimity, as there is at present no known instance of such produce having caused disease of any kind. Many years' experience, on the contrary, shows that such produce is wholesome, and we have this fresh sustaining evidence.

"The Merthyr Tydfil sewage filtering and sewage irrigation scheme having now been in operation for nearly three years, Mr. Thomas Williams, Clerk to the Merthyr Tydfil Local Board of Health, sends us, at the desire of his Board, the following extract from the periodical report of Mr. Dyke, the medical officer of health for the district:—Much discussion has recently arisen as to the supposed injurious effects which would follow upon the use of vegetable food by man and animals when that food was grown on land watered by sewage. To you and to the public of this town and neighbourhood it is well known that now for three summers and two winters large quantities of vegetables have been grown on land specially prepared, watered by the strained sewage from this town, and also that very large supplies of green food for animals have been obtained therefrom. The use of these vegetables and grasses for so long a period by men and animals would certainly by this time have shown some evidences of the evil consequences assumed to result from the mode of growth. It has been my duty carefully to watch the mode of culture and to note any unfavourable signs; but, so far from being able to discover any such, I can with confidence point out to you certain facts which show that the assumed perniciousness of the use of vegetables so grown is without any basis of truth. First, milk forms the chief food of children. The supply of this liquid nourishment was, until lately, very scanty in Merthyr, but it has been remarked that the supply was more abundant during the autumn, winter, and spring of 1872-3, and also that considerable quantities of Italian Rye-grass, Carrots, Mangolds, &c., grown on the sewage-watered lands, were used during those periods as fodder for milch cows. Were any pernicious effects in the health of children noticed? Certainly not; for, while the mortality of the young under five years old formerly averaged 48, 50, and 52 out of each hundred deaths, in the second quarter of 1873 the average was but 39 per cent. Secondly, diarrhoea would be a form of disease that would very quickly be set up in human beings by the use of vegetable food tainted by sewage. The number of Cabbages grown on the filtration and irrigation areas during the last thirty months would number many tens of thousands. All have been consumed by the inhabitants of Merthyr and the neighbourhood. Has diarrhoea been thereby incited? On the contrary, last year the Registrar-General called attention to the fact that diarrhoea was less prevalent in Merthyr than in any place in England and Wales; and, as I have already stated, the fatal cases from this disease in the second quarter of 1873 were but two, and those infants at the breast. Tried, then, by these two tests—the use of fresh fodder grown on sewage-watered lands by milk-giving animals and of vegetables (similarly grown) by human beings—the experiences of the population of this town and neighbourhood demonstrate the perfect salubrity of the vegetable food so grown."

THE PURPLE BEECH.

The beauty of the Purple Beech in landscape scenes and ornamental forestry, its fitness for affording variety to the monotonous green of our woodlands, and for giving effect in assemblages of trees great or small, are so well known that I need only hint that the adoption of this and other deciduous trees with coloured foliage at planting would be a means of giving a charm to our woods they do not at present possess. What our woods need is colour with a grouping of the subjects so as to give distinct and varied features. Beautiful as most of our woodland scenes are, they would be vastly improved in effect by adding in conspicuous places groups of deciduous trees with coloured leafage.

It is not to the fitness of this tree for producing effect as a specimen or in a group that I wish at present to direct attention, but to seek for information on what appears to

mililitate against the tree's arriving at specimen size. I have several young trees that may be a dozen years old, eight or nine years planted, and from 10 to 15 feet in height. Annually some of these fail; some are in exposed positions, and are blown down, the top broken off at the junction of the stock and graft; others die outright, the connection of the stock with the graft being evidently severed. The stock lives, it is the scion that dies. The leaves of the scion assume a bright scarlet colour in August, and are certainly very beautiful; it is the last time they will gladden us by their presence. In autumn the leaves fall never again to be renewed. Upon examination I find the stock has increased in thickness much more than the stem of the scion immediately above the junction of the stock and graft; it is at the junction that the fault lies, and this, I think, is due to the stock or common Beech having larger sap-vessels than those of the scion or Purple Beech. The sap seems to pass into the head freely from the stock in the early years of growth, as evidenced by the free growth, but after a few years the growths are considerably weaker, and it is then that the mischief happens, though it is only likely it has been gradually going on from the commencement of growth in the scion. The barks have not united perfectly, and the wood of the stock is dead opposite that of the graft, though usually covered with live bark, or in some cases exhibiting a scar. It is known that the wood of the stock and graft never unite, and that the barks, though they unite, remain distinct; but in this instance the union of the bark does not appear to have been complete, there being a ring as if a cut had been made and the bark separated. This is the most common in the case of heads that are broken off by the wind, the bark of the stock being disposed to grow over and cover that of the scion; whilst in the dying of the head the bark of the scion just above the junction becomes dry, the sap taken up by the stock not entering it, hence its existence is cut off by the inability of the scion to receive the needful support from the stock. Is there any remedy for this? Has anyone practised the budding of the Purple on the common Beech, and what has been the result?—G. ABBEY.

HORTICULTURAL SHOWS IN THE NORTH— BISHOP AUCKLAND.

RAILWAY travelling during August and September is so general, that one is not surprised at now and then meeting a neighbour at a distant station, where the hurry of the moment allows scarce time for the briefest of greetings. It is only when one is fairly seated again, and the carriage in motion, that something like the pleasures of travelling are realised; and notwithstanding all grumbling and complaints, somehow railway travelling has its fascination, and in fine weather and good company time passes speedily. But railway travelling is not always accompanied by this kind of social intercourse, for many experience great difficulty in conversing amidst the noise of the train, and a quiet and almost continual look-out of the window when not going through a cutting or tunnel is to me a great source of enjoyment. I always endeavour, if possible, to have a peep at what is going on in any district through which I travel, even if it happens to be one known to me.

There are few railway journeys that do not present something interesting, and most of the lines leading out of London pass through districts where gardening is carried on for the supply of the great metropolis; witness the orchards of Middlesex and Kent, while large breadths of land are required for vegetables in the latter county, as well as Herts and Beds. Essex also sends its share, and experienced travellers know where and when to look out for certain things on their way. The Lavender fields on the confines of Beds and Herts before the flowers are cut are of much interest, and so are the fields of Onions, a bulb which is not everywhere to be found subjected to field culture. I was agreeably surprised lately to notice the use made of the seeding Onions to assist another crop in its early growth. Rows of Onions for seed had been formed a yard or more apart, ridge Cucumbers had been planted between them, and, from the healthy appearance the latter presented, it would appear they were doing well.

Railway travelling, especially if the journey is long, also shows the effects of latitude on crops. Thus, on leaving London in August the grass fields are brown and burnt-up with the dry weather, and the corn either ripe or ent; but by degrees as the train makes its way northwards, after the chalk and

gravel of the home counties have been passed, the pasture fields become green, and the corn is unripe, and even in places quite green, while the bulk of grass shows that moisture has been more abundant than nearer London. Orchards are also less frequently met with, and would seem to be confined to supplying the requirements of the farmhouses which they adjoin. Occasionally, however, a favoured neighbourhood presents larger breadths of garden ground; for instance, the environs of Grantham in Lincolnshire, and considerable tracts of North Cheshire, are devoted to market gardens and fruit-growing for the great towns which are near, and even the extensive plain on which the city of York stands is not without its market gardens. Farther north, Carlisle and the vale of the Eden are a land of orchards and gardens. Still more fruitful, though further removed from market, are the large fruit plantations of Worcester and Hereford.

Assuming our journey to the north to be by the Great Northern line, we find that after passing through the hilly district of Herts and Beds we encounter very few deep cuttings or tunnels until a considerable way beyond the city of York, all the important towns that are passed, including that famed city, with its walls entire and noble cathedral, are placed on tolerably level ground, so that it is only when we reach the city of Durham that we find the railway is so far elevated above the bulk of the houses, that it would appear almost possible to throw a bisect into many of the chimneys. The venerable cathedral and the castle occupying the rugged promontory that is washed by the river Wear stand out in all their beauty—in fact, I know of no railway station more pleasingly situated than that of Durham, and the traveller by daylight ought always to avail himself of the opportunity of looking out on a sight that somewhat resembles that from the Calton Hill, Edinburgh.

Amongst other attractions placed before the miner and well-paid artisan of the north, it is pleasing to observe that some are of a character to enlighten and elevate the mind, and among them flower shows are much in vogue. Many country villages have their shows, with schedules of prizes equalling those of similar institutions in country towns in the south of England. Into how far the shows in a colliery village fall short of their more favoured compeers in the districts of sunshine instead of smoke I will not enter, but in the amount of entrance money paid by visitors there is a decided superiority, and sometimes growers from a distance find it to their interest to send subjects; for however skilful the cultivator may be, there are many subjects that will not thrive in a climate not the most congenial even for its latitude, and more especially where clouds of smoke invest everything with a grimy coating.

The show to which I would especially call attention is now one of the established institutions of the country, having existed for many years, and, I believe, it has always been a success; it is that held at Bishop Auckland, which occupies a sort of central position between the great iron-mining and smelting district of the south, and the collieries and ship-building yards that lie to the north, while lines of railway running in every conceivable direction unite it with all the great centres of industry for which the district is famed.

Bishop Auckland, many of your readers will remember, is the residence of the Bishop of Durham, and certainly no nobleman could have selected a better site than that on which his palace stands. A noble stone-built residence, in style partly ecclesiastical and partly castellated, occupies a position in one of the prettiest parks I know. Leaving the railway station, the visitor passes through a town that to all appearance owes its origin to the Bishop's seat, for the portion called the Market Place is very near the entrance to the park; in fact, the street would seem to point to the Gothic-arched gateway, which is itself not more than a stone's throw from the episcopal palace. After entering the gate a broad and well-kept carriage-road leads for some distance in a straight line, then diverges to the left through the dressed grounds, which are shut-out from the park by a series of open arches surrounding a rectangle of considerable extent, in the midst of which the mansion is placed. The whole occupies an elevated tract of table land in a park offering great diversity of surface. Through the openings of this enclosure the visitor obtains a view of the well-filled flower beds, which, arranged in a pretty design on grass, occupy a position on one side of the plateau which surrounds the palace. The beds seemed to be well filled with bedding plants, which at the time of my visit were exceedingly gay. As I went on the beauties of the park soon unfolded themselves, and its popularity for *prole* purposes was easily accounted for. After

passing the palace the ground begins to descend irregularly with many undulations of surface, while at the bottom one of the principal tributaries of the river Wear meandered beneath overhanging trees of great luxuriance. The opposite bank rises precipitously in places—so much so, that at one spot there is an almost perpendicular rock from 200 to 300 feet high, with its base washed by the stream. This wooded height is intersected by walks, with seats and summer-houses at their sides, and here and there a stream of water fresh and pure bubbles out of the steep hillside, while the overhanging trees and the Ferns lend a charm to the whole, and render it a pleasant retreat for those whose avocations lead them daily among brick walls and stone pavements.

The managers of the Show had thrown several temporary bridges across the river (which was not less than from 40 to 50 feet wide), for the accommodation of the visitors, in addition to the permanent rustic bridge; and it was on a piece of level ground adjoining the stream that the tents for the Show were pitched, while on a sort of natural terrace at a higher elevation than the tents, the band-stand was erected, and surrounding it were seats for the numerous visitors.

Continuing the description of the park, I may say that the river curves round it for a considerable distance, afterwards joining the broader expanse of the Wear. The surface of the ground is well diversified by hill and dale, with trees in abundance. Amongst others I noticed some very fine Sweet Chestnuts apparently in the best of health, Beeches equally good, likewise Elm and Alder, while Oaks were to be seen at every turning, occasionally grouped with others crowning an eminence, elsewhere standing alone in all their beauty. Some good examples of Scotch Fir were judiciously grouped on the steep by the river, but I was sorry to see one or two specimen of this and another Fir or two dead, and several Birches in a similar condition; I suspect smoke was the cause. It was anything but pleasing to witness there fine trees in such a plight, and the question naturally arises, Will not the fine Oaks, Beeches, Ash, and other trees some day be also killed? Still, as far as the foliage of the present year is concerned, it would seem as if there was no immediate prospect of such a result. Let us hope that science will in time devise some means of preventing the evils which the smoke of factories brings in its train, and that fine-wooded tracts like the park of the Bishop of Durham (to which thousands were admitted), may remain as ornaments to their districts. I was glad to see that the future requirements of this fine park had not been neglected, for young trees had been planted in suitable places, and among them more than one Wellingtonia in convenient positions. Architectural features had not been neglected; a rising ground at some distance from the palace had been crowned by what might be taken for an ecclesiastical structure—a square of something like 100 feet to the side, with a castellated centre, and surrounded by what might be taken for a continuous corridor on Gothic arches, but this on closer inspection was found to be only a place to feed the deer.

As regards the Show, the great fault was that too little tent room had been provided. The principal tent devoted to plants had a central stage about 14 or 15 feet wide in the centre, with too little space for the public between that and the side shelves, which were of course narrow. An improvement over the arrangement of many of the south-country shows was the central table or stand being only about a foot high, which was ample for most if not all the specimens exhibited; but it was so crowded with plants that their foliage hung over at the sides, and they must have suffered very much when the place was thronged with visitors. A greater extent of tent room and a rope-guard a little way from the plants would have prevented all damage; and if the shelves or platform had been covered with green baize it would have been better, and possibly cheaper, than planing the boards, as was done at this Show. A very good plan, however, was adopted in protecting the fruit from injury. The shelf it was on was lower than is often the case, and made like a long continuous trough, the top being covered with wire netting. This, I presume, was put on after the Judges had done their duty, and it was certainly a very wise precaution, and enabled the visitors to approach close to them, and, in fact, lean over without doing any harm. The same arrangement was adopted as regards the Puhlias, Asters, and other low flowers; but tall spikes of Gladiolus, &c., stood erect, and I found that Hollyhocks were also shown in like manner. The hand-bouquets, which in ordinary shows form a very attractive feature, over which the fair sex delights to linger, were here budded together—in most cases touching each other. Want

of space was the sole fault of the whole Exhibition; and this I believe to have arisen from some mistake, for there was no lack of enterprise, no stint of means on the part of the promoters of the Show, who in their programme intimated their intention of spending £1000 in prizes and other expenses, and I believe, so far as liberality and courtesy to all were concerned, they well fulfilled their duties and promises.

Amongst the plants exhibited were good specimens of Allamanda, Dipladenia, Lapageria, Bougainvillea, Clerodendron, Rondeletia, Ixora, and that ever-lovely Amazon Lily, Eucharis amazonica, with the usual mixture of fine-foliaged plants, as Alocasias, Marantas, Dracænas, Monstera deliciosa, and others. A remarkably fine pot or pan of Tritonia aurea was conspicuous, besides Heaths and other plants usually seen at such shows; but I did not see the plants of Mrs. Cole & Sons, from Manchester, which I believe were in previous years exhibited here. The show of plants was good for the end of August, but I have seen better Fuchsias at a show of less pretensions.

I expected more competition in Pine Apples in a neighbourhood where glass and coals are so plentiful, for there were but few; these, however, were good, yet inferior to what I had seen a day or two before at Lambton Castle, as were also the Grapes; but as the fruit from that remarkable place constituted such an important element in the great Manchester Show, and as I believe Mr. Hunter, from Lambton, was a judge at the place, his fruit could not be exhibited. Some fair Grapes were shown, the black being especially good, while some of the white ones, as is often the case, were not ripe, and, of course, fine-looking bunches had to be passed over. Peaches were very fine, as were also Nectarines and one or two dishes of Apricots; but the Plums, Pears, and Apples fell short of what are often met with in the south of England, and I was somewhat disappointed with the Melons, which were numerous enough. Small fruits were exhibited in sufficient quantity to meet the requirements of collections. The vegetables were in most cases all good, excepting the Cucumbers, which were much too old, but most of the Peas, Lettuces, and the Celery seemed to be better than we see in the south, where a hot summer renders their production very uncertain.

Cut flowers, especially Dahlias, very very fine, Roses but few, Asters good, but I did not notice any Carnations. Perhaps the most conspicuous flower in the whole Show was the Gladiolus, of which there were some excellent stands. There were two large tents devoted to the general exhibitors, and one to cottagers, but I fear that the exhibitions in the latter section were not in accordance with the intention of those giving the prizes, for the productions differed but little in character from those in the other two tents. Vegetables may be as well grown by the cottager as by the gentleman's gardener, and even hardy fruits and ordinary flowers may be quite as good; but good examples of Liliums, Fuchsias that could not well be accommodated in any ordinary window, large, handsome, well-flowered, double Geraniums, as well as Coleuses of several kinds, were amongst their collections, and I saw one or more plants of well-bloomed Eucharis, which indicated that the means of the exhibitor were much beyond those of the ordinary cottager.

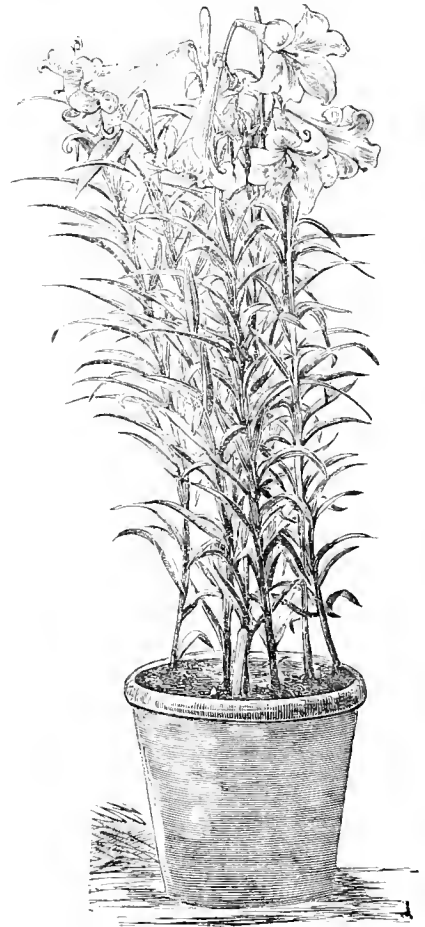
Before taking leave of the Show, which has now been established for many years, I need only point out that I believe its support depends almost solely on that very important element which backs up so many similar institutions—the outside public. I am told the shilling admittances are expected to make up £1000 or more, and on the occasion of a fair day like that of August 29th, when the Exhibition took place, and at a time when the working classes have so much to spend, it is not unlikely it far exceeded that amount, the admission from eleven to one being 2s. 6d., and after that 1s. The attractions of the place, with the best musicians that can be engaged (I was told they were the same performers that represented the English in its contest with America some time ago), brought together such a number of well-dressed people as can only be met with on great fête days in the metropolis or other large towns. It was pleasing to note their general good behaviour, and, what is equally encouraging, their critical taste for music; their remarks, too, horticultural way were often terse and to the purpose, showing that the ship-builders from Sunderland and the Tyne, the iron-workers from Cleveland, the seafaring population from Hartlepool and Tynemouth, and the colliers spread over the southern part of Northumberland and Durham, have a taste for the arts which tend to refine humanity. All credit is due to those who,

in getting up an exhibition like that at Bishop Auckland, do so much to benefit their fellow workers.—J. ROXBOROUGH.

NOTES ON LILIES.—No. 2.

LILIUM LONGIFLORUM WILSONI (LEICHTLIN).

THE portrait of this was taken from the only pot in bloom at the time that *L. longiflorum* (see page 170), was photographed. The plant, not being a strong one, does not do the Lily justice. The distinguishing features are that the growth



Liliium longiflorum Wilsoni.

is stronger, the stem taller, and the tubes much longer than in the case of *L. longiflorum*. We have had five blooms to a stem with tubes 8 inches long to the reflex. In the present specimen the height was only 3 feet 1 inch, with two flowers to a stem, and the length of tube only 7½ inches. On comparing the two photographs, however, the difference of length and form of the tubes is apparent. Some years ago we had a pot of this Lily in full bloom, when a great cultivator of Orchids, and, indeed, of most beautiful plants, paid it a visit. His first exclamation was, "I would have come twelve miles to see it!" It is indeed a beautiful Lily. The only defect we can see in it, and that not a very serious one, is, that the petals being of a rather more delicate texture than *L. longiflorum*, the flowers do not last quite so long. A first-class certificate was awarded to a plant from here.—GEORGE F. WILSON.

PELARGONIUMS AWARDED FIRST-CLASS CERTIFICATES

BY THE ROYAL HORTICULTURAL SOCIETY.

THE following list of the Pelargoniums which have received equivalent to first-class certificates at the Chiswick trials of the Royal Horticultural Society, 1873, with the names of the

donors, has been forwarded to us for publication by the officials of the Society:—

GOLDEN TRICOLORS.—Beautiful for Ever, Colonel Lloyd Lindsay, Countess of Enniskillen, Madonna, Oriental. All these were from E. G. Henderson & Son.

SILVER TRICOLORS.—Circassian Beauty (J. Hodgson); Fair Rosamond (E. G. Henderson & Son); Lass o' Gowrie (E. G. Henderson & Son).

GOLDEN-MARGINED.—Golden Brilliantissima (J. Gibson).
WHITE VARIEGATED.—Laura (E. Bland).

BRONZE-LEAVED.—Crown Prince (G. Acton); Emperor of Brazil (Downie, Laird, & Laing); Freelight (Carter & Co); Golden Harry Hieover (E. G. Henderson & Son); Mrs. Elliott (Downie, Laird, & Laing); Reine Victoria (E. G. Henderson & Son).

PINK-FLOWERED.—Amaranth (J. R. Pearson); Bella (Carter and Co); Cleopatra (— Barrett); Evans' Seedling (— Evans); Mrs. Halliburton (E. Bland); Welbeck Nosegay (W. Tillery).

SCARLET ZONALS.—Begere (Downie, Laird, & Laing); Don Giovanni (William Paul); Dr. Livingstone (Carter & Co).

CERISE AND SCARLET NOSEGAYS.—Chunder Sen (E. G. Henderson & Son); Forest Hill Nosegay (Downie, Laird, & Laing).

It is found that the collection of Pelargoniums grown at Chiswick requires annual reduction, in order to bring it within manageable limits. A large number has been this year struck out as not being required, the best only in the several colours and sections being retained. It has been decided to grow the following again next season, with such additions of novelties as may be obtained, many of these amongst the variegated kinds not having been received in time to become fairly developed during the present season.

GOLDEN TRICOLORS.—Mrs. Pollock, Amy Richards, Louisa Smith, Mrs. Turner, Macbeth, Florence, Lady Cullum, Plutarch, Sophia Dumaresque, Queen of Spain, Beautiful Star, Howarth Ashton, Reindeer, W. E. Gladstone, Sophia Cusack, Lady Sheffield, Beautiful for Ever, Oriental, Countess of Ashburnham, Eastern Prince, Bright Eyes, Fair Emily, Sir R. Napier, Countess of Flanders, Col. Lloyd Lindsay, Angelina, Madonna, Iron Duke, Peter Griev, Prince Arthur, Princess Mary, Imperial, Countess of Enniskillen, Home Influence, Ed. R. Benyon, Leander, Fair Rosamond, Solferino, Dr. Masters, Perugino, Valentine, Vedette, Queen of Spain, Miss Goring.

SILVER TRICOLORS.—Bridal Bouquet, The Graphic, Sabella, Italia Unita, Glen Eyre Beauty, Princess Beatrice, Mr. J. Clutton, Lass o' Gowrie, Sunny Smile, Eva Fish, Knight of the Garter, Prince Silverwings, Circassian Beauty.

SILVER-MARGINED.—Little Dandy, Golden Brilliantissima, Brilliant Superb, Miss Kingsbury, White Lady, Waltham Bride, Silver Chain, Snowdrop, Queen of Queens, Albion's Chiffs, Flower of Spring, Laura.

GOLDEN-LEAVED.—Creed's Seedling, Crystal Palace Gem, Golden Superb Nosegay, Robert Fish.

BRONZE-LEAVED.—Impératrice Eugénie, Gilt w' Gold, Golden Harry Hieover, Model, Golden Button, Crown Prince, King of Bronzes, Freelight, Harold, Reine Victoria, Black Prince, Bronze Banner, Rev. C. P. Peach, Black Douglas, Emperor of Brazil, Cedo Nulli, Beauty of Calderdale, Princess of Wales.

PINK-FLOWERED.—Amaranth, Maia, Florence Durand, Blue Bell, Welbeck Nosegay, Cleopatra, Bella, Christine, Christine Surpasse, Mrs. Pottle, Evans' Seedling, Pink May Queen, Mrs. Halliburton, Le Lord Maire, Richard Wallace, Mrs. F. Burnaby.

MIXED ZONALS.—Amy Pfitzer, Caude de la Meurthe, Mrs. Hole, Sparkler, Magnet, Major Clarke's Princess, Pioneer, Miss Stubbs, Lord Belper, Chunder Sen, Master Christine, Madame Barre, No. 276, Dr. Livingstone, Bonfire, Bolbrooke Pet, Chant National, Red Dwarf, Shakespeare, Madame Day, L'Homme de Metz, De Lesseps, Princess, Argus, President Gray, Don Giovanni, Marquis, Schiller, Rose Morn, Paul Fry, Wilkie Collins, Romulus, Hospitalité Suisse, Mdlle. Vendel, Prince Arthur, No. 153, Richard Dean, Orbiculata, Harry King, No. 1, Patriot, No. 329.

SCARLET SELFS AND ZONALS.—Warrior, Punch, Veauvius, Landers, Congress, Excellent, Aurora, Tyersal Rival, Jean Sisley, Emily Moreland, Corsair, Solfataro, No. 202, No. 229.

CERISE AND ROSE-COLOURED ZONALS.—Lucius, Crystal Palace Gem, Forester, Serviceable, Princess of Wales, Regalia, Ianthe, Climax.

FANCY ZONALS.—Miss Collingwood, Kentish Fire, Kate Creed, No. 5.

IVY-LEAVED.—No. 4, Coccinea, Coccinea fol. var., Peltatum elegans, Ariosta, Duke of Edinburgh, Willis rosea, Imperor, L'Élégante, Dolly Varden, Argus.

CERISE AND SCARLET NOSEGAYS.—Forest Hill Nosegay, Begere, Lady Kirkland, Masterpiece, Violet Hill Nosegay, Merrimac, Amy Hogg, Demosthenes, Lawrence Heywood, Lady Palmerston, Childwell Beauty, Madame Mèzard, Mercy Grogan, Flame, Indian Yellow, Orange Bouquet, Harry Hieover, Mr. Gladstone, Milton, Arthur Pearson, William Thomson, Colonel Holden, Triomphe de Stella, Lady Constance Grosvenor, Charles Dickens, Rev. F.

F. Fenn, Rev. John Wooley, Duke of Portland, Mrs. Melton, Stanstead Rival, Louis Veuilot, Grand Duke, Wellington, Vesta, Waltham Seedling, Soleil, H. M. Stanley, Duke of Devonshire, Mrs. Vincent, Bayard, Concord.

SALMON-COLOURED VARIETIES IN POTS.—Dr. Newham, Emily Licau, Renown, La Fontaine, Hogarth, Forest Hill Nosegay, Gloire de Corbeny, President Thiers, Le Propriète, Polly King, Eugène Mèzard, Queen of Beauties, Belle Esquimoise, Madame Van Houtte, Wilhelmine Weick, Remus, Princess Alice, Hortensia.

WHITE-FLOWERED.—The Bride, White Swan, Miss Collingswood, Virgo Maria, Purity, White Princess, White Clipper.

The authorities at Chiswick would be glad to receive for next year's trials any meritorious novelties (not included above) that may be sent to them; and if forwarded during the autumn they will be still more acceptable, as they will then be in better condition for growth next summer.

ORCHIDS IN FLOWER: SEPTEMBER 11TH.

Phalenopsis amabilis	Miltonia spectabilis
Saccolabium Blumei majus	Morchana
Vanda tricolor	virginalis
suavis	Clovesii
Cypripedium Veitchii	major
concolor	Regnelli
Pearcei	caudata grandiflora
barbatum	Cattleya crispata
Dendrobium McCarthiae	Loddigesii
Oncidium cucullatum	amethystina
Phalaenopsis	labata pallida
dasyle	Lalia elegans, several vars.
tigrinum	Odontoglossum grande
triquetrum	Epidendrum raniferum
incensum	prismatocarpum
flexuosum	Barkeria spectabilis
Kraemeri	Mesospidium sanguineum
Polycemis lepidia	Stanhopea turina
Restrepia anteanifera	Warrea tricolor
Calanthe masuca grandiflora	Arcidea suavissimum

—Victoria Nursery, Upper Holloway.

POTATOES AS THEY ARE.—No. 3.

ROXBURGHSHIRE.—Having been absent from home I was unable to answer your inquiry in reference to the Potato crop. I find our Potatoes all lifted and housed in rooms in good condition. Regents, Early Rose, Red-skinned Flourball, and Paterson's Victoria have little or no disease; Early Don, Mona's Pride, and Milky White are badly diseased; and Ashleafed, Gloucestershire Kidney, Fortyfold, White Flourball, Ashtop Pluke, Prolific, and Smith's Early had a good number bad amongst them. Up to the present time I have not heard of much disease in this neighbourhood. Mr. Thom, of Newton Farm, tells me his Potatoes are affected in the straw, but the tubers are quite sound.

Some people advise planting early kinds early and lifting early, but, as a rule, our earliest sorts are the most affected. I believe it good practice to plant wide apart, say 6 feet or more, and crop between with other vegetables. I have never seen this done anywhere, but it has occurred to me that the wider the rows are asunder the less likely would they be to disease.

My attention has been called to your advising a correspondent not to soak Acacia seeds in boiling water as it would destroy their vegetative powers. I know in the case of the Acacia Ricciana it is the only plan of getting the seed to germinate. To sow this seed in the ordinary way one has sometimes to wait more than a year before it grows, but soak it in boiling water from the kettle and the seed germinates in less than a fortnight. —H. KNIGHT, *Floore Gardens, Kelso.*

ANGLESEA.—The Potato crop in this district was looking well up to the first week in August, the plant being strong and healthy, and the early kinds of first-rate quality, particularly Early Dwarf Ashleaf and Myatt's Prolific; the latter a great favourite here, and a heavy cropper. In the second week of August the disease made its appearance in the stems about 1 foot from the ground, and has progressed ever since, particularly in the fields. The loss will be about two-thirds. —JOHN GOUGH, *The Gardens, Baron Hill, Beaumaris.*

WICKLOW.—We are digging the heaviest crop of Potatoes I have ever seen; but I am sorry to say they are badly affected with disease. Dalmaheys and Kemps especially are bad, three parts of them we are throwing away in a half-rotten state. Paterson's Victoria planted on a piece of ground sloping to a brook and heavily dressed with old lime and mortar rubbish are the best we have. I hope the disease is not general in Ireland. The situation here is very low and damp. —THOMAS P. TURNER, *Gardener to the Earl of Meath, Killruddery, Ireland.*

SOUTH WALES.—The following are the results of the Potato crop in my garden this season:—Myatt's Prolific, large crop but much diseased; Red-nosed Kidney and Paterson's Bovinia, partially diseased; Racehorse, Early Creeper, American Rose,

Snow's Red-skinned Flourball, and Irish Flourball all sound and a fair return. Two or three Maltese Potatoes I put late in the ground yielded a large return, and quite free from disease.—G. RAWDON POWER, *Heywood Lodge, Tenby.*

ROYAL HORTICULTURAL SOCIETY.

SEPTEMBER 17TH.

THERE was but a small display of the subjects invited in the schedule, with the exception of fruit and vegetables, which were tolerably well represented. The best twelve double Zinnias came from Mr. Osman, South Metropolitan District Schools, Sutton; Mr. Clark, gardener to J. M. Robertson, Esq., Rochester, being second; and Mr. Porter, gardener to Mrs. Benham, Isleworth, third. Stocks were miserable and no prizes were awarded, whilst for Pentstemons a second prize was given to Mr. Porter. For Helichrysoms the first prize was withheld; and second and third prizes were awarded to Mr. E. Deau, Ealing and Bedford, and Mr. George, Putney Heath.

Prizes were offered for six Begonias ornamental by their flowers, but there was no competition; likewise for six Begonias with ornamental foliage. Of these two collections were shown, one by Mr. Walker, gardener to H. J. Atkinson, Esq., Gunnersbury House, Acton; the other by Mr. Farrow, gardener to G. Bathers, Esq., Brigadier Hill House, Enfield. These included moderate-sized, well-grown plants of Marshalli, Rex, Princess Charlotte, and Richardsoni. Prizes were awarded in the order in which the exhibitors are named.

There was for the season a goodly show of miscellaneous collections, and for these several extra prizes were given. From Mr. Williams, Victoria Nursery, Upper Holloway, came a numerous group of Beaucarneas, Dracenas, Yuccas, Palms, Croton longifolium, beautifully coloured, and several fine Orchids and Anacochilis. An extra prize was awarded. Mr. W. Paul, Waltham Cross, received a similar award for a collection of pot Tea-scented Roses, among which President, Marie Van Houtte, Souvenir d'Elise Vardon, and Jean Pernet were notably good. Mr. W. Paul also exhibited four stands of, for this season, very fine blooms, and a stand of cut spikes of Gladiolus and Pelargonium blooms. From Mr. Wimssett, Ashburnham Park Nursery, King's Road, Chelsea, came excellent specimens of Dracena Fraseri, excelsa, stricta, Mooreana, magnifica, metallica, and ornata. These received a cultural commendation from the Floral Committee. Collections of Zinnia Haageana, and salmon-coloured and white Zonal Pelargoniums, were shown from the Society's garden at Chiswick. These were remarkably well bloomed, and many of the plants were far superior to those frequently seen at exhibitions in pots four times the size.

Messrs. Osborn & Sons, Fulham, sent a selection of hardy deciduous ornamental trees and shrubs, including Ulmus campestris viminalis variegata, with leaves nicely variegated with white, especially the young ones; Platanus acerifolia pyramidalis, with handsome broad glossy leaves; Tamarix sp., with Asparagus-like leaves; Cornus nas variegata, white variegated; Cornus sibirica variegata, variegated with white and partially tinged with red; Rhus Toxicodendron, the leaves dying-off orange and scarlet; Quercus pedunculata Concordia, a very effective golden Oak; Ulmus montana albo-marginata; Rhus glabra; Salix crispa, the leaves singularly contorted; Catalpa syriacifolia aurea, with golden foliage; Ulmus campestris aurea; Salix caprea pendula, &c., together with Crataegus in fruit.

Mr. Prince, Market Street, Oxford, sent specimens of Roses on seedling Briar stocks of various ages, showing remarkably free growth. The advantages which he claims for this stock are, that the Roses worked on it last longer than on the ordinary Briars, and that their flowers are of finer colour and better form than on the Manetti. One of his plants was Gloire de Dijon budded in 1871, but the bud remained dormant, or nearly so, till July of the present year, since which time it has pushed 9½ feet. He also exhibited several boxes of excellent cut blooms from Roses worked on his seedling Briar.

Though the prizes offered for fruit were small, an assortment of good fruit was staged for competition. The best dish of dessert Apples was sent by Mr. Woodbridge, gardener to the Duke of Northumberland, Sion Gardens, Isleworth, and consisted of good examples of Kerry Pippin. Mr. Douglas, gardener to F. Withbourn, Esq., of Loxford Hall, Ilford, was second with Reinette Jaune Hative, synonymous with Gravenstein. Very good examples of Orange and Ribston Pippins were exhibited, but unripe. Mr. W. Moorman, gardener to the Misses Christy, Coombe Bank, Kingston-on-Thames, had the best dish of Pears, highly-coloured Williams' Bon Chrétien. The second best was sent by Mr. Woodbridge.

A collection of twelve sorts of Vegetable Marrows from Mr. W. G. Pragnell, gardener to G. D. W. Digby Esq., Sherborne Castle, Dorset, had a first prize in the class for that vegetable. Mr. Pragnell also taking the first prize for a fine collection of Tomatoes; Hathaway's Excelsior, Orangefield, and Defiance

were handsome. A good collection was also sent by Mr. Osman. The second prize for a collection of Tomatoes was given to Mr. Record, gardener to J. Whatman, Esq., M.P., Vintei's Park, Maidstone; he had some very good specimens, Charter Oak Prize being particularly fine.

FRUIT COMMITTEE.—Alfred Smee, Esq., F.R.S., in the chair. Mr. W. Cole sent a basket of fruit, and received a cultural commendation for the Williams' Bon Chrétien Pears exhibited in it. Mr. Moorman, gardener to the Misses Christy, Kingston-on-Thames, sent a dish of Peaches named Pine Apple. Mr. Douglas also sent a dish of Lord Palmerston Peach from a pot tree in an orchard house. Mr. Dancer, of Little Sutton, Chiswick, sent a collection of Pears, Apples, and Plums, for which he received a vote of thanks. Mr. B. S. Williams, of Holloway, sent a seedling Apple called Williams's Eclipse, but which was passed as of no particular merit. Mr. Sadler, gardener to R. H. Wyatt, Esq., Wandsworth Lodge, Tooting, sent a seedling Melon which proved to be of no merit. The same opinion was expressed of one sent by Mr. Walker, of Oulton Hall, Leeds; but Mr. Gilbert, of Burghley Gardens, Stamford, sent a Melon of very good flavour indeed, and one came from Mr. Westcott, of Raby Castle, but of no merit.

Mr. Sadler sent a dish of Emperor Alexander Apples; and Mr. Gardiner, of Lower Eaitington Park, Stratford-on-Avon, clusters of the Fairy Apple.

G. F. Wilson, Esq., of Weybridge Heath, sent some good examples of Mr. Standish's Early Ascot Frontignan, which was ripened in an orchard house, and which the Committee considered very good indeed.

From the Society's garden at Chiswick came some splendid bunches of Madresfield Court Grape, as well as a bunch of Muscat Champion, which the Committee considered to be a Grape that ought to be more grown. Mr. Westland, of Witley Court Gardens, sent a seedling Kitchen Apple of very fine appearance, which, after being cooked, was not considered equal to many other Apples now in season.

Mr. Fenn, of Woodstock, Oxon, sent a collection of twelve sorts of Potatoes, which were awarded a cultural commendation. Mr. R. Deau, nurseryman, Ealing, Middlesex, sent a large dish of Hathaway's Excelsior Tomato, which was very fine. This Tomato is growing on trial at Chiswick, and has received a first-class certificate.

FLORAL COMMITTEE.—W. B. Kellock, Esq., in the chair. MESSRS. VEITCH & SONS, Chelsea, sent a charming collection of Lady Heaths in baskets, comprising Erica vulgaris variegata, with purple flowers; vulgaris flore-pleno, very showy; vulgaris rigida, tenuifolia alba, vagans alba, and vulgaris Alpertii, a very fine rich-coloured variety. Together with these were baskets of Menziesia polifolia alba erecta, and Pernettya mucronata in berry, as also fine plants of Celosia Huttoni lifted from the open ground. From the same firm came also Nepenthes Cheloni, a very fine Pitcher-plant, a hybrid between N. Hookeri and N. Dominiana. This received a first-class certificate, as did also Nephrolepis davallioides furcata. Blumenbachia coronata with orange flowers, lifted from the open ground, was again shown. A first-class certificate was awarded for Abutilon Sellowianum marmoratum, with large leaves marbled with white and green, and whilst young with yellow and green. A first-class certificate was also awarded for Actinopteris radiata, with elegant fan-like fronds. Maranta hieroglyphica was also shown by Messrs. Veitch.

From Mr. W. Bull, Chelsea, came Phyllanthus nivosus, with the leaves in the upper part of the shoots white with some blotches of green. This received a first-class certificate, as also did Odontoglossum Roezlii, with a large flower with a white lip yellow at the base, white sepals and petals, the two upper lateral ones stained with purple at the base. Among other plants shown by Mr. Bull were scarlet-flowered Begonias grandiflora and conspicua, having large finely-coloured flowers; Dracena Shepherdii, a noble plant; and Pourretia brevifolia in flower.

New Dahlias were again freely exhibited, Mr. Turner, of Slough, and Mr. Keynes, of Salisbury, staging grand collections. An extra prize was awarded to the former. Mr. Keynes had first-class certificates for Mrs. Livingstone, purplish rose; Letty Coles; Mrs. Stancombe, canary, faintly tipped with purple; and Parrot Keynes, a very showy fancy, yellow and crimson scarlet. White Queen, white, with sulphur tinge, sent by Mr. Wheeler, of Warminster, had a first-class certificate. Mr. Turner, of Slough, had a like award for Emma, a very pleasing shade of rose. Mr. Turner also exhibited a beautiful collection of Ponpon Dahlias.

Messrs. Standish & Co., of Ascot, sent Cupressus nutkatensis variegata alba tinged with white throughout, and Biota elegantissima, a beautiful golden Arbor-Vite. Mr. J. C. Crussell, Fairy Croft Nursery, Saffron Walden, exhibited excellent French Marigolds, some of them quite like a ball, and orange and lemon African Marigolds, evidently a very fine strain. Mr.

Dean, of Ealing, sent a basket of double dwarf Marigolds of varieties, of which *Ranunculiflora*, *Aurea floribunda*, and *Aurantiaca floribunda* were the most notable.

DUNDEE HORTICULTURAL SHOW.

(From a Correspondent.)

The enterprising horticultural Society of this large and flourishing town had a most successful Exhibition on the 4th, 5th, and 6th inst., in the Drill Hall and square in front. It was opened on the 4th inst. by James Yeaman, Esq., the newly-elected M.P., President, who delivered an appropriate address. With the exception of the show in the Baxter Park when the British Association met in Dundee, the Society has had no exhibition equal to that just past. The fulfilled entries were 1678, being for plants, 241 (pots, \$11 in number); cut flowers, 429; fruit, 300; vegetables, 708. The amount of prize money was £280. The visitors, including members and friends (the chief support of the Society), numbered 13,106, and the amount paid by the general public for admission was £217 7s.

The pot plants were a splendid sight, and showed that the wealthy merchants of Jutopolis are not devoted to jute alone. The first prize for nine stove or greenhouse plants was the challenge cup presented by Joseph Grimmond, Esq., Corbett Castle, and £5 in money; this was fairly won by Mr. R. M. McMillan, Mr. Grimmond's own gardener. The local nurserymen—viz., Messrs. W. P. Laird & Sinclair, and Messrs. John Stewart & Son, vied with each other in carrying off prizes in the different departments, greatly to the advantage of the Show. Messrs. Robertson & Galloway, Glasgow, took the first prize for the best twenty-four Gladioli. The first prize for the best eighteen Dahlias went to Mr. John McPherson, Polmuir Gardens, Aberdeen. The Alpines were numerous, and included many rare and fine specimens; the first prize for the best thirty was won by Mr. A. Pattison, Baxter Park.

The cut flowers, as a whole, were very good, but unmistakably affected by recent cold and rainy weather. The table-decorations, hand, table, and button-hole bouquets were very numerous and gorgeous, not a few of them tastefully put up. There were also some good floral devices.

The fruit was excellent. Mr. George Reid, gardener to Bailie Moncur, won the first prizes for the best four bunches of Grapes, best black bunch, best bunch of Lady Downie's, and best bunch for bloom. The first prize for the heaviest bunch was gained by Mr. George Gillespie, gardener to James Paterson, Esq., Binnettles, who also received the first prize for two Pine Apples.

There was an abundance of vegetables of every kind, all in good condition. The little hamlet or clachan of Ballogarno, in the Carse of Gowrie, entered in all the departments, and carried away no less than twenty-seven prizes.

There were two tables, 10 feet by 6, laid out as specimens of dessert decoration, everything complete for a banquet. The first prize, £5, was awarded to Mr. David Goss, gardener to Col. Macdonald, St. Martin's Abbey, Perthshire. The second prize, £3, went to Mr. Mackie, landscape gardener, late gardener to the Earl of Camperdown. The merits of both were warmly discussed, and the general opinion appeared to be pretty equally divided.

REPORT ON THE BRISBANE BOTANIC GARDEN.

We are truly pleased to find from Mr. Walter Hill's official statement that this colonial garden continues its useful and prosperous course under his good management. We have only space to spare for the following extract:—

"The fibre-producing plants have commanded special attention on account of the great and increasing demand that has arisen in the mother country for materials for the manufacture of paper and textile fabrics. For some years past we have had the following plants in cultivation in the Garden:—*Crotalaria juncea* (Bengal Hemp), *Cannabis sativa* (Indian Hemp), *Linum usitatissimum* (Flax), *Corchorus capsularis* (Jute), *Urtica nivea* (China Grass), *Hibiscus cannabinus* (Sunne), *Hibiscus sorbifolia* (Rosella Hemp), *Musa textilis* (Manilla Hemp), *Sida retusa* (Queensland Hemp), &c.

"Samples of the material manufactured from these plants have been exhibited at several of the agricultural and horticultural shows in Queensland, at the Intercolonial Exhibition in New South Wales, and at the International Exposition held in London in 1862. Upon the last-named occasion the fibre of the *Sida retusa* commanded great attention. The sum of £35 per ton was offered for it in large quantities, according to sample, and it was anticipated that an increased demand would raise the price to £60 per ton. So many inquiries were made of me on the subject that, at my private expense, I imported two machines from England, at a cost of £100, which I was led to believe would answer the purpose of dressing the

fibre so as to render it saleable; unfortunately they turned out to be quite unsuitable for that object. A sample of *Sida retusa* was also shown at the London International Exhibition last year, and since then I have been inundated with letters on the subject, to very few of which I have been able to reply, owing to my time being otherwise employed, and the absence of clerical assistance. Such questions have been put as the following:—If a Company were formed, would they be able to find five thousand acres of land suitable for the cultivation of this special product, and where would it be situated? What would be the produce per acre were the land properly cultivated? Do you know of anyone who understands the cultivation of fibre-producing plants, &c.? It is to be regretted that the great demand for the fibre of a plant which grows as a weed in Queensland, and is becoming a pest to the farmers, cannot be better supplied.

"Late advices inform me that small lots of the *Sida* are saleable at only from £14 to £17 per ton; but a steady and reliable supply would no doubt have the effect of raising its value, especially as it appears to be wanted to meet the requirements of the English manufacturers.

"The past year there have been distributed to 480 applicants, 60,000 cuttings of twenty varieties of Sugar-cane, 2000 plants and 4500 cuttings of three species of Mulberry—viz., *Morus alba*, *M. multicaulis*, and *M. latifolia*, 6100 Coffee plants, 2000 Tea plants, 10,000 Chinese Grass-cloth plants, 3000 Ginger roots, 400 papers of Tobacco seed, 6 lbs. of Indigo seed, 8 lbs. of Sun Hemp seed, 6 lbs. of Jute seed, besides 3040 of other useful plants. From the above it will be seen how extremely useful the establishment has been in dispersing superior trees and other plants over the country."

A MELON-CUCUMBER.

We received from Mr. A. Spary, gardener, Digswell House, Welwyn, the following communication:—"A remarkable freak of Nature may be seen at the present time in the nurseries of Mr. John Watson, St. Albans. In a span-roof house occupied on the south side with Munro's Little Heath Melon, and on the north with Cucumbers, is a Cucumber plant on the Melon side bearing both Cucumbers and a Melon. The Melon is about the size of a goose egg, and slightly elongated in form; and although there is a small crack in it, caused, I think, from overwatering, Mr. Watson thinks that it will ripen and produce seed. Was this compound fruit caused by the action of the Melon pollen on the Cucumber blossom? or was it wrought previously in the parent of the Cucumber plant? Mr. Watson is of the former opinion, as he has not grown Melons for a very long period. Have any of your readers met with a similar instance?"

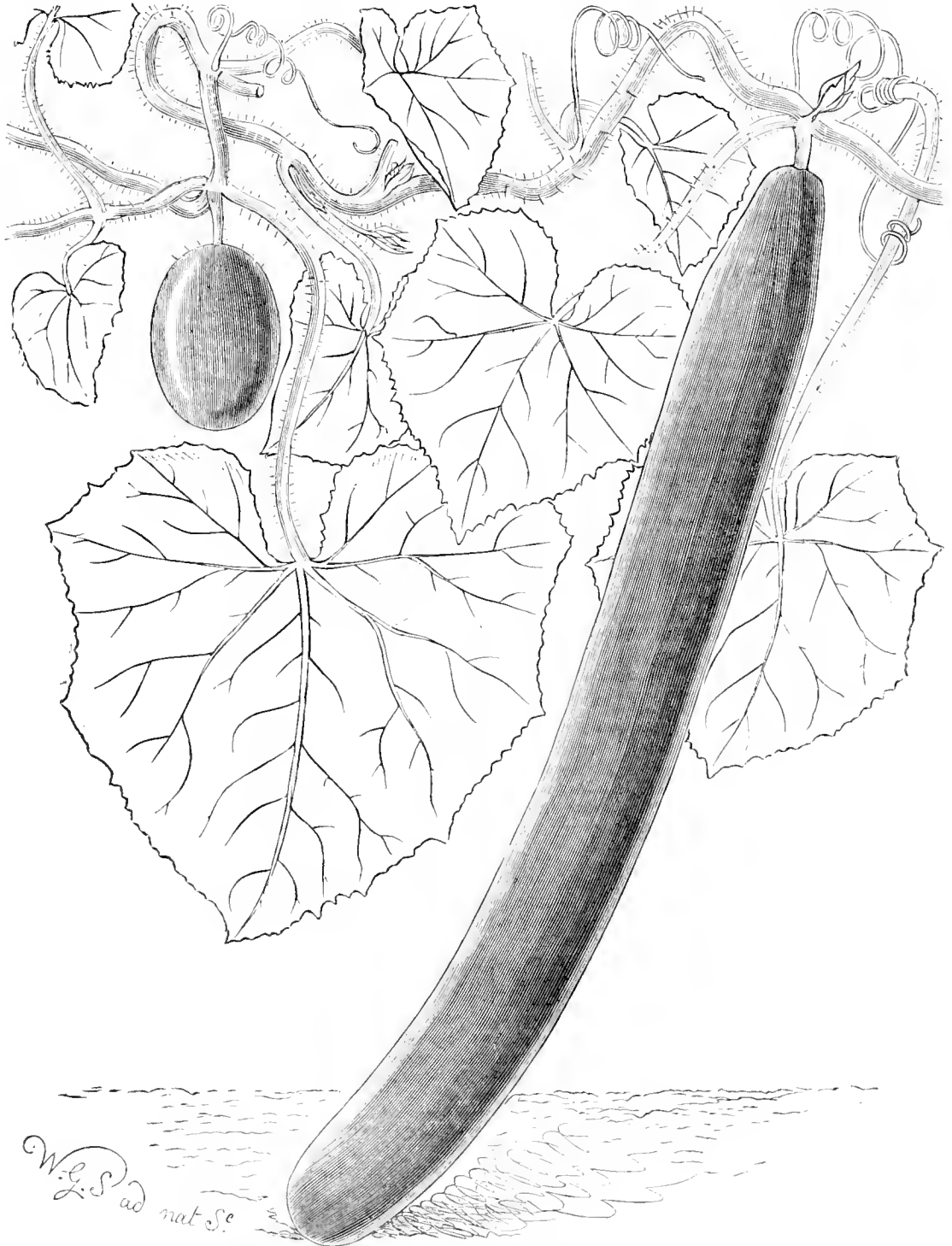
We requested Mr. W. G. Smith, the botanist and draughtsman, to examine the "Melon-Cucumber," and the following is the result:—

Acting upon your request to visit Mr. Watson's nurseries at St. Albans, and make a drawing and notes of his Melon growing upon a Cucumber plant, I went there, and now send the results.

Until the present season Mr. Watson had not grown Melons for thirty years, and the Melon-Cucumber fruit here illustrated grows upon a Cucumber plant on the north side of a span-roof Cucumber house, in which house on the south side are planted a few fine Munro's Little Heath Melon plants. The pollen of a male flower of a Melon was probably transferred to the female flower of a Cucumber by some insect, and so the curious hybrid has arisen.

The Melon-Cucumber is $4\frac{1}{2}$ inches long and $8\frac{1}{2}$ inches round. It seems externally to be exactly intermediate between its two parents; its general form is that of the Melon; its skin is yellowish green, and furnished towards the fruit-stalk with a few Cucumber hairs, the fruit-stalk itself and the base of the fruit is that of the Melon. Mr. Watson believes the fruit will properly ripen and produce seed, but what the nature of the interior of the fruit may be time can only show. On the axil of the stem which produces this cross-bred is a Cucumber leaf of extraordinary size measuring no less than 1 foot 2 inches across, and exactly 18 inches from the cross-bred grows a very fine Cucumber as shown. My first feelings of surprise are somewhat lessened when I remember how very prone some species of Cucurbitaceae are to produce very diverse varieties amongst themselves, as the Melon with its white, yellow, or red flesh, and its smooth or tuberculated bark, and the numerous varieties thrown off from the Cucumber. The two

plants, moreover, come under the same genus, the Melon being *Cucumis Melo*, whilst the Cucumber is *C. sativus*. Had they not been thus nearly related, and belonged to different genera, the hybrid would have gone to prove a very close affinity between the two parents. I conceive that the cross-breeds between different genera of *Orehidaceæ* produced in Messrs. Veitch's establishment by Mr. Dominy, show the extremely close affinity of the different genera experimented upon. A few



words as to the parents will be of interest. Both the Melon and Cucumber plants are in the highest state of robust health. The Melon is Munro's Little Heath Melon, with red flesh. The plants are heavily cropped with magnificent fruit, many specimens weighing from 7 lbs. to 8 lbs. The Cucumber is Watson's Antagonist, which is a healthy new seedling with fruits of great size and fine form. Characteristic specimens that I measure were 26 inches long and 9 inches round. Mr. Watson

assured me that its qualities for the table are first-class, and as he intends selling seeds of it next season, its worth will soon be tested by the horticultural world.—W. G. SMITH.

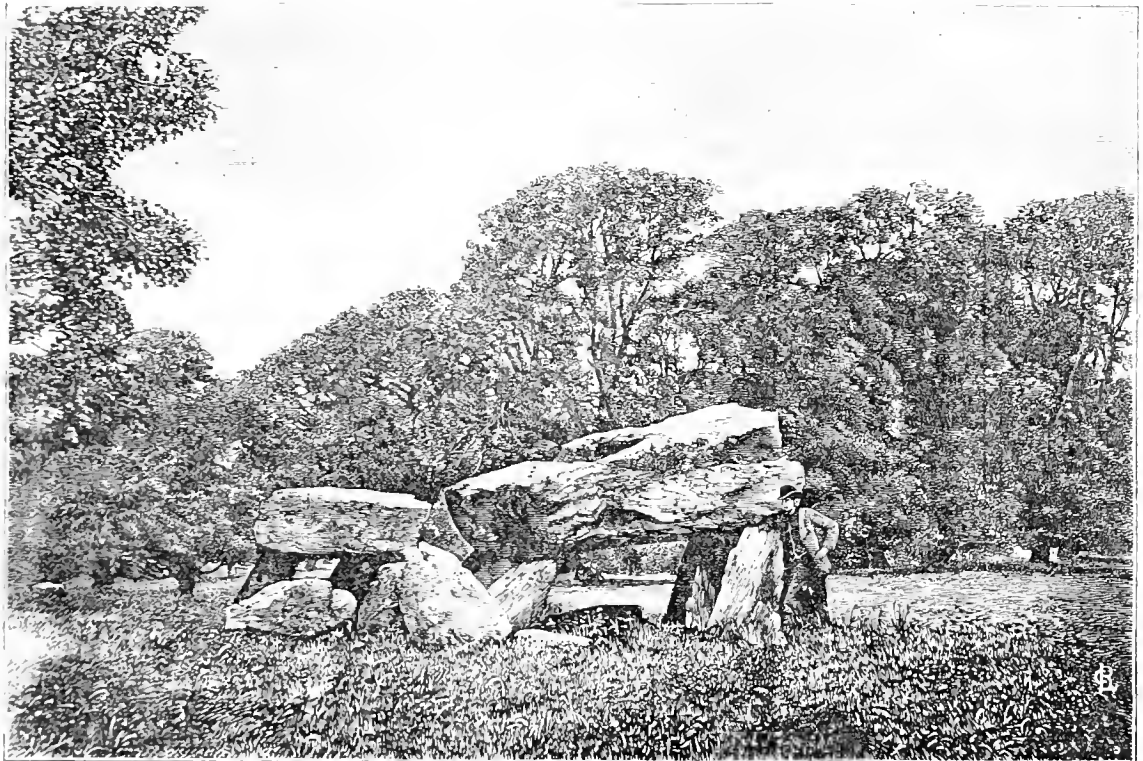
PLAS NEWYDD.

RESIDENCE OF THE DOWAGER LADY WILLOUGHBY DE BROKE,
ANGLESEA,
No. 1.

IN the time of the Druids, two miles from where now is the Llanfair station of the Chester and Holyhead Railway, in the Isle of Anglesea, stood *Elwyn Moel* (the Grove on the Hill), the dwelling-place of *Gwenllian*, celebrated in the Welsh annals. On the site of that a more modern mansion was erected, and was the seat of *Sir Nicholas Bayley*, but that was pulled down when the estate passed into the possession of his relative, the first *Marquis of Anglesey*, who erected the present noble mansion. Since his death it has had other tenants, and *Thomas Assheton Smith, Esq.*, was the one who occupied it immediately before *Lady Willoughby de Broke*. *Mr. Potter*,

recently a square Roman stronghold, and there are the remains of a Roman road leading to it. Close by are, or were, the remains of the *Trer Dryw* (Druid's House), supposed to be the Arch-Druid's residence, and near it his *Bryn Gwyn* (the Blessed Hill), on which is a circular hollow 180 feet in diameter, and surrounded by a bank of stones. *Mr. Rowlands* considered it "the grand consistory of the Druidical administration."

In addition we might particularise numerous other cromlechs and circles of stones, but we have enumerated enough to establish the ancient sacred character of the vicinity, and we felt more readily we were on Druidic ground from the noble trees around. *Mr. Wright*, the head gardener, told us that until not long since the oldest Oak on the estate was standing near the largest cromlech represented in our engraving; and as those still standing and in full vigour must be of four centuries' growth, that ancient of these ancients must have lived from years nearly midway between the present and Druidic times. We measured the trunk of one Oak and found it more than 19 feet in circumference at 4 feet from the



CROMLECH, PLAS NEWYDD.

of *Lichfield*, was the architect, and the entire mansion and outbuildings are constructed of the grey marble from the *Meelfra* quarries near *Redwharf Bay*, on the north-west coast of the island.

Without room for doubt this must be recognised as a chief rendezvous of the Druids; the cromlechs, tumuli, traditions, and history here bear concurrent testimony. Just to the south of *Plas Newydd*, we learn from *Tacitus*, that *Agricola* crossed from the *Caernarvon* shore, defeated the Druid-incited Britons, cut down the sacred groves, and extirpated the cruel superstitions. The place of the battle is still known as *Bryn Feddan* (the Hill of Graves). Not far away is a *carnedd* (a tumulus, or heap of stones), overgrown with grass, but opened on one side some years since, and the opening remains. It leads to a low chamber, in which human bones were found, the remains, as some antiquaries believe, of victims confined there ready for sacrifice on the neighbouring cromlech. When we saw it, he had sought shelter in it, and as they scampered out were suggestive of an escape of the victims.

Then, there is *Caer clawd* (the Matted Intrenchment), evi-

surface, and a neighbouring *Ash* is 16½ feet in circumference, and straight as a javelin for 50 feet, where it separates into branches.

The lodge-entrance of *Plas Newydd* is about two miles from the *Llanfair* station of the *Holyhead Railway*, and passing through the gate you at once enter a wood, through which the road winds, that forcibly reminded us of the forest of *Soignes* between *Brussels* and the field of *Waterloo*. The trees are large and lofty, and the bare white trunks of the *Birch*, and of the still larger *Elms*, all without order, and the soil beneath uncultivated, and productive only of *Mosses*, *Ferns*, and wild flowers—form a fitting preface to the place of the Druids. The road passes by various groups of noble trees for a full mile before the house is reached.

GARDENING AT CHELTENHAM.

You have been lately giving in the papers on "Gardening in the West" glowing accounts of some of those palatial residences, such as *Bowood*, *Tortworth*, &c., which are among the

glories of our land, although in the eyes of demagogues the abodes of tyrannical oppressors and hardhearted despots. Be it mine to add a little mite to these notes on Gardening in the West, by telling what I saw in a more humble way during a hurried visit to Cheltenham, so dear to valetudinarians; and in so doing I will just take a representative of each of the two classes of horticulturists, amateurs and nurserymen—men who have made their mark. When I mention the name of Mr. Cypher I mention one who is well known to the *habités* of our exhibitions as among the most successful and tasteful of our exhibitors of table decorations, and also of fine stove and greenhouse plants; while it was only the other day that a first-class certificate was awarded to a yellow Carnation, King of Yellows, which came from the garden of Dr. Abercrombie, the amateur of whose garden I now wish to say a few words. It is not often that we see a square as private property, but this is the case with Suffolk Square, Cheltenham. The owner built his own large house and kept the square for himself, each house having a stipulation in the lease to that effect. The owner has left or passed away, but the garden remains as before in the possession of the tenant of his house. Formerly it was held by Capt. Lambert, who is well known as an enthusiastic grower of Roses, and is now tenanted, as I have said, by Dr. Abercrombie, an eminent physician, who delights in his garden as a means of recreation and of lightening the cares of a laborious profession.

The square is laid out with a central lawn of grass, in which, however, are some very fine fruit trees—Apples laden with a fine crop, Mulberries equally rich, and Pears. All round there runs a wide border; and in the first of these, 90 yards long, is arranged a very effective ribbon border, with ten rows of plants in it. It was at the period of my visit a little past its best, but still very handsome; the great trouble being to get plants that would agree as to size and period of blooming, whites especially being a desideratum. Will any of the readers of the Journal say what would be the best white for, say, the fourth row in such a border? Geraniums such as Madame Vaucher, &c., will not do. Would *Centaurea candidissima* not be a good plant for that purpose? Along another border was a fine quantity of seedling Carnations and Picotees; amongst them large quantities of the King of Yellows, also another called Maiden's Blush, and a fiery red one called *Géant des Batailles*. These are all selfs, but very effective, deliciously fragrant, and excellent for cutting for bouquets. But it is not to these alone that Dr. Abercrombie confines his attention. He grows a good collection of named sorts, and has some promising seedlings. Along another border he has some "gem" beds, circles comprising one sort of flower which form a sort of trial-ground and nursery from whence stock is obtained for the future. Amongst other things were some *Phlox Drummondii*, which my friend Mr. Banks told me he has largely used this year to supersede the Verbena. It is to be had in nearly all the colours that it includes, and is, moreover, so easily managed, so free from disease, and lasts so long, that it seems worthy of more extended cultivation than it obtains. There were also some good plants of *Chrysanthemums* in pots which were being prepared for the winter exhibition. But perhaps the finest things I saw were some zonal *Pelargoniums* intended for the Flower Show. I have seen them this year in many places. I thought them fine at York and at Leeds, and good at Bath, but I have not seen anywhere any to equal those I saw here. One recollects the grand show *Pelargoniums* exhibited by Bailey, Turner, and others in former days. Now, these zonals were on the same model, were as full of bloom, perfectly dwarf, and the most perfect specimens of zonals—no trusses tied down or across, but all straight up—I have ever seen. If they are beaten I would go fifty miles to see the plants that do it. Here let me say that my acquaintance with Dr. Abercrombie is another instance of the influence of our Journal.

I think I have ere now mentioned that Mr. Cypher is an instance of the old proverb "*Amor omnia vincit.*" In his instance the object of the *amor* was that fair, and, I must say, most affable young lady, Miss Flora. He managed to ingratiate himself into her good graces, and made the garden he had care of famous through the gracious manner in which she met his advances; and when the opportunity came he brought her to a home of his own, and there house after house has been put up for her convenience, and he and she are more devoted to each other than ever. When I went through Mr. Cypher's houses, which are mainly used for specimen plants for exhibition, some of the best had been sent off to Manchester; but there were still some grand plants of *Allamanda*, *Dipla-*

denia, *Stephanotis*, *Azaleas*, *Heichrysums*, &c., all portending future conflicts and triumph. I saw here what I have failed to see for many, many years, that curious and fine old plant *Gloriosa superba*, which has been shoved out of the way for newer and less worthy things. Mr. Cypher is well known also for his great taste in decoration, and from what I saw he is in no little degree helped by his daughter, who was deftly arranging some bouquets when I went there. I was glad to hear that his services are largely sought after in Cheltenham for this purpose; and everything about the nursery, small though it is, showed that what he entered into he did thoroughly.

Such are the hurried notes of a hurried visit, but there may be something in them to those who care to know of the progress of horticulture in all parts of our "tight little island."—D., Deal.

THE AUTUMN ROSE SHOW AT BRIE-COMTE-ROBERT.

HAVING been pressed by one of the worthy Editors of THE JOURNAL OF HORTICULTURE to accompany him on an expedition to France, to be present at the autumn Exhibition of the Société D'Horticulture des Arrondissements de Melun et Fontainebleau, I send an account which I hope may be interesting to many of the readers of THE JOURNAL OF HORTICULTURE, as helping somewhat to compare the manner in which French exhibitions of flowers, &c., are managed, and the manner in which the flowers, &c., are displayed, as contrasted with others in our country. Having promised to be present at a *soirée* at Darlington on Thursday evening, to inaugurate the presentation of a Gardeners' Institute and Reading-room to the gardeners in the neighbourhood of Darlington, given by Mr. Edward Pease, I had to travel down by the night mail, and joining Dr. Hogg in London, we arrived at Paris at 8.30 on Friday evening, having travelled exactly five hundred miles in twenty hours, which was not bad work to start with.

We were off early on Saturday morning, leaving Paris for Brunoy at nine, taking the omnibus at Brunoy for Brie-Comte-Robert. Our omnibus was very full, and the first novelty in Rose-showing, at least a novelty to me, was seeing a veteran Rose-grower numbering seventy-nine summers, on the top of the omnibus with his Roses in a large round hamper lying loosely one on the top of the other. The mystery was, however, solved when we got to the end of our journey. We passed through two country villages on the way to Brie-Comte-Robert, where the Show was held; the first part of our way lying through an orchard district, and on one side, where a hill sloped down to a valley and the lay of the ground was very favourable, there were dwarf Vines growing, but the quality of the Grapes not sufficiently good for making wine. We went along the flat top of a hill, the church of Brie-Comte-Robert being a conspicuous object towering above the town some way off. On entering into the town the Place de L'Exposition was soon reached, as it lay on our right-hand side just outside the town. We were set down at the gate and went in for a short time, but were soon summoned to a *déjeuner* at the Hotel de la Grace de Dieu, where the Jury were to assemble. After partaking of a thoroughly French *déjeuner*, which would be somewhat strange to an Englishman, as it was to me, we returned to the Show, which was still not ready for the Jury, *alias* the Judges, to commence their task. Unfortunately the previous day had been exceedingly wet, and many of the preparations had to be deferred, as the ground had been visited with a thunderstorm somewhat similar to the storms which passed over the neighbourhood of Birmingham previous to the show there last year.

I will now endeavour to describe the Show itself, and I will preface it by saying, that as the district about Brie is one of the chief in France for Rose-growing, so one of the chief features, and the most distinctive feature, of the Show were the Roses. These were not shown in boxes in individual blooms on stages as in our English shows, but in masses on sloping banks, and in beds on the sides of the tent. The central tent was about 160 feet long and 50 wide, and two side annexes opened out from it, one for fruit and the other for vegetables. The annex for fruit extended some way beyond the central tent, and on the further side, also beyond the vegetables, were exhibitions of different horticultural instruments and implements, with iron houses, &c. In the central space outside the tent, and between these two annexes, the ground was laid out in walks and beds on grass, the grass being formed of grass seeds sown on rich light soil; and in the beds were arranged different exhibitions of zonal *Pelargoniums* both double and single, double *Zinnias*, *Cannas*, *Fuchsias*, *Begonias*, *Vincas*, and other plants. The central tent was also laid out much in the same way, one side being broken with rockwork and a jet of water, which flowed into an artificial stream which passed through the tent and curved into the grounds beyond, where there were some young gold fish swimming up and down. This little artificial meandering stream was crossed here and there by bridges, both outside and inside the

tent. The sides of the tent as you entered and turned to the left, and as far as the south end next to the vegetables, were occupied by banks of Roses. These were not arranged according to their *concours* or classes, but each exhibitor filled a space according to the classes in which he was going to exhibit, and the several exhibitions of the same exhibitor were placed together. I do not know whether I make this very plain to understand, but the classes for Roses were arranged as follows—

Concours 36. For Roses, seedlings not yet put into commerce, and never yet shown at any exhibition.

37. For a collection of more than 200 varieties.

38. For a collection of more than 100 varieties.

39. Do. than 50.

40. Do. do. than 25.

41. For a collection of more than 25 varieties of new Roses sent out during the last three years.

42. For a collection of more than 25 varieties of Tea Roses.

Class 43. For collections of the greatest number of Roses of the same variety, not less than 50 flowers of any one variety.

44. For a mixed collection of Roses without distinction of variety, arranged for effect, but not less than 200 flowers to be exhibited.

45. For the best collection of Roses in pots.

From this list of classes it will be seen that quantity was what was aimed at; and in this they were eminently successful, as the quantity of Roses brought together was immense. For instance, I will try and describe one bank of Roses shown by one exhibitor. First came a mass staged for Class 38, about 180 varieties, in bunches of four to five in a bunch, with many duplicates of some of the varieties. This occupied a space about 10 feet long, from 5 to 7 feet wide. Then where the bed widened out came a collection for Class 43—about 60 Paul Neron, 160 Malmaison, 450 Gloire de Dijon, and 50 Baroness Rothschild. Then came 50 Jules Margottin, 50 Reine d'Angleterre, and 50 La Reine. After this followed a collection of new varieties of the last three years. Then came a division between the exhibitors; and in the same bank almost was a collection of 200 varieties, then a mass of La Reine, then a collection of 100 varieties; the end of the group finishing with three kinds of Roses, fifty kinds in each, the whole being edged with about 150 Gloire de Dijon.

About two o'clock the Judges were assembled together at one end of the grounds and divided into different sections, five in each—1st, for stove, greenhouse, and ornamental-foliaged plants; 2nd, for Roses; 3rd, for fruits; 4th, for vegetables; 5th, industrial department; 6th, agricultural department.

After choosing a President among the Judges in each section we had to commence our deliberations. And here I may say that the awards were not in money, but in objects of art and in medals, and a certain number of marks or points to be given to each collection in each class according to their merit, five points being considered as the maximum. For the first class, Class 36, in Roses, new seedlings, there was only one forthcoming, and that of no great merit. I forgot to say our Rose Jury consisted of M. George Schwartz, of Lyon, President; M. Lacharme, of Lyons, M. Soupert, of Luxembourg, Mr. Marc, of New York, and myself. I am glad to say the new seedling was not certificated; and if the example of our Jury had been followed with regard to a few other new Roses, examples of which I had before my eyes here, it would have been a good thing. In Class 38 there were three competitors, one showing the best Roses, but having too many of one kind of bloom—Paul Neron, among them; a second having staged his badly, but having some of the best individual blooms; and a third running equal in point of marks with the first by better judgment in arrangement and selection. And here I must say that the quantity of Roses had to be eked out by many of inferior quality, there being only very few blooms of really great excellence. Among them I noted Dr. Andry, very fine; Madame Laffay; Prince Imperial, nearly the best bloom of the many thousands shown; Madame Thérèse Levet, Souvenir de la Reine d'Angleterre, La Reine, Abel Grand; and among the newer varieties Madame Verard, Reve d'Or, Perfection de Montplaisir, Madame Bernard, Prèsidant Thiers, Étienne Levet, Richard Wallace, rather small; Madame Trille, Tea. This and other exhibitions this year have confirmed me in my impression that there are really no very good new seedlings of 1871 or 1872, and that our best seedlings are the English-rised ones, Annie Laxton and Chestnut Hybrid. Bessie Johnson, as only a sport from Abel Grand, I do not reckon among the new seedlings, nor do I think it any improvement on Abel Grand. I also question its permanency.

But to return to the Exhibition I am at present speaking about. For Class 39, more than a hundred varieties, there were about four lots entered for competition, and in this one of the exhibitors was much in advance of the others. The names of the exhibitors had not been given on to the awards before we left, so I cannot particularise them. There were no entries for more than twenty-five of a sort, and only one for more than fifty; and in Class 41, for twenty-five or more new varieties introduced the last three years, there were only two entries, of no great merit.

Class 42, for masses of different kinds of Roses, not less than fifty of a sort, was one of the great features of the Show. In the centre of the tent, in beds alongside one of the diverging paths, were two lots, one a mass of 120 Paul Neron in the centre, then two rows of Gloire de Dijon 150, and two rows of Souvenir de la Reine d'Angleterre 150, on the outside. This bed was massed too close, and wanted foliage. Alongside it was another bed, a great contrast (fifteen hundred), Rose du Roi in the centre, chiefly buds on foliage, then one side a line of La Reine and Souvenir de la Reine d'Angleterre, and on the other side a row of about eighty Madame Boll, chiefly half opened. This bed was shield-shaped, Madame Boll being on the inner or top side of the shield, the two other rows outside. Besides these two beds, there were also other lots for competition, two of which I have already described; and as it will be seen from what I have already said, one of the particular features of the Show was the way in which Souvenir de la Reine d'Angleterre and La Reine were exhibited in masses; indeed I have never seen La Reine so fine—not coarse and lumpy, as it so often is in England, but clean shell-shaped petals, and fresh in colour. Souvenir de Malmaison was also well shown; but, then, both Gloire de Dijon, which was here shown by the hundred, and Souvenir de Malmaison have both got English reputations for autumn blooming.

But I have not yet described what was the most striking thing among the Rose beds, and that was a vast bank of Roses shown by the Rose-growers of the village of Grisy Luignes. The mass was the whole width of the tent—i.e., about 50 feet wide, extended 30 feet up one side, and 12 the other side, varying in breadth from 4 feet in the least, to 12 feet in the greatest breadth. This bank, according to notice put up, contained thirty thousand Roses in nearly six hundred varieties, and contributed by twenty-two Rose-growers in the district of Grisy Luignes, and they also informed the public visiting the Show, that they had in their district four hundred thousand Roses, standards, half-standards, and dwarfs ready to distribute in November. The effect of this mass of Roses was very striking. There was too much pink of the colour of Anna de Diebach, but, on the whole, it was very effective, and most probably the same kind of thing can hardly be seen elsewhere. The Roses were all in small bunches, which were thrust into balls of clay flattened-out at the base, with a hole pierced at the top to receive the Roses, the clay being then pressed round the stems. There was a plentiful distribution of foliage and buds, and no traces of the clay balls were visible, moss being put between the interstices.

With this I will conclude my notice of the Roses, but will add more another time with regard to other departments of the Show, both fruit and vegetables, as there were several exhibits of unusual merit among the fruits, especially Pears and Apples, and I could not but regret that the Manchester Exhibition had not been graced by a collection of these French-grown Pears and Apples, chiefly produced on espaliers and pyramids. There were also other things with regard to this Show which are well deserving of notice, and which I will allude to in next week's Journal.—C. P. PEACH.

NOTES AND GLEANINGS.

WE understand Messrs. Felton & Sons, of Birmingham, have been appointed nurserymen and seedsmen to His Royal Highness the Duke of Edinburgh.

— MESSRS. J. B. BROWN & Co., 90, Cannon Street, London, were awarded the medal for merit for their galvanised wire netting at the VIENNA UNIVERSAL EXHIBITION, for "excellence and perfection in material and workmanship, large extent of production, and cheapness of produce."

— An unsatisfactory controversy was carried on a few years since as to the meaning of this Scotch popular rhyme:—

"The gule of the Garioch,
And the Bowman of Mar,—
They met on Bennachie;
The gule wan the war."

The *gule* is a weed (wild Mustard) too well known in many parts of the country, although, perhaps, it is more generally known by other names. It is also pronounced *gule*, and is derived from the same root as *gold*, *gild*, *gelt*—i.e., from the root of *yellow*, and signifies the *yellow* plant—a name to which it is well entitled, for it too often covers the green corn-field with a blaze of gold. Another rhyme of the "north country" also mentions it, characterising it as one of the pests of an agricultural country:—

"The gule, the Gordon, and the hoodie-craw
Are the three worst enemies Moray ever saw."

Bowman is an old Scotch word for *farmer*, from *bae*, *bull*, or *boar*, a farm-house (originally of a dairy or pasture farm), derived, probably from Gael. *ba*, cows, cattle. This root occurs

very frequently in place-names in the north, as in Eastern and Western Be, Lingambo, Delnabo, Lochnabo. The word *bowman* has originated myths in other parts of the country also, as, for instance, in the case of the Bowman's Road, on the shoulder of the Knock Hill in Banffshire, a road along which the myth-making faculty has made the bowmen of a defeated army retreat.

Mar and the Garioch (pronounced Gāry) are two districts of Aberdeenshire, separated from each other in part by the hill range of Bennachie, with its lofty and picturesque pinnacles of rock.

I would, therefore, interpret the rhyme as follows:—There was a time when the *gule* was prevalent in the Garioch, but had not yet spread into Mar. The agricultural mind of the latter district was alive to the fact and the danger, and used every means to prevent its encroaching. The representative bowman, armed with full powers, stood, as it were, on Bennachie, on the march of his own territory, to meet and drive back the insidious attacks of the enemy, but in vain—the *gule* won the war.—(Notes and Queries.)

WORK FOR THE WEEK.

KITCHEN GARDEN.

EARTH-UP Broccoli plants as they advance, this greatly promotes their growth; also earth-up other plants that require it. Keep a watchful eye for the caterpillars; as soon as they are observed have them gathered-off by hand, this being the only sure means of extirpation. The main spring crop of *Cabbage* may now be planted, the small dwarf sorts at 18 inches row from row, and 15 inches apart in the row; the larger at 2 feet row from row, and 20 inches apart in the row. A double quantity may be planted in the rows so as to admit of thinning-out every alternate one in the spring. Prepare ground for *Cauliflowers* to be protected with hand-glasses; the soil should be rich and if possible under a south wall. Nine plants may be planted under a good-sized glass, and in the spring five or six of them may be taken up and planted elsewhere. The first earthing-up of *Celery* should not take place until the plants have made considerable progress; by commencing too early they are drawn-up weakly. The earth should be closed round the stalks with the hand. The heat of the *Cucumber* beds containing hearing plants must not be allowed to decline or they will not continue productive, whereas by proper attention they will produce fruit till Christmas. Dung should now be procured and prepared for beds next month. Tie-up *Endive* for blanching when the plants are quite dry, and lay a tile upon each plant. Another plantation may also be made. If a supply of *Dwarf Kidney Beans* is required through the winter, a sowing should now be made in pots half-filled with soil, which allows of the plants being earthed-up. The beds of *Mushrooms* recently made must be spawned immediately the heat has become moderate. When earthed they should be well beaten down, as solidity is one of the principal causes of productiveness. When the haulm of *Potatoes* is ripe they must be taken up, as they are likely to grow again if showery weather occurs, which greatly deteriorates their flavour. *Salading* should now be raised under a hand-glass or in boxes placed in a forcing house. To keep-up a constant succession a sowing should be made about three times a fortnight.

FRUIT GARDEN.

In paying attention to the fruit at this season do not let the trees be forgotten, but take every opportunity for hastening the maturation of the wood. The points of the shoots might now be shortened, and the large leaves on strong shoots cut through the middle. The shortening the shoots will cause the buds left to swell better, and unless the trees receive too much moisture at the roots there will be no danger of the buds then bursting. In extreme cases of luxuriance the stronger roots might be pruned with advantage.

FLOWER GARDEN.

The sowing of annuals to stand the winter must not be delayed. A light free soil is the most suitable, but it is not desirable to have them in a very sheltered situation. We find them stand better when the seeds are scattered over the rockwork. We have few finer plants for bedding-out in the summer season than the *Petunia*, and few genera in which a greater improvement has been effected as to the quality of the flowers. One of the finest varieties of the purple class for forming groups undoubtedly is *Violacea superba*, a kind sent out some years back by the Horticultural Society, and which has the property of holding its colours until the flowers are quite withered. Prince Albert is another variety possessing nearly the same properties with a little improvement in form. Those desirous of having *Carnation* layers which will healthily pass through the winter, will do well to pot them off as soon as rooted, and where new and fresh varieties are required, the best plan is to see them taken off. Should layers come from a distance, examine that part of the stem which communicated with the parent plant, it will some-

times have a cankered or decayed appearance, this must be carefully removed with a sharp knife, and the stem cut back to where it is healthy. Should there be no appearance of decay the stem must be cut across at the joint, which will frequently emit fresh roots. As the layers are taken off, the compost in which they have been grown may be turned into the *Tulip-bed*, either as a substitute for that which previously formed the bed or to ameliorate that which is already there. It is a good time to plant out those *Pinks* intended for blooming in true character next year. By putting them out at this season there is a much greater certainty of their blooming in true character next season. Take care to have the frames intended for the reception of *Auriculas* properly cleaned, and the broken squares of glass repaired. Prepare a bed for offset *Tulips*; these ought to be in the ground a month before the main bulbs are planted. Continue to turn the soil of the bed at intervals, giving it the benefit of sun and air. Where bulbs are required for the flower garden in the spring, no time should be lost in making a selection of them, and it is worth remarking that good bulbs, though they may cost a little more, are preferable to going to a cheap market and getting indifferent kinds.

GREENHOUSE AND CONSERVATORY.

Plants in the conservatory, the greatest portion of which are expected to be in flower, may be kept as still as if they were kept in a Ward's case from this time to the beginning of the growing season, merely giving air to keep down sun heat. There is no plant, however hardy it may be, that will endure with impunity the drenching rains of autumn, if confined in a pot. A forest tree might thus be injured in wet seasons; how much, then, must half-hardy plants endure if exposed in this way! and yet it is no less injurious to them to be housed early—that is, after they have passed the nursery stages. All young and delicate plants, such as *Heaths*, &c., should now be put into frames, not through fear of cold, but to guard them from the rains and heavy dews; and all large and more hardy sorts should be placed in the full sun on the south side of hedges, walks, or the like, and some means of throwing off the wet should be devised. *Cinerarias*, *Chinese Primroses*, *Calceolarias*, and the like, when they have been grown on north or shady aspects, should now be changed to face the south. Sufficient quantities of peat, loam, sand, and leaf mould, in a dry state, for winter and early spring potting, should be put under cover at any time when they are in a dry state. Our success or failure depends on the condition of the compost more than many are aware of.

STOVE.

After the stove has been kept dry for some time as is always done more or less from the end of August, the red spider makes its appearance in some collections in greater numbers than at other times. This is the worst time in the year to permit the ravages of this insect, as if the foliage is now disfigured it must remain an eyesore till next season's growth; therefore, on the first appearance of the evil apply sulphur to the pipes, &c., and any plants more liable to the attack may now have their winter pruning rather than be a harbour for the red spider.—W. KEANE.

DOINGS OF THE LAST WEEK.

FRUIT AND KITCHEN GARDEN.

THERE is now plenty of work in this department. *Apples* and *Pears* are being gathered as they become fit, and we never had a better crop or of better quality. The *Apple maggot* has been a plague to us in previous years; before the fruit was half-grown it would mature and drop off through this pest boring into the core. We used to look over the trees weekly and pick all fruit that had been attacked, also picking-up and destroying all that fell on the ground. This prevented the maggot from increasing, and has allowed us to secure a crop tolerably free from it this year. Gathering *Apples* and *Pears* requires considerable judgment. The fruit ought to be handled very carefully so as not to bruise it, and it ought to be picked at the right time; if taken from the trees too early it will shrivel, if allowed to remain too long the flavour of many of the varieties will be impaired, and should a high wind arise much of the best will be scattered on the ground. The inexperienced may ascertain if the fruit is ripe in two ways—by cutting a specimen in halves, if the pips are just changing to a brown colour, it will be ready to gather; or by taking the fruit in the hand, if, when the stalk is bent upwards it is not difficult to detach it, the fruit may be picked. We noticed a peculiarity in some of the *Pears* this year. Some varieties always crack with us, and this season has not been an exception, but on the east side of the trees the fruit was very badly cracked, on the west side it was but little damaged. A tree of *Beurré d'Amanlis* was most noticeable. All the *Pears* without an exception on the east side of the tree were badly cracked, thickly covered with russet, and of very small size, while those on the other side were of good size and scarcely any of them cracked. We have looked over all the pyramid trees and cut-back all young wood; this should have been done three or four weeks

ago, but we cannot do all work just when it is necessary, and some judgment and consideration are required to know what to do and what to leave undone at such times. When the young trees were planted here about nine years ago some were upon the Paradise stock, others upon the Crab, and for small gardens we would unhesitatingly recommend the Paradise stock, the trees come into bearing at once and continuing to yield; but the best and largest fruit are obtained from trees worked on the Crab stock, and the objection to growing them in small gardens is, that they are long in coming into bearing, and they will grow to a large size, taking-up much space.

We continue to attend to the young Strawberry beds, removing the runners once in a week or ten days; they are also kept perfectly free from weeds by a constant use of the Dutch hoe. Where the system of planting a new bed every year and destroying the old beds is pursued, success very much depends on the management. If the plants are not out in time, if they are allowed to grow wild, or to become smothered with weeds failure is certain. We earthed-up Celery when the plants were dry, and dug-over ground that had been cleared of crops.

FRUIT AND FORCING HOUSES.

In the late *vineries* we have found it necessary to have fires on in the day with plenty of ventilation to dry-up the damp. Some of the berries had begun to mould, these were removed and a little attention to keeping the atmosphere of the house dry will prevent any further damage. Royal Vineyard is generally the first to turn bad, and next to it is Trentham Black. The berries of these two sorts, Royal Vineyard especially, have a tendency to crack round the stalk, consequently are liable to decay at that part. Royal Vineyard is a thin-skinned Grape of very good flavour, but it is a bad setter and does not keep well.

We have planted out a house of Cucumbers, from which we principally intend to cut after Christmas; of course, they will come into bearing long before that time, but will not be allowed to carry much fruit. The house was thoroughly washed before planting them out; the woodwork with water in which a very little soft soap had been dissolved—too much soft soap will bring the paint off—the glass with clear water, and the walls with lime-wash. To a pail of lime-wash we add a pound of flowers of sulphur. During winter it is quite necessary to keep everything in the forcing houses scrupulously clean; if dirt is allowed to accumulate in all directions it cannot be possible to keep the plants in health.

ORCHARD HOUSE.

We continue to repot the trees, and have finished with nearly all from which the fruit has been gathered. We used to pot half of them annually; those that were potted in 1872 would not be repotted until 1874, but would be surface-dressed instead. Experience has proved to us that it is the best plan to repot annually, and when we make this statement we also say when and how the potting is done, so as to secure a crop of fruit the following season. To the inexperienced cultivator the greatest difficulty will be found in repotting a plant in full leaf into a pot the same size as that in which it had previously been growing; but this can readily be done. The roots which have become matted round the outsides of the ball must be cut away and the ball of earth reduced, so that when it is replaced in a clean pot there will be from 1 inch to 1½-inch space all round. If the ball of roots is dry, plunge it in a tub of water for five minutes. In potting, ram the soil in quite firmly with a wooden rammer. The plants treated in this manner will have a tendency to flag for the first three days after potting—not longer. We never shade, nor do we keep the house any closer; if the day is sunny and windy it will be necessary to dew the trees over with a fine syringe two or three times. Give a good watering at the roots ten hours after repotting. Several dozens of our Peaches, Plums, and Pear trees have been treated as above this year; they have not lost a leaf through it, and if your correspondent, "G. S.," is within a convenient distance he can come and look at them. We have picked all the Nectarines; Victoria and seedlings from it were the latest. The only Peaches left now are Desse Tardive, Princess of Wales, nearly over, Lord Palmerston just come in, Lady Palmerston, and Salway. Lord Palmerston Peaches are pretty good this year, but, though well exposed to the sun, they are very pale, yet they have not so much of the clingstone as they had last year. This and Lady Palmerston are very useful late Peaches.

CONSERVATORY AND PLANT STOVE.

We have been re-arranging these houses. Any greenhouse plants out of doors have now been taken inside. This has been a bad autumn for pot plants standing out of doors without shelter, the soaking rains being injurious. Those who grow hardwooded plants for exhibition do not allow them to be exposed to rains, but place them under a framework, which can be covered with canvas made to wind upon rollers, and to be let down readily when required. Those who have had their plants exposed to soaking rains must not be surprised if a few choice specimens die-off in a mysterious manner during the winter, or obstinately refuse to start into growth in the spring. Azaleas and Heaths are very prone to do so. We have placed

a goodly number of Zonal and Variegated Pelargoniums in 6-inch pots in the greenhouse; these were struck from cuttings in July, and are very useful for flowering between now and Christmas; their brilliant flowers are ever gay and attractive.

Cyclamens.—Until now they have been out in a cold frame with the lights facing the north, but the weather being so unfavourable, they have been removed to a span-roofed pit, and placed on a stage near the glass. *C. persicum* has become one of the most useful winter-flowering plants; it can be had in flower from the time the bedding plants are over in autumn until the beds are again gay with Hyacinths and other spring flowers. The plants will grow freely in a stove or greenhouse temperature. They are readily raised from seeds, and can be made into nice flowering plants in nine months from the time the seeds are put into the ground. In dull damp weather the flower buds and partially-developed leaves have a tendency to mould and decay in the centre of the plant; these should be looked for frequently and removed at once, otherwise the decay will spread, and the plants be much injured and disfigured.—J. DOUGLAS.

TRADE CATALOGUES RECEIVED.

S. Dixon & Co., 48A, Moorgate Street, London, E.C., and Amburst Nurseries, Anton Street, Hackney, E.—*Catalogue of Dutch and other Flower Roots.*

Pine-Apple Nursery Company, Maida Vale, Edgware Road, London, W.—*Catalogue of Dutch Bulbs and other Flower Roots.*

Louis Van Houtte, Royal Nurseries, Ghent, Belgium.—*Catalogue of Azalea indica, Camellias, Greenhouse and Hardy Rhododendrons, &c.*

W. H. Rogers, 132, High Street, Southampton.—*Catalogue of Dutch Bulbs and Flower Roots.*

R. B. Matthews, 65 and 67, Victoria Street, Belfast.—*Descriptive Catalogue of Dutch Flower Roots for Winter and Spring flowering, Greenhouse and Stove Plants, Fruit Trees, &c.*

Edmondson Brothers, 10, Dame Street, Dublin.—*Autumn Catalogue of Hyacinths, Tulips, Lilies, Crocus, &c.*

Robert Cragg, Car Colston, near Bingham, Notts.—*Descriptive Catalogue of Roses and Hardy Spring-flowering Plants.*

TO CORRESPONDENTS.

BOOKS (R. R. Duke).—London's "Hortus Britannicus" contains the botanic and English names of plants.

HEATING SMALL GREENHOUSE (C. Morrison).—Merely to exclude frost from so small a house, have a gas stove with a tube to convey the fumes into the open air, and have an outside blind.

FRUIT TREES (An Old Contributor).—We cannot advise further. What your family prefer you had better select from our lists.

VENTILATION (A Nurseryman).—It does not follow that the award at Manchester was wrong because the prize was given to a well-known system. The judges were competent men. Your letter, if published, would be an advertisement for the manufacturer you name.

FIVE-POUND GREENHOUSE (Timbuctoo).—We know not where it can be purchased, but full directions for its construction are in "Greenhouses for the Many," a copy of which you can have free by post from our office if you enclose seven postage stamps with your address. Any carpenter could erect one.

FAIRY-RING FUNGI (A. S. A.).—The fungus you mention is probably the true "Champignon." If so, it is edible, but all Fairy-ring Fungi are not edible.

PEACH BLOTCHED (L. M. S.).—Your Peach we suppose was gathered from an exposed wall, for we never observed similar blotches in Peaches grown under glass. We consider such blotches are caused by exposure to sudden and considerable variations of temperature. A jardiner is intended for plants in a dwelling-house.

SELECT CAMELLIAS (New Beginner).—Alba plena (old Double White), Pearl, or Lecana superba, deep crimson; Valtearedo, bright rose; Jubilee, pinkish white and rose; Imbricata, scarlet crimson; Countess Lavinia Magg.

SELECT AZALEAS (Idem).—Duchesse Adelaide de Nassau, red shaded with violet; Stella, orange scarlet; Flower of the Day, white; Kinghorn, rosy lilac; Etoile de Gand, white and rose; Leopold I., rose.

GERANIUM FOR GREENHOUSE BACK WALL (Knutsford).—Clipper is a very good kind for the back wall of a greenhouse having plenty of light. If the wall is shaded we fear you will find all run up with bare stems, but they may be made to branch by stopping. Pillar of Beauty (Wm. Paul) is one of the finest for the pillars and walls of a conservatory.

GLOXINIA LEAF BROWNED (Lady King).—The leaf sent is completely dried up, we think in consequence of thrips, though the cause may have been scorching. Without a better specimen and some details of treatment we cannot give a more satisfactory reply.

CALIFLOWERS BUTTON-HEADING (J. N.).—The cause of the plants going to head is their not having been transplanted sufficiently early; they were too large. From seed sown at the end of March they would be fit to plant out in May or the early part of June. The heads were formed before they were put out, and the consequence is a "button" instead of a good large head. Leaving them in the pricked-out bed, but thinned, and their being no better than those planted out, does not show, as you may have concluded, the land to be in the plants. Were they not large before they were thinned? Had they been planted at the distance you name in good rich soil, we think you would have out them ere this with large heads. For following Potatoes, or planting out in July, the seed should not be sown before the beginning of May.

TOBACCO JUICE—LEE'S PROLIFIC BLACK CURRANT HYDRANGEA NOT FLOWERING (C. B.).—The tobacco juice is made at tobacco manufactories,

and may be had there or of any druggist. Lee's Prolific Black Currant may be procured through any respectable nurseryman. Our "Florists' Flowers" will suit you. It contains Eucharis treatment. It may be had from our office for five penny postage stamps. The Hydrangea we should place in a warm sheltered position, and give no more water than sufficient to keep it from flagging, and afford protection from frost in winter, or better keep it in a cool house and dry. Start it in spring in a green-house, and we doubt not you will another year have a splendid bloom. We have one about the same size that had nearly a hundred heads of bloom. *Festuca ovina* would not do alone for a lawn. You should sow a mixture of the best Grasses and Clovers.

REPORTING CAMELLIAS (*A Subscriber*).—We have potted Camellias successfully as soon as the flower-buds were formed, and we should not hesitate to do it now if the buds were not being swelling for flowering. If they are it would be better to defer it until they have flowered. We consider the plants are best reported as soon as the buds are set.

PEARS FOR PYRAMIDS (*Idem*).—Beurre d'Amanlis, Marie Louise, Beurre Diel, and Beurre Bachelier. All large, good-flavoured, and free bearers.

REPLANTING CERASTIUM, ARABIS, AND STACHYS LANATA EDGINGS (*E. M. M.*).—It will answer quite as well to replant the edgings of these now as in spring, each division, especially of the Cerastium, having good roots. The Arabis and Stachys are not so particular as to roots; the shoots will strike if a few inches of the stem be placed in the soil and the latter made firm about them. The earlier it is done the better, choosing a moist time, and watering at planting, especially if the ground be dry, which is not unlikely if you plant on the same spot. It would be well in such a case to give a liberal dressing of leaf soil or thoroughly rotted manure, and work it well into the soil before planting.

TANK FOR AQUARIUMS—GREENHOUSE (*J. H.*).—The depth of the tank need not exceed 18 inches. This will allow of about 6 inches of soil and a foot of water over it, which will, however, be rather deep; but then you can add a greater depth of soil, so as to afford the requisite depth of water. The tank would be suitable for a great number of aquaria; the only fear will be in the flue on which the tank is placed making the bottom of the tank too hot. Amongst the taller sorts are *Saururus cernuus*, *Dietis bicolor*, *Thalia dealbata*, *Typha stenophylla*; and of dwarfier kinds, *Nymphaea pycnantha*, *Aponogeton distachyon*, *Lymnanthemum gemmatum*, *L. nymphaeoides*, and others that would succeed in such a tank; *Jussiaea grandiflora*, *Nymphaea minus*, *N. odorata*, *Sagittaria chinensis*, *S. lanceifolia*, *S. obtusifolia*, *S. rigida*, *Vallisneria spiralis mascula*, *S. spiralis femina*, *Villarsia chilensis*, *V. parnassiaefolia*, *V. reniformis*, and *athiopica*.

GARDEN INFESTED WITH VERMIN (*A. C.*).—The best thing would be to pare the surface off and burn it; but as you may not be able to do this on account of trees, &c., we should give it now a dressing of salt at the rate of one peck to 30 square yards, taking care to apply it to the surface of the soil only, and not stirring it on growing plants. The dressing of salt may be given in March, also lime, as you have the ground cleared, at the rate of a bushel to 30 square yards; or you may apply gas lime in autumn, one peck to 30 square yards, allowing it to lie on the surface a few days afterwards; then dig it in, and fork the ground over again in March, or in February if dry.

PRUNING LAURELS (*H.*).—The Laurels and other evergreens becoming too large should be cut-in at the end of March or early in April, choosing, if possible, moist and mild weather. When the air is dry and frosty is not a good time to prune. You may cut them in as much as you like; they will grow again freely, and become green before autumn. The Wellingtonia may be moved in moist weather, the earlier the better.

HEATING A SMALL PIT (*Victor and W. M. Andrews*).—Hot-water piping is undoubtedly preferable for the application of heat to all kinds of glazed structures, yet for your little pit a small furnace and brick flue will answer admirably. Fix the furnace outside the pit at one end, carry the flue very near, but not close, to the inside of the front wall on the bottom of the pit, along the end farthest from the flue, and continue it near the back wall to a shaft at the same end as the furnace. Put a few 6-inch drain pipes on end along the top of the flue, 3 or 4 feet apart, fill up the bottom space with coarse rubble, making all level a little higher than the top of the flue, and put the soil for Melons or Cucumbers upon the rubble. By means of a few wooden plugs fitted into the tops of the drain pipes you can regulate both top and bottom heat to the greatest nicety. We add one or two valuable hints:—Fix a damper and root-door in the shaft near the bottom, and to insure a quick draught let the flue have a sharp ascent for the first 2 or 3 feet next the furnace.

ROSE ISSUING FROM A ROSE (*Rev. S. A. B.*).—Your specimen is too dried-up for engraving from, even if it had been desirable to portray such a deviation twice.

MEANING OF LEOW (*Victor*).—This word when used in South Devon, we think, is pure Anglo-Saxon. When it is said the "land is leow," the cultivator meant the "land is warm." *Leow* is Anglo-Saxon intends a nourishing warmth.

TRAINING VINE OUT OF DOORS—GROWING FOR COMPETITION (*A. T. W.*).—The best Grape for culture out of doors in England is the Royal Muscadine, but it does not bear freely unless young wood is trained up from the base periodically. The best way is to train a rod horizontally right and left from the main stem, then train the shoots from these vertically at the distance of 18 inches or 2 feet apart. It is easy to remove the old rods and replace with young ones when the old are exhausted. You would stand very little chance of taking a prize with your Grapes, competing against those grown in a hot-house. We prefer nailing the rods to the wall rather than tying them to a trellis.

PEARS SPLITTING (*Flora*).—This is caused by the autumn rains, and is most common on light dry soils. Many varieties are useless with us every year from this cause. Beurre de Rance and Marie Louise d'Uccle are the worst, and this year Beurre d'Amanlis has half its fruit spoiled. If you could water the trees during dry weather in summer it might prevent it to a certain extent. But probably the best way for you to do would be to head the tree back and graft it with a sort that does not crack.

VINES UNHEALTHY (*Essex*).—We have had our own Vine roots in three vintages, and we had specimens of roots sent from a friend this year similar to these you have forwarded. The specimen of loam seems exactly adapted for Vines. Our own borders were made with the greatest care, as we personally saw all the compost mixed up and put into the borders, and why the roots should decay as they did was, and has as yet been, a mystery to us. Scientific gentlemen were consulted, but they could not account for it. We set to work and removed the surface loam to the depth of 3 or 4 inches, laying bare some of the roots, half of which were quite dead; the compost was re-

placed with turfy loam pure and simple. Next season this turfy loam was matted with sound healthy roots, and the Vines have continued to progress well ever since. We can only advise you to try the same experiment. You did wrong if you watered the unhealthy Vines with manure water; it would only make bad worse, and manure water taken from a tank in the farmyard would be of uncertain strength. We have seen it applied to the ground strong enough to bring the worms to the surface, where they died. In that state it would be too strong for the roots of healthy Vines.

TREATMENT OF LARGE FRUIT TREES (*B. W. R. S.*).—The trees seem to have been allowed to grow wild for a number of years; and if you were to cut the branches well back now or in winter you would not have a crop next year, as all the fruitful buds of such trees are at the ends of the branches. The best way to adopt would be to cut back a few of the most prominent branches annually, and thus gradually get them into shape without losing a crop.

MANAGEMENT OF DAMSON TREES (*Idem*).—Probably the trees are too close together; by removing every alternate tree it may dispose the others to fruit. The trees will not bear fruit if the soil is too rich. They bear best when they make little wood. Do not prune the trees at all.

PEAR TREE UNFRUITFUL (*Idem*).—Head it back, and graft it with a free-bearing variety. If the wood is thick, what is called crown grafting is the best. About the end of February or early in March, when the trees are bursting their buds, is the best time. The tree should be headed-back in the winter.

VINES FOR SMALL SPAN-ROOF HOUSE (*Inquirer*).—They would grow in the same soil as in which the Cucumbers have been growing, but we would prefer fresh loam for the Vines. Six Vines will be sufficient, three on each side; two rods from each will allow you to train the rods 2 feet 6 inches apart, and 1 foot 3 inches from each end of the house. Three Black Hamburgh, one Muscat Hamburgh, one Duckland Sweetwater, one Foster's White Seedling.

BARK OF PEAR TREE CRACKING (*Amateur*).—We fancy the tree must have its roots in soil that is too rich, or in an unsuitable subsoil. If that is the case you ought to root-prune it, and add some loam from an old pasture if you can obtain it; if not, any suitable soil, not too rich, round the roots will do. As the tree is not large, you may bind the stem round with strong bast, and slacken it as the wood swells when the tree is in growth.

REPLANTING VINES (*Idem*).—You may replant them, but it would be better to place some turfy loam over the surface of the border, and raise it up the stem to the required depth.

HOT PRESS (*Subscriber's Sister*).—We do not know what you mean by a "hot press," but whatever it is the heat from a small bed-room fire could not be used "economically." The apparatus would be too expensive.

ROSES WHOLESALE (*W. R.*).—Write to Messrs. Paul, Mr. W. Paul, Mr. Cranston, Mr. Turner, Messrs. Curtis & Co., or any of the leading nurserymen who advertise in our columns.

SPORING FUCHSIAS (*W. H.*).—The best plan is to keep the plants in a dry shed, cellar, or outhouse, where they will be dry and safe from frost. After flowering they may be set out of doors, and rather dry, so as to harden the wood, and be taken under cover before frost. They will do well in any place which is cool, dry, and secure from frost. The plants should be examined occasionally to see that the wood does not shrivel, and a little water given. Shrivelling will hardly occur if the plants are set on a floor or other rather moist surface. The cooler they are kept the better.

MUSHROOMS GROWING IN FRAME (*C. S.*).—The frame will answer for Mushroom-growing if you can keep out frost, and the only danger will be in the pipe from the hot-house drying the atmosphere. If the pipe be only warm it will be beneficial rather than otherwise; a temperature of 55° to 60° is needed for Mushrooms in winter. We presume you wish to know how to make the bed. Procure the droppings of horses, mixed with about one-third of short litter. Lay them out thinly on a floor, and so keep them from heating until you have a sufficient quantity for making the bed. Make the bed by putting in layer upon layer of the droppings, heating each very firm, and making it about 3 or 4 inches thick, until you have a bed 13 to 15 inches deep. When the bed is heated plunge a thermometer into it about 4 inches, and observe the temperature daily. In a week, if it be not above 75°, the bed may be spawned, but if higher this must not be done until the temperature fall to between 75° and 70°. Put in pieces of spawn about 2 inches square, in holes 9 inches apart every way, and so as to be covered an inch deep. Afterwards close the holes, and make the material firm about and over the pieces of spawn, and when the temperature falls to 70° earth the bed with 2 inches thick of rich loam, and beat very firm. In about six weeks the bed may be watered very lightly, so as to keep it just moist, and mats or other covering may be placed over the lights to maintain a uniform moisture and temperature.

REPORTING GREENHOUSE PLANTS (*Idem*).—It is best done in spring or early in summer, when they are beginning to grow, or after the plants have flowered and are making fresh growth.

RED FLOWERS FOR SPRING GARDENING (*G. S.*).—Tulips, single-flowered, that bloom about twelve days, of the single Eye Van Thol, are—Arlis, scarlet; Belle Alliance, scarlet, dwarf; Crimson King, scarlet crimson; Prosperine, dark rose, dwarf; and Rouge Luisant, deep rose. We like the single-flowered Tulips best for bedding, but we have known fine beds of the double—Imperator ruberum, scarlet crimson, and Princess Alexandra, red, margined yellow, very dwarf. Other plants with red flowers are the Bellis anemifolia and double red Daisy, double red Wallflower, Phlox verna, and double crimson Primrose. We do not know of anything with red foliage that would suit beyond the Beet.

DIVIDING MYOSOTIS DISSECTIFLORA (*F. J.*).—If divided now, but not into small portions, it will answer for blooming next spring. Why not put out the plants as they are? Raised from seed last year they will hardly be too large—in fact, we like them best strong.

HARDY PLANTS FOR MIXED BORDER (*Idem*).—*Aquilegia glandulosa*, *Delphinium alopecuroides*, *D. Belladonna*, *Dicentra spectabilis*, *Agrostemma coronaria purpurea flore-pleno*, *Campanula aggregata*, *Geum coccineum grandiflorum*, *Hepatica angulosa*, *Lilium tenuifidum*, *Libelia fulgens* St. Clair, *Lychuis Haageana superba*, *Euthera macrocarpa*, *Papaver nudicaule sulphureum*, *Thalictrum anemioniflorum plenum*, *Tricyrtis hirta*, *Tritoma Burchelli*, *Thellus napellifolius*, *Asclepias tuberosa*, *Veronica corymbosa*, *Pentstemon Wrightii*.

WINTERING LILIUM ATRATUM BELLS (*A. G. C.*).—This is a question less easy to be answered than at first sight appears to be the case. I believe that as yet no cultivator can plant any number of bulbs without almost the certainty of losing a considerable proportion of them. If this were not so,

with the immense annual importation from Japan, auratum Lilies would be more plentiful and cheaper than they are. I believe that it is now generally admitted, that, unlike *Hyacinths*, *Liliums* have no time of complete rest, that the new roots are formed before all the last year's ones die. It follows, therefore, that if the bulbs in pots are allowed to become quite dry, these earliest first roots will be checked. Our practice is to repot as soon as the stems fade, and to keep the soil slightly moist. Bulbs out of doors, of course, never dry, and I think, a larger proportion of these keep healthy than of those in pots. As to plunging pots covered with ashes, I know this is often done, and the right quantity of moisture may reach the bulb, but it is a rather uncertain treatment, more so than keeping the pots under cover and giving an occasional sprinkling. There is no doubt that too much moisture in pots rots the bulbs, so this must be carefully guarded against.—GEORGE F. WILSON.

PLANTING HOLLYHOES AND PHLOXES (*Tyro*).—In a heavy and wet soil they should not be planted until spring, especially the Hollyhocks, which ought not to be turned out until April, the plants being wintered in a cold frame. If you have the Hollyhocks in a mass the plants should be 3 feet apart every way, but if in rows these may be 4 feet apart, and the plants 3 feet from each other in the rows.

LCERNE SOWING (*Idem*).—It should be sown in April in drills 1 foot apart. The ground should be in good tilth and clean. Six pounds of seed will be required for the ground you name.

NAME OF ELM—DISTANCE TO PLANT FOREST TREES (*Sunny*).—The leaves enclosed are those of a variety of the English Elm, probably *Ulmus campestris* *comubiensis*. In the genus *Ulmus*, as in *Salix*, the varieties are so much alike that they are easily confounded. The English Elm is generally preferred for planting for its timber. The Chichester Elm has a broader leaf and is of upright growth; it is preferred in some districts. You will require, to plant trees of the genus *Pinus* 3 feet apart, 48 to one acre; 4 feet apart it would require 2722. It is the best way, however, to plant closely and thin out early.

NAMES OF FRUITS (*F. T. W.*).—No. 1, Nonesuch; 2, Hawthornden; 3, Selwood's Reinette; 4, Kentish Fillbasket; 5, Winter Greening.

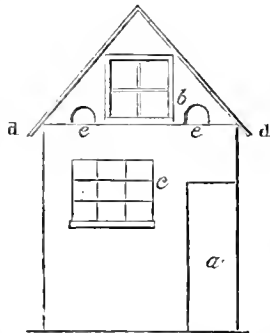
NAMES OF PLANTS (*J. Knight*).—*Cyrtanthera Pohlana*, *Nees* (*Justicia carnea*, *Lill.*). (*C. F.*)—It may be *Rivina levis*. (*John*).—1, *Scabiosa atropurpurea*; 2, Looks like a poor specimen of *Anemone japonica*. (*A. B., Ireland*).—The white one is *Hibiscus syriacus* (the *Althea frutex* of gardeners); the other is a variety of the same, or a nearly allied species. (*Octogonarius*).—1, *Acanthus mollis*; 2, *Sambucus Ebulus*. (*Juvenil*).—*Scilla autumnalis*.

POULTRY, BEE, AND PIGEON CHRONICLE.

BUILDING A POULTRY AND PIGEON HOUSE.

Which is the most economical way of building a fowl and Pigeon house? What size ought it to be for twenty-four large fowls? Ought there to be a separate compartment for sitting? Would it do to have the Pigeons over the fowl house?—M. S.

[Your house should be of wood, and built with a gable—thus, being ceiled inside, as at *d*. The upper part of the house will make a Pigeon house. *a* Represents the door of the building; *b*, a glazed door for the Pigeon house; *c, c*, openings for them to go in and out. These may be closed at pleasure. Nine feet square will be large enough for twenty-four fowls. Let it be as lofty as you can. If you like to make it 12 feet square it will allow you to partition off a space 3 feet wide and 12 feet deep for a sitting house. The birds must not sit in the roosting house. We believe you will find Brahmas the hardiest and most useful fowls.]



PUBLISHING JUDGES' NAMES—STANDARD CHARACTERISTICS.

ALLOW me to add my opinion on this subject to those of others. I for one consider that it is simply an act of common honesty to exhibitors for committees to publish the names of the judges in their schedules and advertisements. As Honorary Secretary of the Cambridge Poultry, Pigeon, and Rabbit Society, I may state that I believe a good deal of the success which attended our shows may be traced to our having secured first-rate judges, and announced their names. But there is another point I think quite as important, and it is this—all judges ought to have one standard of excellence, and award the prizes accordingly; then we should bear no more of sending certain birds to shows to suit the taste of certain judges—a procedure which I consider simply scandalous, and tending greatly to disgust all amateurs who exhibit for the honour of winning fairly. I would suggest that a meeting be called in London inviting all breeders and judges to attend who like, and that a standard of excellence be drawn out and published, so that committees may know how the birds at their shows are going to be judged. We should then, perhaps, have the satisfaction of seeing the best birds win, which I am sorry to say lately has in many instances not been the case; at any rate,

amateurs would know what the points of the various breeds are required to be for exhibition. If, as is stated by Mr. Wright, different judges have different opinions, it is certainly high time that there should be a rule to go by.—F. W. METCALFE.

It would be an inducement to owners to show their birds, and add greatly to the welfare of the various exhibitions throughout the country, if some particular standard could be made to serve as a rule and a guide for judges to decide by. It would be the means of breeders all striving for one object—that of coming up to the standard of perfection. As it is, we are all groping in the dark. What is perfection in one place is not considered so in another; hence the dissatisfaction of exhibitors who have carried off the prize in one locality and failed in another. To prevent such a state of things, I would suggest that there be chosen from among the best judges some of the most experienced men to draw up a set of rules that shall serve as a standard for judges to be guided by, giving the various points required in each class of poultry, Pigeons, and other birds. The same standard to be used by judges in all parts of the country. We should then know what to do, what to strive for—amateur and professional alike. In preparing this standard, such men as Mr. Hewitt, Mr. Teehay, and other well-known judges could greatly assist, and in all schedules issued by the various committees there should be printed the various points required in every class.—THOMAS WEBB.

BANTAM COCK BROODY.

I HAVE rather a curious case with a Bantam cock. The hen hatched and brought-up some chickens; they are, perhaps, now about three months old, and the cock about three weeks ago got them altogether to sit in the nest at night, and now he has taken to sit himself. All day he remains on the nest, spreads his wings and tail like a hen, and if I take him off flies on again directly. The hen and chickens, of course, are about as usual, but he remains on the nest, leaving only about once a-day.—G. C.

[Is the cock the father of the chickens? A capon, or an emasculated cock will often do as you describe (a capon always). It would, indeed, be a curious case if he were the father of the brood.]

BUCKWHEAT FOR FOWLS.

I HAVE given it once a-day to all my young stock (Brahmas), and they have done wonderfully well, and not one has been sick or ailing since it has been hatched. I never give it to the hens, as I consider it too fattening. My fowls are in a small enclosed run.—ZIT.

RYHOPE (SUNDERLAND) POULTRY SHOW.

THIS Show was held on the 9th inst., in a field halfway between Sunderland and Ryhope. The management was praiseworthy, and the pens (Fothergill's) were placed in single tiers at a nice elevation. The only fault, and it is a common one, was that they were open back and front. This might be easily obviated by securing a few pieces of common calico, which, stretched the whole length, would afford protection and prove a great boon to exhibitors at all out-door shows, where many chickens are ruined by this cause alone. The schedule was an improvement, as also the entries, upon all previous years, but on account of the pieces of plate being offered for old birds only, the young ones in some of the classes were poor, though in the large section the Dorkings and Cochins were extremely good and forward.

Of adult birds, *Dorkings* were in good feather for the time of year, as also the *Cochins*, in which class a pen of grand Whites carried off the cup for the section; the adult *Brahmas* also being very good. Of *Game* there were some well-formed birds, but mostly out of feather, the cup being awarded to a grand pair of Brown Reds, which, like the rest, showed signs of moult. *Game* chickens were too young to show much quality. There were some fair birds in *Hamburgs*, the Silver-pencils and Gold-spangles being among those most noteworthy. As is generally the case in the Sunderland district, the entries of *Game Bantams* were numerous, and the birds generally good, but in old birds an unfortunate mistake was made by some exhibitors, and the best cocks in the class were mated with pullets, and the consequence was they were thrown out of competition, and yet the cup was won by a capital pair of Black-breasted Reds. The chickens in the Reds were very good, and a smart pair (the cockerel undubbed) of the above-named variety were first, and capital Brown Reds second. In any other variety of *Game Bantams*, the winners in old birds were Duckwings, very good in colour and style, but rather heavy in feather; and in chickens very good Duckwings stood first, and Piles second and third. The Black and White Bantams were poor in both classes, and the *Aylesbury Ducks* only moderate, but the *Rouens* were of great size, and good in all points. In the Variety class, *Widgeons* were first, and *Pintails* second.

There was an extra class in which some good birds were

shown, the first prize being taken by a nice pair of Malay chickens, while good Houdans stood second.

DORKINGS.—I, J. White, Warlaby, Northallerton. 2, W. J. Thompson, Woodhorn, Morpeth. *hc*, A. Buglass, Durham. *Chickens*.—1, J. White. 2, S. Stoddard, Milfield. *hc*, W. Swann, Bedlington.

COCHINS.—1, Cup, and *hc*, G. H. Procter, Durham. 2, W. J. Thompson, *Chickens*.—1, G. H. Procter. 2, D. & J. Ibbetson, Whitby. *hc*, W. Jaggs, Blyth; D. & J. Ibbetson.

BRAHMAS.—1, W. Swann, Bedlington. 2, R. Moore, East Rainton. *c*, N. H. Scott, Sunderland. *Chickens*.—1, C. Venables, Sheraton, Castle Eden. 2, R. Moore. *hc*, J. N. Lawson, Ryhope.

SPANISH.—1, G. Holmes, Grindal. 2, R. Moore. *c*, A. Buglass; W. Jaggs. *Chickens*.—1, R. Moore. 2, W. Swann.

POLISH.—2, A. Buglass, *hc*, W. Laing, Sunderland. *Chickens*.—1, W. J. Thompson. 2, W. G. Purden, Driffild. *hc*, J. T. Proud.

GAME.—*Any variety*.—1, W. Laing. 2, T. & J. Robson, Bishop Auckland. *Black-breasted and other Reds*.—1 and Cup, J. Fletcher, Manchester. 2, E. Aykroyd, Eccleshill, Leeds. *hc*, J. Brough, Carlisle. *Chickens*.—1, R. Britton, Thirsk. 2, J. Fletcher. *c*, G. Watson, Ryhope.

GAME.—*Any other variety*.—1, E. Aykroyd. 2, W. G. Purden. *hc*, W. Laing. *Chickens*.—1, W. Laing. 2, W. Allen, Sunderland. *hc*, W. Allen; G. Holmes.

HAMBURGS.—*Golden-spangled*.—1, G. Holmes. 2, A. Buglass. *hc*, W. Bearpark, Northallerton. *Silver-spangled*.—1, R. Moore. 2, G. Holmes. *Chickens*.—2, T. Ay, Bankfoot, West Auckland.

HAMBURGS.—*Golden-pencilled*.—1, W. Bearpark. 2, R. Moore. *Chickens*.—1, J. J. Pattison, Beahside Colliery. 2, T. Stansfield, Milfield. *c*, G. Holmes. *Silver-pencilled*.—1, W. Bearpark. 2, W. G. Purden. *hc*, R. Moore. *Chickens*.—1, G. Holmes. 2, and *hc*, J. Barlow; G. Holmes; Mrs. G. Hall.

BANTAMS.—*Game*.—*Black-breasted and other Reds*.—1 and Cup, W. Rogers, Sunderland. 2, D. Hunter, Sunderland. *hc*, J. French; J. Ferry, Cowpen, Morpeth. *Chickens*.—1, D. Hunter. 2, Miss M. J. Nelson, Cockshaw, Bexham. *hc*, Mrs. G. Hall, Kendal (2); J. Ferry. *c*, J. Barlow, Monkwearmouth.

BANTAMS.—*Game*.—*Any other variety*.—1, J. Barlow. 2, Miss M. J. Nelson. *hc*, T. Dowell, Milfield; G. Hall, Kendal; J. & W. Gill, Bishop Auckland; G. Holmes. *Chickens*.—1, D. Hunter. 2, T. & J. Robson. 3, Mrs. G. Hall. 4, Miss M. J. Nelson. *hc*, J. Barlow; G. Holmes; Mrs. G. Hall.

BANTAMS.—*Any variety except Game*.—1, G. Holmes. 2, T. H. Cartwright, Bishop Auckland. *hc*, Miss M. J. Nelson; A. G. Mitchell. *Chickens*.—1, T. & J. Robson. 2, G. Holmes. *hc*, J. R. Torchook, Middlesborough.

DUCKS.—*Aylesbury*.—1, T. Stansfield. 2, C. Venables. *hc*, W. J. Thompson; W. Laing; T. Dowell. *Rouen*.—1, W. Swann. 2, Miss M. J. Nelson. *hc*, T. Stansfield; C. Graham, Boroughbridge. *Any other variety*.—1, J. G. Milner. 2, T. P. Carver. *hc*, T. Falla, Bishopwearmouth.

SFALCO GALLI.—1, J. G. Milner. 2, R. Moore. *hc*, W. Swann; R. Moore. 3, T. Falla; G. Watson.

ANY OTHER VARIETY.—1, R. Hawkins, Seaham. 2 and *c*.—Wilcox, Whitburn. The Judge was Mr. E. Hutton, Pudsey.

HUNTINGDONSHIRE POULTRY SHOW.

This was held on the 12th inst., when the following awards were made:—

DORKINGS.—1, Rev. E. Bartrum, Berkhamstead. 2, R. Wood, Clapton, Thrapston. *Hens*.—1, R. Wood. *hc*, Rev. E. Bartrum. *c*, Mrs. Stephens, Abbotts Rippon Hall. *Chickens*.—1 and Special, P. Parlett, Great Baddow, Chelmsford. 2. —Wyman. *hc*, Wren & Page, Lowestoft; K. Wood, Clapton. *Pullets*.—1, Rev. E. Bartrum. *hc*, Major C. I. Ewen, Fulham. *Cock*.—1, R. Wood. *hc*, Cockerell. 2, Rev. E. Bartrum. *hc*, R. Wood; E. W. Stratford, West Malling.

SPANISH.—1, Major C. I. Ewen. 2, Mrs. Stephens. *Hens*.—1, E. W. Stratford. *hc*, H. Yardley, Birmingham. *Chickens*.—1, Major C. I. Ewen. 2, H. Yardley. *hc*, E. W. Stratford. *Cock*.—1, H. Yardley.

GAME.—1, S. Deacon, Onndle. 2, H. Yardley. *Cock*.—1, S. Deacon. GAME BANTAMS.—*Black-breasted or other Reds*.—1, H. Yardley. 2, J. Goodfife, Huntingdon. *c*, Hulme, Huntingdon.

MIXED BREED.—1, P. Parlett. 2, R. Wood. *Any other variety*.—1, H. Wyman (East Indian). 2, J. Goodfife (White Call). *Ducklings*.—1 and 2, J. Goodfife (Black East Indian and White Call).

DUCKS.—*Aylesbury*.—1, Deacon. 2, J. Goodfife. *Pucklings*.—1 and Special, T. Seer, Inkewick, Buckingham. 2, J. Goodfife. *Rouen*.—1 and 2, J. Goodfife. *Ducklings*.—1, F. Parlett. 2, R. Wood. *Any other variety*.—1, H. Wyman (East Indian). 2, J. Goodfife (White Call). *Ducklings*.—1 and 2, J. Goodfife (Black East Indian and White Call).

GESE.—1, T. M. Derry, Gedney. 2, M. Kew, Market Overton, Oakham. *Go Braves*.—1, Hon. C. W. Fitzwilliam, Peterborough. 2, T. M. Derry. TURKEYS.—1 and Special, E. Arnold, Whittleford. 2, M. Kew. *Pullets*.—1, E. Arnold. 2, T. Guenell, Milton.

PIGEONS.—Special, 1 and 2. —Minson, St. Ives (Carriers). Extra Prize to the exhibitor obtaining the greatest number of prizes in the foregoing classes. A cup of the value of £5, by the inhabitants of Huntingdon. Awarded to Mr. Goodfife.

JUDGE.—Mr. Tegetmeier, Finchley.

MANCHESTER AND LIVERPOOL POULTRY SHOW.

This was held at Chester on the 10th, 11th, and 12th inst. The following is the list of awards:—

DORKINGS.—*Coloured*.—1, T. Statter, Stand Hall. 2, T. Briden, Earby, Skipton. 3, J. Robinson, Garstang. *hc*, T. Rigby, Winsford. *Silver-Grey*.—1, J. Robinson. 2, A. Darby, Bridgnorth.

SPANISH.—1, H. Beldon, Gt. Stock, Bingley. 2, H. Wilkinson, Earby, Skipton. 3, J. Siddons, Winsford.

COCHIN-CHINA.—*Buff or Cinnamon*.—1 and 2, C. Sidgwick, Kighley. 3, W. A. Taylor, Manchester. *Brown and Partridge-feathered*.—1 and *hc*, C. Sidgwick. 2, W. A. Taylor. 3, E. A. Tadmam, Whitechurch.

BRAMA FOOTBALL.—*Dark*. 1, W. A. Taylor. 2, J. H. Pickles, Birkdale, Southport. 3, C. Layland, Warrington. *hc*, E. Kendrick, jun., Lichfield; H. Beldon, Gt. Stock; C. Layland. *Light*.—1, H. Beldon. 2, J. Long, London. 3 and *hc*, C. Layland.

GAME.—*Black-breasted Reds*.—1, T. P. Lyon, Liverpool. 2 and 3, J. Platt, Swinlow, Winsford. *Brown and other Reds, except Black-breasted*.—1, J. Platt. 2 and 3, J. Wood, Wigan. *hc*, C. W. Brierley; G. F. Ward, Wrenbury. *Any variety except Black-breasted and other Reds*.—1, C. W. Brierley. 2 and 3, J. Goodwin, Liverpool.

HAMBURGS.—*Golden-pencilled*.—1 and *hc*, W. & E. Clayton, Keighley. 2, Duke of Sutherland, Stoke-on-Trent. 3, W. Speakman, Nantwich. *Silver-pencilled*.—1, H. Smith, Keighley. 2, J. Robinson. 3, H. Beldon.

POLISH.—1, 2, and 3, P. Unsworth, Lowton, Newton-le-Willows. *hc*, H. Beldon. FRENCH.—1, J. J. Malden, Biggleswade. 2 and 3, W. Dring, Faversham. *hc*, J. K. Fowler.

ANY OTHER VARIETY.—1, H. Beldon (White Cochins). 2, W. A. Taylor. 3, J. K. Fowler. *hc*, Mrs. Cunliffe (White Dorkings); J. J. Malden (White Cochins). GAME BANTAMS.—*Black-breasted Reds*.—1 and 3, G. Naples, jun., Wavertree, Liverpool. 2 and *hc*, W. F. Entwistle, Westfield, Bradford. *Any variety except Black-breasted Reds*.—1, 2, and 3, W. F. Entwistle.

BANTAMS.—*Any variety except Game*.—1, W. A. Taylor. 2, Pickles & Whitaker, Great Hey, Edenfield, Burnley. 3, H. Beldon.

DUCKS.—*Rouen*.—1, 2, and 3, T. Wakefield, Golborne, Newton-le-Willows. *hc*, T. Mills, Seacombe; P. Unsworth. *Aylesbury*.—1, J. Walker, Rochdale. 2 and 3, J. K. Fowler. *hc*, J. Walker; J. K. Fowler. *Any other variety*.—1, J. Walker (East Indian). 2, J. J. Malden, Biggleswade (East Indian). 3, H. Beldon (Call). *hc*, H. B. Smith, Brooklands, Brighton; C. W. Brierley.

GESE.—*Grey and Mottled*.—1, J. Walker. 2 and 3, S. H. Stott, Preston. *hc*, J. K. Fowler; E. Shaw, Flax Wilmot, Oswestry. *White*.—1 and 3, J. K. Fowler. 2, J. Walker.

TURKEYS.—1, J. Walker. 2, J. K. Fowler.

PIGEONS.

POTTERS.—*Cock*.—1, L. Watkin, Northampton. 2, G. Taylor, Huddersfield. *hc*, G. Taylor; T. Moore, Birkenhead. *Hen*.—1, T. Moore. 2, H. Yardley, Birmingham. *hc*, L. Watkin. *c*, G. Taylor.

CARRIERS.—*Cock*.—1, E. C. stretch, Ormskirk, Liverpool. 2, H. Yardley. *hc*, T. H. Stretch, Ormskirk; T. Moore. *Hen*.—1, T. Moore. 2, T. Chambers, jun., Northampton. *c*, T. H. Stretch; H. A. Weston, Southport.

TUMBLERS.—1, H. Yardley. 2, T. Moore. DRAGOONS.—*Blue and Silver*.—1, W. Gamon, Chester. 2, F. Graham, Birkenhead. *hc*, W. Smith, Walton, Liverpool; W. Gamon; E. C. stretch; F. Graham (2). *Any other colour*.—Cup, 1 and 2, F. Graham. *hc*, F. Graham (4); W. H. Mitchell, Moseley, Birmingham. *c*, F. Graham; W. Hill, Stockport.

JUSTICE.—1 and Cup, J. Fielding, jun., Rutland. 2, T. Moore. *hc*, H. Yardley; A. Justice, Salford; G. Taylor. *hc*, H. A. Weston, Southport.

TERTSITS.—1, T. Moore. 2, G. J. Taylor. *hc*, J. Waits, King's Heath, Birmingham. *c*, H. Yardley.

FANAILS.—1, J. F. Lovelandside, Newark. 2, W. Hill, Stockport. *hc*, J. F. Lovelandside; W. H. Tomlinson, Newark-on-Trent.

BARNS.—1, J. Fielding, jun. 2, H. Yardley. *hc*, A. Justice; T. Moore. ANY OTHER VARIETY.—1, 2, and *c*, W. Gamon. *hc*, H. Yardley; J. Waits; A. Justice; W. Hill.

NON.—1, H. Yardley. 2, W. Hill. *hc*, T. Moore. ANY OTHER VARIETY.—1, T. Moore. 2, G. J. Taylor. *hc*, H. Yardley; J. Waits; W. Hill; W. Gamon. *c*, W. Gamon; G. J. Taylor.

JUDGES.—*Poultry*: Mr. J. H. Smith, Skelton, York; Mr. R. Teebay, Fulwood, Preston.

STEALING PRIZE PIGEONS FROM AN AGRICULTURAL SHOW.

I AM glad to be able to send the enclosed, for the loss of birds has become frequent of late. I discovered this theft myself, and put the Secretary and detective on the alert. A pair of Red Turbits with shell crowns were lost from the Bramley Show, and have not been heard of since.—E. HUTTON.

“At the North Riding petty sessions, Whitby, on Saturday, Henry Wilson, shoemaker, of Ayton, near Stokesley, was charged with having stolen a valuable pair of cream-coloured Barb Pigeons from the Whitby Agricultural Show on the 27th ult. The Pigeons were exhibited by Mr. Henry Yardley, of Birmingham, a noted breeder, who valued them at £20. They took the first prize in their class. They were missed from the pens between three and four o'clock in the afternoon, and it is surprising how the prisoner succeeded in making off with them, as policemen and caretakers were stationed around. The Secretary of the Society (Mr. Stonehouse) offered a reward of £5, and the prisoner was apprehended and pleaded guilty, but the Pigeons have not been recovered. The Chairman said the prisoner was convicted only last October of stealing two Tumbler Pigeons at Great Ayton, and sentenced him to two months' imprisonment, with hard labour.”—(Leeds Mercury.)

POLYGAMY IN PIGEONS.

THE remarks of “WILTSHIRE RECTOR,” published in the Journal of the 4th inst., upon the communication which I recently made upon this subject demand from me a few words in reply. “WILTSHIRE RECTOR” will, I hope, forgive me if I do not treat very seriously, or regard as having much analogy with the facts narrated by me, the occurrence which he mentions as having taken place when he was once attending at a petty sessions. Such an occurrence may rather be regarded as partaking strongly of the nature of a practical joke, or, at the very best, as furnishing an example, not by the way an unfair one, of the hasty and illogical manner in which conclusions are not unfrequently arrived at by those who are entrusted with the administration of justice in tribunals of the kind referred to. In the case mentioned by “WILTSHIRE RECTOR” there was, according to his statement, the assertion of the marriage, the production of the alleged offspring, and I suppose we may assume the absence of any denial of the marriage on the part of the witness; but many other circumstances were conspicuously wanting, for the existence of which in the case which I have ventured to call one of polygamy in Pigeons I can vouch. “WILTSHIRE RECTOR” does not even tell us, for instance, whether the baby produced bore any resemblance to its alleged father; but I will not pursue the case in “petty sessions” further.

That “WILTSHIRE RECTOR” should be a little incredulous as regards polygamy in Pigeons I am not surprised. I cannot lay claim to thirty-five years' experience as a Pigeon fancier, but I have kept Pigeons, and have been interested in their natural

history for some years, and the case described by me in the Journal of the 21st ult. is the only case of the kind, as I have indeed before said, which has come under my notice in any way whatever. Thus far "WILTSHIRE RECTOR" and I are at one. I also agree with "WILTSHIRE RECTOR" in the belief that Pigeons will change over partners. Was the case mentioned by me, it is asked, more than simply such an exchange? I answer that I am satisfied that it was more. Had it been simply an exchange of partners, one would have expected to find the Blue cock paired with the Black hen, and the Black cock paired with the Blue hen; but this was not so. The Black cock was entirely beaten off, and did not (I speak from a tolerably close observation) in any way consort with either hen. He certainly was not admitted to the nest of the Black hen, nor did I ever find him sitting upon or see him so much as approach the nest of the Blue hen. I am glad to find that "WILTSHIRE RECTOR" does "not for one moment impute the least atom of untruthfulness" to me, but, at the same time, I think he is a little hypercritical when he asks the meaning of the words "I believe" in the sentence "I believe that the Blue cock regularly took his turn on each nest." I am aware that Pigeons, as a rule, sit a regular time and through certain hours; and my meaning was, that having constantly seen the Blue cock sitting at one time on one nest and at another time on the other I believed, or, in other words, that I had good reason to infer, that he "regularly"—that is, from day to day or as a habit, and not from mere caprice, relieved each hen in sitting. No doubt, as "WILTSHIRE RECTOR" remarks, one cock was the master cock, and it will occasionally happen that one cock bird among several is such, but that circumstance seems hardly to account altogether for the one cock taking entirely to himself two paired hens, and otherwise acting as I have stated. Now, to recur to the hatching, "WILTSHIRE RECTOR" says "One pair of eggs were broken, and though each contained a bird, the evidence as to variety is at an end." One pair of eggs was, it is true, broken, but I cannot admit that "the evidence as to variety was at an end," for the eggs broken were those of the Blue hen, whilst those of the Black hen produced Blue birds. No birds having been reared to feathering from the Blue hen's eggs, positive evidence as to the variety of the birds which they contained was, of course, at an end, but there was, especially under the circumstances of the case, presumptive evidence of it.

The remark made by "WILTSHIRE RECTOR" that "many Blues are very dark at first," does not appear to me to have any application to the present question, the birds referred to being from the Black hen's eggs. The opposite assertion, if well founded, that many Blacks are very light (or even blue) at first, might have had more force. "WILTSHIRE RECTOR" further says that "of the second hatching I stated nothing as to colour." How could I say anything upon the point? the old birds, as I stated in my former communication, having gone to nest for the second time only, somewhat more than three weeks ago, so that at the time of my writing the young birds could not have been more than a very few days old. I am now, however, able to state that of the second lot of young birds, one from the nest of each hen, was a Blue bird, the other two young birds, one from each nest, not having lived over the feathering. I may also state that the two hens each laid a third pair of eggs, and that the conduct of the Blue cock still continued the same. I do not by any means desire to assert that Pigeons are by nature polygamous; but I have narrated the facts of this case precisely as they have been observed by me, and strange and unaccountable as the case may appear, I do not feel or perceive any ground for feeling that I have been mistaken either in my observations or conclusions.—R. W.

EXPERIENCE IN BEE-KEEPING.

ACTING on the advice given in books, I gave my bees additional room early in the season to prevent swarming. I tried supers, nairs, and collateral boxes, in order to give each system fair play. After all my trouble the bees swarmed in June and July. Would it not be better to let them swarm early, and then give them supers, as I do not find that giving them extra room prevents swarming? I find they work better in supers than in any other kind of box. This season I tried three nairs. At the end of August I removed them in order to get the honey. Two were perfectly empty, and the third was full of empty comb. Another hive had a box at the side, of which the bees took not the slightest notice. Two other hives had supers. I took both off late in June, and after taking the honey replaced them. At the end of August I took them off again. One was full of fine pure honey, the other had only a few combs, which, however, I have carefully put by for next season. I use straw hives, and one or two bount boxes. Having had unexpected swarms I was forced to live them in a hurry. For the same reason I never was able to find out which hive swarmed, as I generally came into the garden, and found all the bees in a turmoil, and a swarm hanging to a bush near. In my neighbourhood I have to work single-handed, for the few people who keep bees smother them every year in the old-fashioned way, and shook their heads

because I bought my first swarm as "A CLERGYMAN'S WIFE" did. I should state that the bee pasture is very good in my garden, commencing early in March, and continuing as long as the heather is in bloom. Even now (September) fuchsias and Mimulus are in full blossom, and the bees are still busy.—TIMBUCTOO.

[Every year brings with it some peculiarity of weather which compels the bees to vary their proceedings accordingly. So one year being wet and deficient in honey-producing power, naturally allows freer scope to the breeding powers of the queen; hence a tendency to swarming predominates. Another year, abounding in honey and fine weather, is favourable to the storing of the precious gift, and swarms are rare, or else from some other cause the bees will multiply enormously, and fill every super with comb, without either swarming or gathering honey. Were we able to foresee the coming season we should forearm ourselves accordingly, but if the peculiar experiences of one unforeseen season are to guide us in our preparations for the next, we should be constantly trying experiments, and be liable to endless disappointments. Therefore, our reply to your inquiry is, that while, doubtless, your proposal might succeed, given a suitable summer, ten to one it would disappoint you equally when the time came, owing to a change in the season totally the reverse of the present one. We should, therefore, advise you to persevere in that system of management which is most adapted to your requirements. If you want swarms, let them swarm early. If you have stock enough, give abundant super room as soon as possible, and thereby discourage swarming. We ourselves have entirely discarded the use of both nair and collateral boxes, and believe the super to be the only profitable, and, indeed, natural method of enlarging the honey-comb quarter of the hive. You seem to have been as lucky as anybody this year.—EDS.]

BEEES AND HONEY AT MANCHESTER SHOW.

THE bees and honey were very interesting and attractive. The corner in which they were shown was crowded with visitors during the whole four days; indeed, so numerous were the visitors on the last day of the Show, and so great the crush to see the bees and honey, that not one in ten could obtain a satisfactory view of them. For hours a compact mass of people ten or twelve deep were slowly moved or pushed past the stage on which the honey and bees stood. No one fancied that the bees would interest so many people, otherwise better arrangements would have been made for the visitors to examine them. The living bees in glass houses should be exhibited apart from each other, and at some distance from the hives of honey and honeycomb. Though only £25 and two medals were offered in prizes for bees and honey, we had more than forty entries, but in some cases no appearance was put in, the cause being supers, which on examination were found not quite finished. Two heavy hives broke down (combs) on their way from the Derbyshire hills.

In Class A, for the heaviest and best hive filled by a swarm of 1873, Mr. Breen, of Manchester, came in first with a Pettigrew hive weighing 84 lbs.; and Mr. Withnell, of Burton-on-Trent, was second with a bar-frame hive weighing 60 lbs.

B. For the most ornamental hive Mr. W. Cooke, of Denton, came first; and Mr. J. Wrigley, of Rochdale, second.

C. For the best observatory hive Mr. Young, of Burton-on-Trent, carried the day.

D. For the best glass super of honeycomb Mr. Breen again came to the front with a magnificent "Crystal Palace" weighing 87 lbs. It was the queen of the Exhibition—grand beyond description. I saw it before it was brought from the moors, named it "a Crystal Palace," and valued it at £10. One of the Judges bought it at that price as soon as he saw it. Mr. Bethell, of High Leigh, Knutsford, was second with a flat glass super weighing 25 lbs.; and Mr. Wakefield, of Kendal, took the third prize with a smaller super. All were well filled.

E. For the best wood or straw super Mr. Withnell, of Burton, took the first prize; and Mr. J. Lee, of Windlesham, Bagshot, came second. Under this head some syrup-comb was shown—most beautiful to look upon. The Judges on tasting it pronounced it to be sugar-and-water, and therefore disqualified it for a prize. I saw it was made of sugar before it was tasted. Sugar-and-water cannot be converted into honey, though making excellent food for bees.

F. For best collection of hives, supers, and bee furniture, Mr. J. Lee, of Windlesham, took the silver medal; and Mr. S. Yates, of Manchester, the bronze one. Mr. Lee's collection was very neat and unique. His hives were chiefly made of straw with bar-frames inside. His supers were of wood and glass. Mr. Lee has, like most practical men, found that wood hives condense the moisture of bees—which causes the comb to rot, and therefore he makes his bar-frame hives like those of the late Mr. Woodbury—all of straw, neatly put together. Mr. Yates's collection was larger in some respects, and more various too. In it he had some of the best-made straw hives I ever saw,

from 20 inches wide inside down to smaller sizes, supers of all kinds and sizes, and a Stewarton hive, which did not appear to advantage beside the rest.

Mr. Aston, of Newport, Salop, exhibited some of his simple and useful drone traps and other bee furniture. The Judges awarded him a prize of 20s. for his traps, &c. I bought a drone trap of him, and have tried it already, and I am glad to say it answers well. Bee-keepers must thank Mr. Aston for his excellent contrivance.

Mr. Wood, of Nyborg, Denmark, sent a hive and a large boxful of various kinds of honey, mead, wax, &c., so interesting that an extra prize was given for it.

When the Bee and Honey Show was suggested and tacked on to the International Fruit Exhibition it was my intention to exhibit some heavy hives, with thirty or forty big supers of honeycomb from my own bees, but the season has been so unfavourable for honey-gathering that I could only place one hive and two supers on the tables. The hive weighed 108 lbs., and the smallest glass super 26 lbs.; both were filled by my first swarm obtained on the 21st of May. The hive alone was sold for £4 5s. as it stood. The other super might be termed a Crystal Palace too, for it stood 20 inches high and weighed 40 lbs., though not quite finished. The Judges were the Rev. W. Cotton, Frodsham; and J. S. Cunliffe, Esq., Hanfworth.—A. PETTIGREW, Sale, Cheshire.

BEEES ON A FIR TREE.

A SWARM of bees some time in the summer settled on a small Scotch fir in my shrubbery, about 2 feet from the ground. They were seen only lately, and have made a quantity of beautiful white comb, now being filled with honey. It is fixed to the stem of the tree, which is only 5 feet high. Is there any safe method of taking the honey, and how? If left till the winter, would the bees die and the honey be spoilt?—A. R.

[If left the bees would certainly die. Are the combs fixed outside the tree, or are they in a hollow? If the former, you may drive the bees off the combs by steady fumigation with brown paper, and cut the combs away easily. In the latter case you must destroy them with brimstone.—Eds.]

BEE-FEEDING.

Excuse my taking exception to your advice to "B. G." about bee-feeding. The food suggested is cane-sugar syrup. As its water dries from it, it crystallises. Applied as you recommend, it would be partly taken down during the night. In the morning, as the temperature rises, the expanding air which stands over the syrup in the bottle will drive down a deluge over the bees; this crystallises upon their bodies and destroys numbers, besides rendering useless the adjacent sides of the two middle combs, which are the most important in the hive. *Experto crede.* The sugar should have added to it a teaspoonful of strong vinegar for each pound, or, better, three drops of sulphuric acid, which, upon being boiled, changes the cane sugar into grape sugar (the form in which sugar occurs in honey), which will not crystallise, and which is more natural as a food, and better for storing than cane sugar. The method of giving food recommended I thought was exploded. Place a piece of perforated zinc (that called No. 6 is best) over the feeding hole. Pour your syrup into the bottle, and place over it a piece of zinc bent up at one edge, then turn your bottle over. Place all upon perforated zinc, and withdraw the slide. The whole operation is simple and cleanly. If you wish to remove the bottle, replace the slip. The form of the zinc piece is immaterial, but a shovel heavy in the handle is most convenient.—F. CHESHIRE.

[We cannot admit that our advice to "B. G." was in any way incorrect. We are almost tired of reiterating our assertion that food prepared in the proportions, and boiled for the time which we recommend, can be safely administered by the bottle system of feeding. Whether net or muslin in conjunction with zinc, or a piece of zinc only between the fluid and the bees, be used, is a matter of but little consequence. We prefer the net, as it enables the bee-master to supply or remove the bottles much more readily. We never find the food crystallise; and if it should happen to run over the bees or the combs, not the slightest injury results, as the bees are soon cleaned by their sisters, and the combs also are soon licked dry. Whether or not the syrup would be improved by the addition of vinegar or sulphuric acid we cannot say, but will give the treatment a trial.—Eds.]

VALUE OF HENS.—A curious statement has been made and published in a French paper in regard to hens. It reckons the number of hens in France at 40,000,000, valued at \$20,000,000. Of these about one-fifth are killed annually for the market. There is an annual net production of 80,000,000 chickens, which in market yield \$21,000,000. The extra value to be added for capons, fattened hens, and the like, is put at \$2,200,000. The

production of eggs is reckoned at an average of 100 eggs per hen, worth \$48,000,000. In all it is reckoned that the value of hens, chickens, and eggs sold in the markets of France is \$80,000,000.—(Boston Cultivator.)

CONSUMPTION OF EGGS.—The importation of eggs increases. In the last eight months the declared value was £1,797,759, against £1,302,870 of the preceding year.

OUR LETTER BOX.

STOCKING A HIVE OF EMPTY COMBS (G. H. F.).—If your seven-years-old straw hive is strong, you may drive out the bees into an empty butt, and when pretty well settled shake them into your frame hive, which immediately place upon the stand which the straw hive had previously occupied. You must make up your mind to feed liberally; at least 20 lbs. of food will be necessary. Possibly you would not object to give a good quantity of the darkest honey from the old butt. If you find that the box has not as many bees as you would wish, you can get some cottager to allow you to drive out and bring home the bees of a doomed stock, which you may add to your own.

METEOROLOGICAL OBSERVATIONS,

CAMDEN SQUARE, LONDON.

Lat. 51° 32' 40" N.; Long. 0° 8' 0" W.; Altitude 111 feet.

DATE.	9 A.M.				IN THE DAY.						Rain.
	1873.	Baromet- er at 39° and Sea level.	Hygrome- ter.		Direction of Wind.	Temp. of Soil at 1 ft.	Shade Tem- perature.		Radiation Temperature.		
			Dry.	Wet.			Max.	Min.	In sun.	On grass.	
We. 10	29.692	58.5	59.7	W.	55.9	deg.	deg.	deg.	deg.	In.	
Th. 11	29.761	58.7	55.0	N.W.	56.6	66.3	51.4	116.8	47.3	0.254	
Fri. 12	29.909	55.6	51.4	N.W.	56.2	65.3	46.7	106.9	41.0	—	
Sat. 13	29.862	51.0	49.9	N.	55.7	62.0	42.1	76.7	38.0	0.880	
Sun. 14	29.637	58.8	55.0	S.	55.2	64.2	48.2	116.8	41.4	0.980	
Mo. 15	29.279	53.5	49.7	W.	55.7	59.9	47.8	104.6	45.0	0.590	
Tu. 16	29.718	53.4	48.7	W.	54.3	63.3	41.4	117.0	39.5	—	
Means	29.631	55.6	52.1		55.7	63.8	47.6	106.8	42.9	1.364	

REMARKS.

- 10th.—Fine morning, occasionally cloudy, with much wind, but not any rain.
 - 11th.—Rain in the night and early morning; but fine by 8 a.m., and the remainder of the day. Lunar halo at 11.15 p.m.
 - 12th.—A fine bright day, with less wind than on the previous ones. Solar halo at 4 p.m.
 - 13th.—Hazy morning, rather dull all day. Solar halo at 10 a.m.; wet in the evening.
 - 14th.—Rain early, fine at 9 a.m., but rain again at 10.30, followed by a showery day. Rainbow in the early evening; rain at night.
 - 15th.—Sunshine and showers all the day; two vivid flashes of lightning about 2.30 p.m., with hail, followed very quickly by two loud peals of thunder; several sharp but very short showers during the day.
 - 16th.—A beautiful day throughout.
- A slight increase in temperature, but still rather chilly.—G. J. SYMONS.

COVENT GARDEN MARKET.—SEPTEMBER 17.

We have had a large quantity of fallen fruit in the market, shaken down by the late high winds, which has been selling at very low prices, and which has interfered with that of gathered sorts, neither good Pears or Apples quite maintaining last week's prices. Pimms also continue plentiful, Damsons rather scarce. Vegetables are well supplied, and of excellent quality.

FRUIT.

	s.	d.	a. d.		s.	d.	a. d.
Apples, } sieve	1	0	1	Mulberries, lb.	1	0	0
Apples, } doz.	0	0	0	Nectarines, doz.	4	0	0
Cherries, } lb.	0	0	1	Oranges, } 100	10	0	2
Chestnuts, } bushel	0	0	0	Peaches, doz.	4	0	0
Currants, } sieve	2	0	3	Pears, kitchen, doz.	1	0	2
Black, do.	0	0	0	dessert, doz.	2	0	3
Figs, doz.	0	6	2	Pine Apples, lb.	3	0	6
Fibrets, lb.	1	0	1	Plums, } sieve	2	0	4
Colts, lb.	1	6	0	Quinces, doz.	0	0	0
Gooseberries, quart	0	0	0	Raspberries, lb.	0	0	0
Grapes, botthouse, lb.	1	0	5	Strawberries, } lb.	0	0	0
Lemons, } 100	10	0	20	Walnuts, bushel	10	0	16
Melons, each	2	0	5	ditto, } 100	2	0	2

VEGETABLES.

	s.	d.	a. d.		s.	d.	a. d.
Artichokes, doz.	3	0	6	Mushrooms, pot/le	1	0	2
Asparagus, } 100	0	0	0	Mustard & Cress, punnet	0	2	0
French, } 0	0	0	0	Onions, bushel	3	0	0
Beans, kidney, } 4 sieve	2	0	0	Peas, quart	0	6	0
Beet, Red, } doz	1	0	3	Parsley per doz. bunches	0	4	0
Broccoli, } bundle	0	9	1	Parsnips, doz.	0	9	1
Cabbage, doz.	1	0	1	Peas, quart	0	8	1
Capiciums, } 100	1	6	0	Potatoes, bushel	4	0	6
Carrots, bunch	0	6	0	Kidney, do.	0	0	0
Canniflower, doz.	3	0	6	Round, do.	0	0	0
Celery, bundle	1	6	2	Radishes, doz. bunches	1	0	1
Coleworts, doz. bunches	2	5	4	Rhubarb, bundle	0	6	1
Cucumbers, each	3	0	0	Salsify, bundle	1	0	6
pickling, doz.	0	0	0	Savoy, doz.	0	0	0
Endive, doz.	2	0	0	Scazoneria, bundle	1	0	0
Fennel, bunch	0	3	0	Seakale, basket	0	0	0
Garlic, lb.	0	6	0	Shallots, lb.	0	3	0
Herbs, bunch	0	3	0	Spinach, bushel	2	0	3
Horseradish, bundle	3	0	4	Tomatoes, doz.	1	0	3
Leeks, bunch	0	3	0	Turnips, bunch	0	3	0
Lettuce, doz.	1	0	1	Vegetable Marrows, 0	1	0	3

WEEKLY CALENDAR.

Day of Month		Day of Week		SEPT. 23—OCT. 1, 1873.															
				Average Tempera- ture near London.			Rain in 13 years	Sun Rises		Sun Sets.		Moon Rises		Moon Sets.		Moon's Age.	Clock after Sun.	Day of Year.	
				Day.	Night.	Mean.	Days.	m.	h.	m.	h.	m.	h.	m.	h.	Days.	m.	h.	
25	Th	Twilight ends 7.47 p.m.		65.8	43.1	54.4	21	53	af 5	50	af 5	49	9	7	7	4	8	26	268
26	F	S. CYPRIAN.		65.7	43.8	54.7	21	55	5	48	5	4	11	26	7	5	8	46	269
27	S			65.3	44.6	55.0	21	56	5	46	5	after.	53	7	6	9	6	270	
28	Sun	16 SUNDAY AFTER TRINITY.		65.1	44.0	54.5	22	58	5	43	5	54	1	32	8	7	9	26	271
29	M	MICHAELMAS DAY.		65.5	44.3	54.9	26	59	5	41	5	41	2	26	9	9	46	272	
30	Tu			65.0	43.3	54.2	24	1	6	59	5	33	3	37	10	9	10	5	273
1	W	Royal Horticultural Society, Committee Meet- ings, Fungus and Grape Show.		65.4	44.7	54.1	21	3	6	56	5	12	4	morn.	10	10	24	274	

From observations taken near London during forty-three years, the average day temperature of the week is 65.1°; and its night temperature 43.9°. The greatest heat was 82°, on the 25th, 1832; and the lowest cold 23°, on the 28th and 30th, 1835, and 29th, 1842. The greatest fall of rain was 1.68 inch.

EVENING MUSINGS FOR PLAIN PEOPLE.—No. 7.

VINES.

IN thinking farther on this subject I have need to recapitulate for a moment. The object is not to teach those learned in Grape lore, but to aid and encourage those whose homes lack a supply of the princely fruit, and who are yet in possession of means which might be turned to account, and useful Grapes be produced in a comparatively easy and inexpensive manner. Elaborate preparation and a high system of culture are beside the point. Plain, simple, and natural means are alone considered. I would not look at the subject as a gardener's question—yet, in passing, I may note a few points in practice and observation which some brother gardeners may possibly read and ponder over—but rather as an everybody's affair, for I would like to see this luscious, wholesome, and most valuable fruit growing and ripening in every village in the land, and within the easy reach of all. I would especially like to see it at hand to soothe, comfort, and nourish in sickness, as well as to add to the gratifications of those in health. I would not desire that the culture of the Grape be limited to those for mere family or personal pleasure, or even with a charitable or benevolent object solely, but would like ten thousand amateur growers to try their hand with the view of disposing of their surplus as a marketable commodity, and benefit themselves and others too. Grow cheap and sell cheap, is a principle I would like to see in universal operation. It will pay as well as growing dear and selling dear, and be of infinitely greater benefit to the general community. I would not "go in" for ornamental and narrow span-roofed structures, subject to alternate roasting and starving—extremes of heat and cold—longing for cloud in the day and crying for fuel at night; or for costly borders of which the soil is carted for miles, and paved with Yorkshire slabs; or for numerous and new varieties, remarkable for glowing characters and long prices, which, however, may be well merited in a proper place, but here not adaptable. I would rather advocate simple lean-to's of glass, supported by the walls of dwellings, or by other existent walls having a good aspect to S.S.W. or S.E., and would not be frightened by due E. or full W., if any adjacent shelter could break the force of sweeping gales.

I would prefer a rafter or roof as long as possible, and to this confine the glass. In a good-sized place vertical light is enough; and ends and sides wholly or in great part of more solid material economise heat and contribute to a more steady and equable temperature, and in perfectly dry and well-drained localities, if the ground floor of the house is a few feet below the general level of the ground, all the better. Very bright and lofty structures are not the places for unskilled amateurs, as in such hands the probability is they would make sad work with fuel to grow red spider. In view of high-class culture in the hands of professionals the case is different, and even then it is easy to err in the matter of mere height of

structure, without giving due consideration to length and breadth. The more limited is the superficial area to be enclosed the lower should be the roof consistent with space for convenient working. The products of ground vineries prove the soundness of this principle, and the excellent Grapes grown in mere heated brick pits with sunken pathways confirm it. But especially, in addressing amateurs contemplating a little vinery, I say, Do not hoist your glass too high in the air, particularly if the house be narrow, with sides or ends of glass. With stone or brick walls go as high as you like, and cover with glass instead of slates or tiles; put a flooring across a foot or so below the wall plate, and you may have useful Grapes above at no cost, and cows, or pigs, or implements, or what not below, just by utilising unoccupied roof space. I have seen Grapes thus grown in a village—or rather they grew themselves, as the bunches were never thinned—and people ran for miles after them at 1s. 6d. per lb. This was, as the owner said, "all profit," as he did not give six hours a-year in the way of attention: the sun did all the heating, and a few vessels of guano water stood about did all the syringing—*i.e.* top moisture, and kept insects completely at bay, while Grapes grew and ripened in wild luxuriance and semi-neglect, which sick and sound bought freely: thus proving at once a want in the district and an easy way of meeting it. With a little reasonable care in dressing and thinning, these Grapes (Hamburgs) would have been really excellent fruit, and as good as some—and I speak without hesitation, except so much as assures me of cool and correct assertion—which I saw exhibited at the Manchester Show, for some there were really grand and others hardly so.

The above is only an idea thrown out as it were parenthetically of a structure which may be placed by the side of Mr. Pearson's Apricot sheds, and I can answer for its being as good in its way as the Apricot "bit," equally easy, and common sense. I think I have heard of something of the same kind being carried out in Scotland, where a gentleman grows beef and Grapes under the same roof, and the best of both. There are, no doubt, plenty of places where, by using glass instead of slates as a covering, much useful fruit of different kinds might be easily and profitably grown.

But I would mainly urge the erection of neat useful structures on sites already formed by blank wings of dwellings or moeupied walls. With a good wall, or possibly a recess between two walls, the job is half done, and the rest is easy and inexpensive. Glass or verandah-like covered ways to the entrance of dwellings are also capitally adapted for producing useful Grapes without any fuss or science about the matter, and without any artificial heat at all. These glass approaches further add a feature of ornament and comfort to a residence, and are easy to make bright and sweet by a few flowers. This is not a mere crotchet, but a fact proved. Only a few evenings ago I happened to look into one of these very places, and found the owner in an easy chair with Grapes hanging over his head and a bunch on the table by his side, with a bottle of wine of his own growth and

brewing, and a newspaper in his hand. It was a picture of home contentment worthy of being placed on canvas. In ten minutes more I could have walked into another equally prized as a pleasant adjunct to the home, saying nothing about the value of the canopy of purple clusters hanging from the roof. There are sites innumerable suitable in soil and aspect in all parts of the country where nice table or wine Grapes may be produced almost without cost, excepting, of course, the trifling outlay of neat glass coverings. The point is not to have them too narrow, the aim should be to have all the roof space possible. The interior can be turned to account in many ways as ornamental by the introduction of plants or for more useful purposes. I am acquainted with one of these glass rooms or home appendages, which is primarily used as a promenade and exercising ground for the juveniles of the household, and paterfamilias is fond of repeating that for this purpose alone, and without any Grapes at all, that it is worth every penny it cost.

Grapes thus grown without any fire heat will be well remunerative at 1s. a lb., and there is no insuperable obstacle in the way of their being produced at even half that price in almost every village, but certainly in every market in the land. This may appear at first sight as rather a bold statement, but consider for a moment what a healthy Vine will do, and it will not be found far off the mark of sober truth. It would be a national advantage if something like this were accomplished. There seems to be a great aggregate wage and money surplus in towns which must be spent in luxury, and a luxury in healthy fruit is infinitely preferable to other indulgences which might be named. A fruit-supply of this character would not interfere with the superior produce of skilled cultivators, which will always command a superior price to satisfy the demands of "superior people," who would no more eat cheap Grapes than drink cheap wine; and who can blame them? Not—J. WRIGHT.

CULTURE OF BEDDING CALCEOLARIAS TO AVOID DISEASE.

I AM rather surprised to hear complaints of the Calceolaria disease this season, considering how favourable the weather has been for the growth of that moisture-loving plant; I therefore send you a few notes, the result of my own experience and observation. The bedding Calceolaria has with me always been, and still is, a favourite, as it is, I think, with most gardeners, for the simple reason that it would be a difficult matter to find an equally effective substitute.

My method of propagating and preparing the plants for planting-out I described in vol. xxiii., page 487, and now that the season is approaching I would advise those who wish to have Calceolarias next summer to put in a supply of cuttings in October in a cold frame at the back of a north wall or hedge, and after the cuttings are inserted, give all a good watering and put the lights on, which will be sufficient without any other protection during winter to secure you in the spring a lot of beautiful plants, looking the picture of health. But some will perhaps say, Why advocate cultivating a plant which is so uncertain and so liable to die-off by disease, &c.? In answer I say that I have cultivated the Calceolaria both in Scotland and the north and south of England, and I have never yet been visited with what I would call the Calceolaria disease. It is true I have lost a few plants occasionally; this year my loss has been about eighteen out of between 550 and 600 bedded-out. One ribbon border contains 350 plants, and I have not lost one plant out of it; but I do not consider this any great achievement, as the season has been so suitable to the growth and well-being of the plants.

It is when we have to contend with a hot dry summer that our skill is tried, and the results show whether or not we have been making any provision for the want of atmospheric moisture by securing the conditions necessary for the health of the plants at the roots, which I deem to be the most important point of all. The neglect of this, and planting in an unfavourable poor soil in a dry season, will, I have no doubt, produce what is termed the Calceolaria disease. In a poor, light, sandy soil the Calceolaria will only prove a disappointment; have the soil, therefore, removed to the depth of 2 feet, and replace it with some well-rotted turf enriched with manure, and, if very heavy, half ought to be removed and the other half mixed with a compost the same as above. If the plants have been prepared as I recommended in the article previously referred to, and are lifted carefully with balls, planted firmly in the ground,

afterwards well watered, and during the summer have the blooms picked off as soon as these show signs of decay, successful results may generally be relied on. The ripening of seed exhausts the energies of the plants and stops their growth, but if the decaying blooms are removed the plants will commence a fresh growth, and a succession of flowers will be kept up.

Mr. Raiton in a former number, page 174, attributes his success this season to "dipping his plants in a solution of Fowler's insecticide, heat 100°"; but I hope he will excuse me if I say that I have very little faith in anything that can be done to the tops. I believe the secret of success to lie entirely at the roots, and I likewise consider the past season has been too favourable for the growth of the plants to test any application properly or to justify speaking decidedly on its merits.—J. ANDERSON, *Hill Grove, Kidderminster.*

FRUIT TREES AT MR. THOMPSON'S, ILFORD.

ON reading Mr. Abbey's article on pyramid and bush fruit trees in the Journal of September 11th, I was rather surprised at the result of his experience with these exceedingly useful forms of fruit trees for small gardens. I say small gardens advisedly, because in large gardens I would plant at least a large proportion of both Apple and Pear trees on the Crab and Pear stock respectively.

The Cherry, Plum, Pear, and Apple trees at Loxford this year have borne a splendid crop; Cherries and Plums could be gathered in handfuls, and Apples especially have been plentiful. Now, as it happens we had Apples of the same variety both on the Crab and Paradise stocks, and Pears on the Pear and Quince stocks, planted at the same time, while none of the trees had been removed for six years, anyone can see at a glance the different effects of the stock. Cox's Orange Pippin on the Crab has not half a crop, on the Paradise the trees are bent down with the load of fruit. On the Crab the trees are more inclined to grow to wood, the growths are stronger, and the leaves twice as large as those on the other stock. Then, again, take Louise Bonne or Beurré Hardy on the Quince and compare them with those on the Pear stock; they do not look like the same variety of fruit, and this "apart from root-pruning or biennial or triennial lifting." Then let us notice the Blenheim Orange; it can be seen at Ilford on the Paradise stock on trees 7 feet high and 8 feet across actually loaded with fruit. I also went up to Ilford and examined the orchard of fine young trees belonging to Mr. W. Thompson, under the care of Mr. Green. Nearly all the trees are on the Quince and Paradise, and for young trees (they have only been planted six years, many of them only three and four years ago), the crop of fruit they are bearing is extraordinary, and not on a few trees only; for of some of the most useful sorts Mr. Green has planted from three hundred to four hundred trees. Considering the large number of trees to attend to, their well-trained appearance reflects great credit on the management of Mr. Green.

Here is a row of Ribston Pippins, fine healthy trees, not a spot of canker on the wood or a blemish on the fruit; they are carrying a good crop. My experience with this variety is, that on the Crab stock it cankers in the second year from planting; on the Paradise, planted six years on the same ground, it shows no signs of canker. Next to the Ribstons there is a row of Rymers; this is a fine kitchen Apple. Dumelow's Seedling, or Wellington as it is always called in the London markets, is overloaded with fruit, and, as a consequence, it is rather small. Sturmer Pippin should be grafted on the Crab stock; on the Paradise the fruit is very small. Pomona is remarkably fine, the trees are studded with fine handsome fruit; this is free-bearing on any stock. Tower of Glamis does not bear so freely, this being the first year the trees have had anything like a crop, but large handsome fruit they are, and it is a good keeper. In contrast to it here is the Dutch Mignonne, the fruit on all the trees clustering together like bees swarmed on a branch; but most noticeable is the Blenheim Orange. There are many trees of this good old sort all on the Paradise, but on walking down the rows, here and there a tree is seen with an unusually large crop, and on examining the union of the stock with the scion it is plain that there have been two sorts of Paradise stock used, the union being the same on all the trees heavily loaded with fruit, and different from that on the others. Probably Mr. Thomas Rivers is the only one who can throw any light on this matter.

Here in one place are four hundred trees of Louise Bonne

Pear 6 feet apart, and not one which is not bearing a good crop of remarkably fine fruit. Beurré Hardy is nothing behind it, the fruit clean, and considering the crop the trees are bearing, of good size. Next comes Beurré Piel; a portion of these trees were removed last year, and those that have not been removed are carrying the largest and best crop. Gansel's Bergamot, double-grafted, is bearing freely, and twenty trees of Doyenné du Comice are bearing a large crop of very fine fruit. This variety can be highly recommended. Conseiller de la Cour is not at all a free-bearing sort with me. With Mr. Green the trees are producing abundantly, and the fruit is very fine. I have also seen this variety very good with Mr. Barron at Chiswick. It is a Pear of most delicious flavour. There is a row of about fifty trees of Bézi Mai, this never becomes melting; it has been headed back and regrafted with such sorts as Dunmore, Zéphirin Grégoire, Bergamotte d'Espéren, Marie Louise d'Uccle, &c., all of which are doing very well on it. The last-named sort succeeds well on the Quince, and is a free bearer; the fruit is covered with brown russet, and is of very good flavour. Marie Louise will not thrive on the Quince. Benrré d'Anjou I had not seen before, but it is thought highly of by Mr. Green; it is a good-keeping Pear, of large size, and the flavour is excellent. Durandean or De Tongres on the Quince is loaded with fine large fruit, but on the Pear stock it is very poor. Souvenir du Congrès is a new Pear, but one that I fancy will yet be grown to a large extent. I have it double-worked, and so it is here. The tree has a fine crop of large showy fruit.

Plums have been fine, but owing to the wet weather many have cracked and are spoiled. All had been gathered except Autumn Compote, which had a moderate crop of fruit on it. Mr. Green spoke highly of Guthrie's Late Gage. It is now ripe in the garden at Loxford Hall, and I can freely corroborate Mr. Green's good opinion of it. It is one of the very best Gages for a pyramid.—J. DOUGLAS.

THE MADRESFIELD COURT VINE.

I TRIED two experiments last year to prevent the berries of this splendid grape from splitting. These Vines are in two large tubs. The rods, 10 feet in length, were stout and well ripened. At the end of one I inarched a Black Hamburgh, the effect of which has been to cause all the oval berries to become perfectly round on all the twelve bunches, two berries on one bunch alone preserving the oblong form. The Vine on which the Muscadine was inarched has ten bunches; very few of the berries have split. This inarching was only half way up the rod. The Black Hamburgh and Muscadine are still in pots, and I suppose it will be advisable not to cut them off from the Muscadines. The seed of the round Grape I shall preserve. What does Mr. Rivers say to this plan of changing oval berries into round ones? The experiment can be tried at once on any sorts where there is an oval and a round Grape growing near. The lateral at the end of each rod should be preserved, and when the wood is ripe inarched. It would be curious to watch the effects of inarching different sorts.—OBSERVER.

COPINGS FOR WALLS.—No. 1.

I SHOULD think that after years of experience and the advice of practical men there are not now two opinions existing upon the necessity of furnishing a garden wall with a suitable coping. A wall exposed as it is to all the vicissitudes of weather needs a coping quite as much as a house requires a roof, in order to throw off the water that falls on the top, and to protect the interior from the action of frost. A coping is in this sense very important, but when it also affords protection to the trees growing on the face of the wall it becomes of the greatest importance.

To accomplish either object a coping should project to some extent on each side of the wall, but as to how far this projection should extend I believe there exists some difference of opinion. I consider that if a permanent coping, such as I am alluding to, has a projection of from 3 to 6 inches, according to the height of the wall, it is sufficient for the general protection and well-being of the trees; but in the spring, when the trees are breaking into growth, and their bloom buds expand, I agree with the common custom of adding a temporary coping of wood a foot or more in width, to remain over the trees till the season is well advanced or the weather has become somewhat settled; for, as is well known, the Peach tree

is a tender subject, and both the wood and foliage, as well as the fruit, are liable to injury from the changeable weather that generally prevails up to the turn of the days. I therefore do not withdraw my coping-boards till that time, and for the above reasons I suggest that others should try the same plan instead of taking them down when a crop of fruit is set. I fancy my readers will say that if the Peach tree is so tender, why not put the coping-boards over them in winter? To this I would say that I think no harm can arise from it, but there is a possibility, and even probability, of an advantage, and it is not difficult to perform. I think, however, I have said enough to convince anyone of the utility of a projecting coping to a wall, and will therefore give a few illustrations and descriptions of forms of coping in use in different parts of the country.

Fig. 1 represents a wall 11 inches wide, with a coping 18 inches wide and 6 inches high in the centre, reduced to about an inch in thickness at the edges. It has a projection of only 2 inches on each side, which I think is not enough; 3 inches on each side would be more effectual in shielding the trees from wet. If the wall were 18 inches wide instead of 11 inches I would extend the projection even another inch on each side, particularly if the wall were 10 or 12 feet high.



Fig. 1.



Fig. 2.

Fig. 2 is another coping of a similar shape and width, but is only 1 inch high in the centre, having the same projection on each side as in fig. 1, but the thickness at the edges is not more than three-quarters of an inch. This coping is very suitable for a wall from 8 to 10 feet high.

Fig. 3 is quite a different form of coping, being made or shaped to convey the most of the water to one side of the wall; it is a very useful form for those who have a fancy for it, and think that it is likely to prove effectual or more advantageous than the preceding ones; I am, however, by no means certain that it would be so. It is of the same width as the preceding forms, but is 4 inches thick on one side, reduced to 3 inches on the other, and projects from the wall to the same distance.



Fig. 3.

Fig. 4 is the dish form of coping, being shaped so as to convey the water along the centre by a groove 1 inch deep, and about 1½ in width. The thickness of the coping at the outsides is 4 inches, reduced to 3 or a little less in the centre without the groove. The water running down this groove must, of course, be conveyed to the ground through a spout similar to that from the roof of a building, but it need not be so large. I like this form of coping very much, and am inclined to think it as good as, if not better, than the rest, because it would do away with most of the drip from each side of the wall.

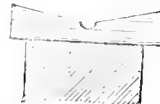


Fig. 4.

On referring to figs. 1 and 2 there will be seen a little groove under the part that projects from the wall, and also on one side of fig. 3; these grooves are very essential to all projected copings, for the purpose of preventing the water from running down the wall.—THOMAS RECORD.

CULTURE OF THE YAM IN ENGLAND.

We have been doing well for two or three years in cultivating and acclimatising the Yam. With the sad prospect of the Potato crop this is doubly interesting. We will with pleasure send to any gentleman or gardener who may send his address on a stamped envelope (as long as the supply remains), half a dozen bulbs. They are only peppercorn and pea size, but the plant becomes of 20 or 30 feet.—THE GARDENER, Egremont Lodge, Brighton.

We do not know which species of Dioscorea it is that has done well at Brighton. One species from Japan is probably as hardy as the Potato, and two natives of North America certainly are, but whether profitably cultivable remains to be proved.—EDS.]

LARGE CUCUMBER LEAVES.—One of my Cucumber plants, Cox's Volunteer, has leaves on it 20 inches across, and a fruit 28 inches long and 7 inches round, which has not yet done

growing; and on my other plants, Blue Gown, many of the leaves are 18 inches across. All who have seen them say they never saw such magnificent plants.—CHAS. H. PAGE, *Dulwich House, Cardiff.*

TABLE DECORATIONS AT THE CRYSTAL PALACE AUTUMN SHOW.

The Table Decorations were of a novel character, inasmuch as prizes were offered for a combination of fruit and flowers, also for a centrepiece of Grapes with foliage. The difficulty of the former was manifest in the want of harmony of colour and form, as few of the exhibitors seemed equal to the task. In both classes Mr. Hudson, of Denmark Hill, was greatly in advance of his fellow competitors, his first-prize in the open class being a truly artistic work. His using some large and heavy-coloured flowers for his centre made his fruit-surroundings of equal value as regards colour. Nor was he at a loss for light and delicate tints and blendings, which were well thought out, and his colour carefully studied and carried through; and yet his materials were of the simplest kind. Take, for instance, his stand with a Melon, a beautiful netted one, full of varied greys, greens, and buffs. This he very skilfully set-off by placing it on some Vine leaves variegated with the bright crimson and yellow of autumn's decay, and so placed that the tints of the Melon led into the brighter one of the leaves, which were, as it were, garnished with Maidenhair Fern. Then, again, how charming was his dish of Pears! how carelessly, and yet how pictorially, were his Grapes laid in their dish! In fact, taken altogether, his table was a great success. He also had the honour of winning the first prize in the amateurs' class with another excellent and well-arranged display, the fruit and flowers being well balanced.

Mr. Buster made a very fair second with his flowers excellently arranged, but his shortcoming was with the fruit. In other cases the fruit totally overpowered the floral portion, and, to use a sporting phrase, "had it all their own way." In few instances was the fruit used as a decorative feature, and in some it was almost hidden. This, of course, was in the worst possible taste, and one of the exhibitors went so far as to muddle his Grapes in such peculiar manner as more to represent ill-arranged Damsons. As regards the centre group for a table, Mr. Bones was a good first simply with black and white Grapes well thrown together with Vine leaves and Ferns on a two-tier glass. Good as this was, it might have been far better if a few red Grapes had been introduced, or some of different colours with Vine leaves in the colour of autumn. The rest of the exhibits in this class went all the wrong way, the Grapes being in most instances partially, and in some cases nearly, hidden by Ferns, Coleus, and other leaves, and in one a tazza had some *well-polished* Apples. In short, there was but little novelty or originality and a sad want of thought and taste, Mr. Hudson showing more knowledge of the subtleness of art than we have seen for some time. Still, the Show was particularly useful as it was decidedly instructive, and we hope is but the prelude of far better things, as it is clear that it is one thing to decorate a table with flowers only, and quite another to dispose fruit amongst them in such a manner as to be useful and yet ornamental, and so to unite the two that they may form one harmonious whole of the highest class of table decoration.—W.

HAGUE'S SEEDLING POTATO.

In your Journal of the 28th ult. Mr. R. Fenn, of Woodstock, states of the Potato called Hague's Seedling (or Hague's Kidney, for I presume they are the same), that it was raised by a son of Major Hague, near Leeds, from seeds of some Potatoes which he received from Harewood, and the said gentleman appeals to five brothers as to the fact. One cannot reasonably doubt such a statement; but, as Mr. Fenn goes on to remark, with respect to the Lapstone Kidney, said in the same article to have been first named by Mr. Fuller, of Hedingly—"there are a great many Lapstone Kidneys under as many aliases;" so, on the other hand, may there not be more than one variety of Potato under the same name of Hague's Seedling? At all events I can vouch for the accuracy of the following. Some years since (I cannot state how many) a gentleman named Holgekinton resided at Darby Moor, Notts, on the Great Northern road. He being on a tour of pleasure on the Continent, brought home with him from France a Potato which he gave to his gardener, an old man named Hague, to

raise stock for him. A fine second early Potato was the result, which he called "Hague's Seedling," after the old man who had the care of it, and he distributed samples of it among his neighbours and friends. In this way I obtained a sample of it, and have grown it ever since, and now have the pleasure to send you the produce of one root, just taken up, that you may judge of its quality and productiveness.—OCTOGENARIUS.

[We showed your specimens to one who is well conversant with Potatoes, and he says, "This appears to be simply another variety of the old Lapstone, which reproduces itself from seed very readily."]

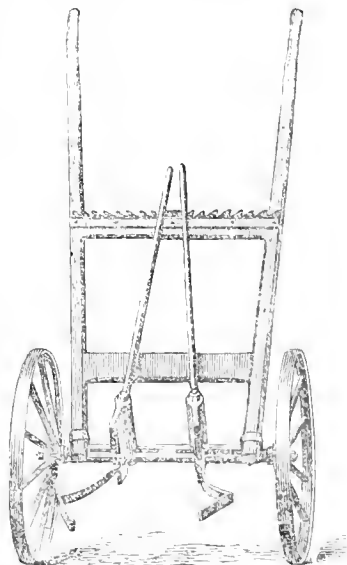
PINE APPLES IN NEW ZEALAND.

I AM not aware of any Pine Apples being under cultivation in Canterbury at the present day. Our supplies of this fruit during our winter come from Queensland, arriving first at Sydney and Melbourne with other tropical fruits, thence here, after being knocked about very much at the above places, and by the time they reach us they are very much disfigured and bruised, which does not improve their flavour. Another thing I observe about them—they have been cut when the pips are only half their size, consequently they must be almost in a green state when packed to travel. What little colour they do acquire is during the voyage, no doubt. This may account for their being almost tasteless, and having very little juice. On their arrival here, to say the best of them, they are only of third-rate quality, and are very different from those under cultivation at home, with large, flat, swelled pips. I am given to understand that they undergo a routine of cultivation in Queensland the same as other tropical fruits. They usually arrive here with Sydney Oranges, which I can assure you are very plentiful every winter, and sell for a penny each. By the cylindrical form of the fruit, and the average weight, $2\frac{1}{2}$ lbs. (half ripe), small spines, little crowns, they appear to be the old Queen variety—minus its bright yellow, juicy, and sweet flesh, with its very pleasant acid—considered one of the best and most useful of Pine Apples. No doubt the same might be the case in Queensland, if the people there would only allow them to arrive at maturity before removing them from the parent stools.—WILLIAM SWALE, *Acroside Botanic Garden, Canterbury, N.Z.*

POT-TRUCK FOR REMOVING FRUIT TREES IN LARGE POTS.

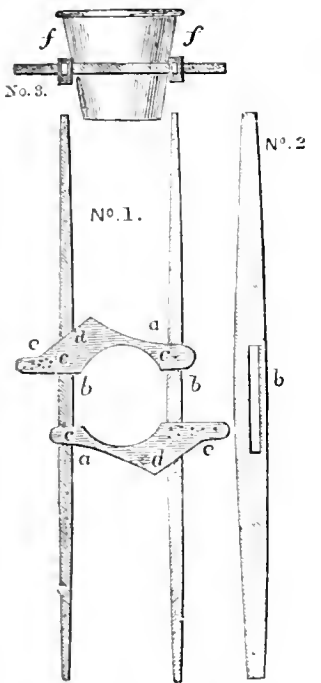
It is well known that the flavour of Peaches and Nectarines grown in pots is much improved if the trees are carried out into the open air a week or ten days before the fruit is ripe; but it is rather difficult to move trees in 18-inch pots with branches down to the bottom, extending 2 feet on each side, without either injuring the branches or shaking off some of the fruit. To get over this difficulty I have had a machinemade, of which I send you a drawing. It answers the purpose admirably.

By means of slots in the axle, and also in the upright bearers which carry the clips, I adjust the latter to about the proper height and width of pots to be removed, and when these are properly set, pots measuring from 11 to 18 inches can be removed without altering anything except the two handles, which lie on the cross-bar of the truck. When I wish to remove a pot I adjust these handles, so that the points of the clips are a little wider than the bottom diameter of the pot; next elevate the handles of the truck, and slip the clips round the bottom of the pot; then, by depressing the handles



again, the clips take hold of the pot under the rim and lift it clean from the ground. You will observe, also, that when the handles of the truck are the proper height for wheeling, the clips point upwards at an angle of about 45°, throwing the tree into a slanting position to enable one to get tall trees through doorways of an ordinary height.—J. GAMETT, *The Grange, Bolton.*

[The following still more simple contrivance was described by Mr. Eadie in the twenty-fifth volume of our old series:—



No. 1 shows the manner the tie-pieces lie in the mortice; *a a* are the two ties; *b b* are the mortices; *c c* are the permanent pins; *d d* are the pin holes to hold it together; *e e* are the closing sides.

No. 2 is a side view of the hand-spoke, showing the size of the mortice.

No. 3 is a cross view, showing the manner of catching the pot; *f f* are the two pins holding the hand-spokes together.

carry from 10-inch to 18-inch pots, the curve might be 7 inches wide or 11 inches diameter.—EAD.

It consists of two common hand-spikes, in this case about 6 feet long, 1½ inch thick, and 3½ inches wide, with a slit or mortice in the centre through the side to receive freely the cross or tie-pieces; and two, what I will call the pieces, being boards 1 inch thick, and wide enough to be strong, with one end fastened with a pin or bolt so as to work on a pivot in the mortice of the hand-spoke; the other end made with a bevel of about 40°, or enough to close the tie-pieces as fast as the hand-spikes are closed; then a pin on the outside of the hand-spoke put through a hole in the tie-piece fastens the whole together. The end of the mortice is made to fit the bevel of the tie-piece, so that the pressure of the pot cannot push it back. To take it off the pot, you draw out the pin from the hole on the outside of the hand-spoke, and draw the tie-piece out of the mortice. The pins are fastened to the hand-spoke by a string or chain, so that they cannot get lost. The curve or circle in the tie-pieces need not fit the circle of the pot exactly, but may be about a medium of what it is intended to carry; if intended to carry from 10-inch to 18-inch pots, the curve might be 7 inches

a mixture of all sorts, and the habit has been quite unmanageable; for, to keep the plant within bounds, frequent trimming has been necessary, and this involves cutting away the best blooming part of the plant. *L. compacta*, on the other hand, requires no trimming, but will form a dense line of very dark blue, and for a front row in a ribbon border, or for mixing along with other contrasting colours—such, for example, as Golden Pyrethrum, in carpet bedding, it is quite unique. All it requires is, during the growing season, to open the plants a little in the centre and gently push them flat on the ground, which will induce them to spread.—J. ANDERSON, *Hill Grove, Kidderminster.*

THE AUTUMN ROSE SHOW AT BRIE-COMTE-ROBERT.—No. 2.

To take up the subject where I left off in the last number of the Journal, I will turn next to some of the other interesting features in the Show. I have already said in my last that both the large tent and the grounds outside were laid out in winding walks, with raised beds of flowers set in grass. If the grass had been like our good English lawns it would have added a great charm to the whole; but we do not see good lawns in France, and the effect was produced by fine seeds sown and coming up very evenly, but the grass was not intended to be trodden upon. Among the beds inside, the most noticeable were—first, a bed of varieties of Begonias. The *Begonia boliviensis*, of which there was also a large bed by itself outside, was exceedingly well done; and besides this, inside was *Sedum Ingrami*, *ascotiensis*, a fine, tall, red variety, and another fine variety quite new to me, called *Emerond*; this had a large red flower opening wide, showing many of its flowers upright, and one I measured was 3 inches across, each petal very broad. This is the largest-flowered *Begonia* I have yet seen, and if as free-flowering as it seems to be, a very great acquisition to any garden.

There were several very fine collections of ornamental plants, chiefly of the size for house decoration. Among them *Draconas* in many varieties, the old *terminalis* and *Cooperi* being still among the best; then *Cordylines*, *Carex*, *Aspidistra*, *Crotons*, &c. The Palms were shown in a separate group by themselves, but I did not notice any which are not pretty well known in England.

There were several groups of *Pelargoniums*, both double and single *Zonals*. Though not being an admirer of double *Zonals*, still I looked carefully through them, and did not see any improvement on the older sorts exhibited there, as *Marie Lemoine*, *Marie Rendatler*, &c. There were two good pinks, *Merveille de Lorraine* and *Impératrice Eugénie*, but Mr. Laxton's seedlings are certainly finer in quality of pips to any I saw here. One double one was called *Mistress Proloc*, which was evidently our *Mrs. Pollock* under an altered name transferred to a double. I was also amused among the single ones to see *Buisson Ardente*, or *Burning Bush*.

Among the collections of single *Pelargoniums*, the class for which, No. 13, was far the most beautiful collection of *Pelargonium Zonale inquinans*, not less than twenty-five varieties, not more than two plants of each variety; there were a great variety exhibited. Among those I had not seen before were *Mlle. Nilsson*, a pink *Nosegay*, good; *Deuil de Lorraine*, dark *Zonal*, fine colour but small truss; *Lansandgo*, like *Duchess* (*Donald Beaton's* variety); *Madame Dureau*, a fresh pink, something like *Pearson's* new variety, *Comtesse Quarto*; *Mexico*, a cerise; *Lady Kulam* (*sic*), fine scarlet, white eye, (?) *Lady Cullum*; *Anno Pastry* (*sic*), a large-petalled salmon *Nosegay* of the stamp of *Lizzie*, and one or two others. I am not, however, inclined to think them any advance on existing varieties we have in England; indeed, Mr. Pearson's Hybrid *Nosegays* among the Hybrid *Nosegays*, and Dr. Denny's, Mr. George's, Mr. Paul's, and Mr. Laing's, and others among both *Zonals* and Hybrid *Nosegays*, have made such rapid strides lately, that it will, in my opinion, be very difficult to obtain any very great improvement now. Among old friends I saw well shown were *Jean Sisley* (which, by the way, has been exceedingly good with me both spring and autumn this year, but failed very much during some hot weeks in July, as many of the pure *Zonals* do, from casting its petals), *Leonidas*, *Jean Valgean*, *Firedy*, *Striking*, *Merrimac*, *Le Grand*, the last not up to the mark, *Madame Hoste*. The effect of the masses of *Pelargoniums* in mixed colours was very good, but some of the beds which were outside the tent were much dashed with a heavy rain, which came on about 2.30, and soon found its way inside the tents as well, making all the walks very wet and puddly, reminding me painfully of the Birmingham Exhibition.

Among other beds outside the tent were some fine collections of *Cannas*, some very tall in flower, others dwarfed, and in many shades of foliage. The beds of double *Zinnias*, especially one, were very fine, some of the heads very perfect. This is a flower which evidently requires warmth to bring it to perfection, and,

EXHIBITION FRAUDS.

It was with considerable interest that I read in your issue of July 31st a paragraph by Mr. W. Paul on exhibition frauds; and now that the subject has been again referred to in a letter by M. Sisley, I am desirous of adding my protest against a system, the working of which I have had abundant opportunities of observing. The honest exhibitor will, I think accept the exposure made by Mr. Paul as a timely one.

The practice of borrowing plants for exhibition has in places with which I am acquainted become so general, that it is regarded as a matter of very slight importance. An evil which I have noticed in connection with it is this: when persons who themselves practise this kind of fraud, or connive at it in others, are placed in office, false awards and other forms of favouritism have not unfrequently been the result.

With M. Sisley I believe that interest in trade is not in the smallest degree favoured by such frauds, but more than this, they who practise them show their utter disregard of principle.—S. WALTERS, *Hilperton Nurseries, Trourbridge.*

LOBELIA COMPACTA, OR CRYSTAL PALACE BLUE.—I think the superior qualities of the above-named plant for bedding cannot be generally known, otherwise we should not see so many speciosa seedlings used. These have very much deteriorated of late years, being neither one variety nor another, but only

I think, would be well worth growing with care for sub-tropical gardens at Battersea Park or elsewhere, as the varieties in colour are now becoming more marked, and some of the colours very glowing.

Among the cut flowers, which if my friend, "D., Deal," had been with me there would have been a detailed report, were long lines and banks of Gladioli. These were massed rather like the beautiful bank which Mr. Kelway showed at Manchester, but clustered much nearer together, and it was difficult to examine the individual spikes, and I had not time to take down the names of the best. There were also Dahlias in great variety, a good selection of Asters, some Verbenas, which were much injured by the wet weather; some good spikes of Phlox decussata, &c., but I need not stop to particularise.

Outside in a sort of boundary to the ornamental garden were fine and interesting examples of trained fruit trees as cordons, pyramidal, candelabra-shaped wall trees trained on wires, fan-shaped, horizontal, upright, and cordons; tall standards trained fan-shaped and horizontal, for covering the upper spaces of walls (and of these there were some remarkably fine specimens), double cordons for espaliers, &c.

On the right annexe were several collections of horticultural instruments, especially pruning tools, as scateurs, saws, knives, &c. Then came two long tables covered with fine fruit shown in large collections; for instance, the first collection of Pears I looked at contained fifty-one varieties, the next forty-seven, and so on. The Apples and Pears had chiefly been grown on cordons and espaliers. Among the sorts I noticed especially good were, among Pears, Doyenné Sterckmans, Nouveau Poiteau, Colmar des Invalides, Beurré Hardy, very fine; Fondante des Bois, Bon Chrétien, Unique, and Williams's. Beurré Gris, Beurré Superfin, Reine d'Hiver, Prince Albert, Louise Bonne de Jean, Louise Bonne d'Avranches, generally known with us as Louise Bonne de Jersey; Bon Chrétien, Napoléon, Suzette de Bavay (our Aston Town), Doyenné St. Michael, Belle Auvergne, St. Michel Archange, Triomphe de Louvain, Alexandre Laubric, Autumn Crassane, very fine; Duchesse d'Angoulême, very fine; Colmar d'Artemberg, Joséphine de Malines, Beurré Bachelier, &c.

Among Apples were Reinette du Canada, and also a beautiful striped variety of the same called Reinette du Canada, Panachée, Alfriston, Belle Duhois, very fine, one Apple the size of an ordinary Green-fleshed Victory of Bath Melon; Reinette de Versailles, Reine de Reinette, Ribston Pippin, the best of all, one Apple wonderfully fine; Cadeau de General, Baldwin, Alexander, quite a picture in point of colouring, &c.

There were some good Peaches shown, but not so many as I expected; very few Nectarines comparatively; a great number of the Grapes of the country, and a fine collection of eighteen varieties of Grapes shown by M. Bergman, gardener to Baron de Rothschild, at Ferrière, a hothouse collection, backed-up by five or six very good lines, Mr. Bergman having for some time learnt English Grape and Pine growing at Chatsworth.

There were some fine collections of Plums also shown, though in no great variety, the Reine Claude de Bavay predominating.

To turn to the vegetable department, I need not enter into detail upon the ordinary vegetable, but will mention some peculiarities, among which were enormous Gourds (Potirons), one weighing 66 kilogrammes, the kilogramme being nearly 2 lbs., another 63, and another 60. Another very peculiar Gourd was the Turban, looking like a large yellow loaf quartered, striped with red, and placed on the top of a round flat one, the four quarters at the top bending over towards the centre and bulging out at the side. Then there were large Black Spanish Radishes, about the size of a medium long red Mangel Wurtzel. Very fine Aubergine, or fruit of the Egg Plant, in varieties. Snake Cucumbers more than 6 feet long, and twisting about like a real snake. Potatoes in great varieties, one exhibitor showing 120 varieties, among which were our Yorkshire Lapstones, and a dish called Lapstones, wrong named, which were really American Early Rose; a good Kidney called La Certiere, De Bretonneau, large, round, looking like a good Potato, and one very curious and ugly-looking Potato, called Crapeau Nouvelle, or the New Toad, which certainly deserved its name. Many of our known varieties of English Potatoes, as the Margolin or Ashleaf, Chare Jaune, or Yellow Shaw, and others were shown very small, and in many were traces of disease. There was a fine assortment of Endive, which are much used for salading, and also Eschalots and different varieties of Onions, but I need not enter upon any detail about the other sorts.—C. P. PEACH.

KENT LABOURERS VERSUS NORTHERN MINERS.

LET me state that my impression of Kent, gathered from a ten-days stay in one of its most beautiful localities, is exactly the opposite of Mr. Witherspoon's. I was charmed with the county, its people, and its productions, and feel sure, if Mr. Witherspoon had seen what I saw in my short sojourn, any remarks he may have made would have smoothed "D., Deal's,"

fur, instead of, as was natural, putting his back up. On returning to the coal pits of Durham I really had some compassion and feeling for the Israelites when they remembered the Onions, Leeks, Cucumbers, &c., which they had had in Egypt; Kent was my Egypt. I need say nothing respecting the north country and the Kent labourer, but the latter, though he has less wages and less beef, has other gifts more conducive to the well-being of his county.

"Yes, in the poor man's garden grow
Far more than herbs or flowers—
Kind thoughts, contentment, peace of mind,
And joy for many hours."

—J. N.

WASHINGTON AS A CULTIVATOR OF THE SOIL.

At a recent meeting of the Norfolk Agricultural Society (Virginia) Mr. Hope detailed the following particulars relative to General Washington:—It is my intention to take you to the estate of the Father of his Country, and to show you George Washington as a Virginia farmer of the last century. I begin first with Mount Vernon, where, indeed, I shall linger for the greater part of the time I have allowed myself in illustrating his system of agriculture. This estate consisted of the Mansion House farm, on which, as its name indicates, his residence stood. Then, attached to it were the following:—Union Farm, Muddy Hole, Dogue Run and River. These estates, at the time of his death, contained an aggregate of 8027 acres, as may be seen by reference to his will, and a water front of over ten miles in extent. He owned lands in Fayette and Washington counties equal to 4614 acres; on the Ohio and Great Kanawha, 32,373 acres, which land, in his own language, was "the cream of the country," and here he had a river front of fifty-eight miles. In addition, he had a tract of 1200 acres on Four Mile Run, then the Round Bottom opposite Pipe Creek, fifteen miles below Wheeling, containing 587 acres, with two miles and a half of river front, and 234 acres at Great Meadows on Braddock's Road, a line which will for ever remain associated with the courage and sagacity of Col. Washington when on the staff of that gallant but unfortunate commander. In addition, he acquired by his marriage with Mrs. Custis control of 15,000 acres of land and three hundred slaves, for which information I am indebted to the President of our State Agricultural Society; I need not say I mean Major-General W. H. F. Lee, who now resides at the White House, where his ancestress was married to Washington. In addition, he owned lands in Pennsylvania, in Gloucester, and in the Great Dismal Swamp, which he personally surveyed, and out of this examination and his report thereon grew the company which is now in existence in the city of Norfolk. Finally, he owned lots in Williamsburg, Richmond, Manchester, Fredericksburg, and Alexandria. You will observe that I have been only able in part to give you the extent of his possessions, but we see that he owned or managed as a fiduciary during the most vigorous years of his life, an aggregate of 61,214 acres, and that his riparian ownership amounted to seventy miles and a half.

Having given you this general and imperfect view of his possessions, a very great part of which were its primeval forest, to which on a more formal occasion I might have ventured to give some colouring, I return to the Mount Vernon estate as it was in 1762. At that time it contained 3260 acres under cultivation, and was worked by the following force of hands:—

	Men.	Boys.	Women.	Girls.
Mansion House farm	12	6	—	4
Muddy Hole farm	3	—	9	—
Ferry farm	7	4	18	—
River farm	8	—	18	19
Dogue Run farm	6	—	8	2
	—	—	—	—
Total force, 126.	38	10	53	25

The above is taken from his manager's report for April 14th, 1792.

Going a step further I find in a letter to Arthur Young, of England, dated Philadelphia, December 12th, 1793, that the General described his estate as follows, and Mr. Irving, in his charming life, has copied in full the paragraph from which I quote a part:—"No estate," says the General, "in United America is more pleasantly situated than this. It lies in a high, dry, healthful country, three hundred miles from the sea, on one of the finest rivers in the world. A husbandman's wish would not lay the farms more level than they are. The

river, which encompasses the land the distance above mentioned (ten miles), is well supplied with various kinds of fish at all seasons of the year, such as shad, herrings, bass, carp, perch, sturgeons, &c., and several valuable fisheries appertain to the estate—the whole shore, in short, is one entire fishery." The separate farms were divided into fields, numbered from one to seven, the better to enable him to carry on the wise system of rotation in crops to which he so rigidly adhered. Having arrived at some conception of the topographical and other advantages possessed by the Mount Vernon estate, it cannot fail to interest this assembly to know how it was stocked at the date above mentioned. In the letter already quoted he says on the four farms there are forty-five draught horses, twelve mules, 317 cattle, oxen included, 631 sheep, and "many hogs;" "but," says he, "as these run pretty much in the woodland, which is under fence, their number is uncertain." Such was the estate. Of its illustrious owner I shall presently speak, but only in his character of Cincinnati at the plough, an instrument, by the way, which he was known to fashion on one occasion with his own hands in order to instruct his smith.

But before going further, gentlemen, permit me to indulge in a brief episode. I think it can hardly fail to interest you, as you are all absorbed in a study of the great question of labour and immigration. At that date (1793) a movement looking to the introduction of English-speaking settlers in Virginia was on foot in Great Britain, and Washington's correspondent, to whom the General wrote the letter I have just quoted, addressed him on this subject. In the reply to his foreign correspondent the General says:—"Few ships of late have arrived from any part of Great Britain or Ireland without a number of emigrants, and some of them, by report, very full-handed farmers." But, at that time eligible lands in the settled parts of Pennsylvania, Maryland and Virginia, commanded prices ranging from \$20 to \$40 per acre, which I gather from a letter of his to Sir John Sinclair. This price, I fancy was more than the yeomen cared to pay in any number, while the labourers were driven off by a consideration suggested when the General remarked, with far-reaching sagacity:—"It deserves consideration if the mixing of whites and blacks is advisable." And here by way of illustrating the price of land in Virginia in '94, I pause a moment to light up my dry details and badly adjusted quotations with a little gleam of romantic history. "Within full view of Mount Vernon," writes the General, "separated therefrom by water only, is one of the most beautiful seats on the river for sale, but of greater magnitude than you seem to have contemplated. It is called Belvoir, and belonged to George W. Fairfax, who, were he now living, would be Baron of Cameron, as his younger brother now is, though he does not take upon himself the title." Thus you see, gentlemen, that a kinsman of the gallant guardsman, the Lord of Greenway Court, who ended his eventful life in Virginia, abandoned his rank, and renounced a title among the most honourable of the British Empire. The prose of this story is found in the fact that this estate was then in the market at \$33.33 per acre, a sum equal to at least \$100 of our currency.

For his daily life and habits at Mount Vernon I must refer you to the pages of Irving, where all the life and movement and colouring which I exclude from this paper will be found combined in a vivid picture. I only remark that like a good farmer he rose at dawn, and was one of the very few grandees in the colony or infant Republic who personally looked after his own affairs. He was fond of field sports, and kept a pack of hounds, which he followed with hearty enjoyment; but this exhilarating sport was always made a matter of incidental amusement and not a pursuit, as was unfortunately but too common with the gentry of that period.

I have shown you the magnitude of the estate on which he lived, and I now, by your permission, will show you how he systematically increased its area and productivity. This he did by reclaiming heads of creeks and inlets just as we may do here. In his directions for managing Union farm, he says: "Although I may find myself mistaken, I am inclined to put the other prong of this swamp into meadow, and have directed the mole to be pursued to accomplish it. Next to this let as much of the inlet in field No. 2, as can be laid dry for the purpose be put in corn, and when this is effected, planted in grass. As the field comes round all the inlets may be prepared for grass if circumstances will permit. The inlets at the ferry might be brought into excellent meadows at very little expense; but to dwell on the advantages of these would be a mere waste

of time." So also in speaking of the River farm he said: "And as the fields come into cultivation, or as the labour can be spared from other work, the heads of all the inlets in them must be reclaimed and laid to grass, whether they be large or small." This gives you some idea of his judicious system. But on this point let the great farmer speak in his own language: "A system," he says, "a system closely pursued, although it may not in all its parts be the best that could be devised, is attended with innumerable advantages. The conductor of the business in this case can never be in any dilemma." Again he writes: "Nothing can so effectually obviate the evil of mis-directed labour, or lost time, as an established system made known to all who are actors in it."

In ordering the construction of a barn at Dogue Run, a barn said to have been the best in America, he issued this order: "Make the bricks at the place and in the manner directed, and let there be no salmon bricks in that building." Thus you see from great questions of statesmanship and the growth of the largest tobacco crops—crops grown on the York and on the Shenandoah, and the Potomac—down to the smallest matter, he was full of careful thought. On this subject General Washington says in his directions to his nephew, George A. Washington, in 1787: "It would be of great advantage if a certain part of the force of each plantation could be appropriated in the summer, or early part of autumn, to the purpose of getting up mud to be ameliorated by the frosts of winter for the spring crops which are to follow."

But with all this minute care, judicious economy, and accurate utilitarianism, Washington had an eye to the beautiful, as is shown by his love of trees and flowering shrubs, for as we learn from a letter of his to Mr. Jefferson, he had a botanical garden of his own, to which he was greatly devoted. In evidence of his fondness for trees we find him writing an order to one of his managers to save him all the honey locusts possible, and in the fall to plant them on the ditches, where they are to remain, says he, about 6 inches apart, one seed from another. Again in directing certain work, he says: "The Cedars are not to be cut down, but only trimmed, and other trees left here and there for shade."

Again he writes: "In clearing the whole of this ground let all the Ivy and flowering shrubs remain on it over and above the clumps and other single trees where they may be thought requisite for ornament." I might go on thus, gentlemen, at great length in my quotations; but in reproducing the words of Washington it is not necessary to multiply them on this or any other subject.—(*Prairie Farmer.*)

NOTES AND GLEANINGS.

The following satire in the *American Agriculturist* is well deserved:—"We are not, after all, up to our English brethren in devising names for horticultural fixtures and appliances. Does frost injure your Peach trees? Then grow them under the 'Portable Fruit-tree Crymboëthus.' If this is not sufficient protection, cover the glass with 'Frigi-domo,' and increase the temperature inside by means of a 'Calorigen.' Should the trees grow out of bounds, you can shorten them with an 'Averruicator;' and should scale, mealy bug, and the like molest, you have only to apply some 'Phytosmegma.'"

— We regret to have to announce the DEATH of M. BARELLET-DESCAMPS, the eminent French landscape gardener, who, under M. Alphande, conducted the garden embellishments of modern Paris. The event took place at Vichy on the 12th inst., and was caused by disease of the heart, from which he had been long suffering.

FLOWERS FOR OUR BORDERS.—No. 17.

SOLLYA LINEARIS (LINEAR-LEAVED SOLLYA).

THE Sollyas are by no means the most striking features in the flora of the Australian continent; but they are neat in their habit, and of easy management. They are all of scandent growth, but do not generally exceed 5 or 6 feet, and may easily, if thought desirable, be kept down to 2 or 3 feet by stopping. Their evergreen character gives them an additional value, and their lively blue flowers are so freely produced from the end of May up to a late period, that one is surprised they are not more generally seen by the side of the Fuchsia and Geranium. The oldest and best known species is the *S. heterophylla*, with leaves considerably broader than those of linearis, but with smaller and paler flowers. The only other species with which we are acquainted, in addition to the three first named,

is the *S. Drummondii*, with very small leaves and flowers, much inferior in interest to those of the other species.

The *Sollyas* are usually treated as greenhouse plants, where they thrive with but little attention, and upon the window they will flourish quite as well as in the greenhouse. They are, however, so nearly hardy, that wherever a south wall can be afforded them they will grow to much greater height than in pots, and produce a profusion of flowers. In the south of England, and also in Ireland, the *S. heterophylla* has been known to live for several years with very little protection. They would not, however, resist severe frost unless well matted up; and even in mild winters we would advise the same precaution. When the plants are left out-doors, it will be prudent to strike a cutting in early autumn, and preserve from frost. As they are of rapid growth, the loss of a specimen can be easily replaced. The soil best suited to them is a mixture of peat and loam; some cultivators dispense with the peat.



Sollya linearis.

When grown as window plants they require a rather large pot, and plenty of water during the summer. The plants generally throw up shoots from their base, the first three or four joints of which, if taken off when a little ripened, will readily root under a small bell-glass or tumbler, and produce flowers the following season. Seeds are produced freely by all the species, and they may therefore be readily increased by this means.

The long seed-pods, a group of which is represented in our plate, are remarkable for hanging upon the plant at least a year before they are ripe, so that the fruit of the previous year is generally seen in company with the flowers of the current season. The seeds are surrounded by a resinous pulp, as in most other plants of the order Pittosporaceæ, of which the Pittosporum is the type, and from which circumstance the name of that genus is derived—from *pitto*, resin, and *sporun*, a seed.—(W. Thompson's *English Flower Garden*, Revised by the Author.)

ORIGIN OF RUBUS IDÆUS, THE GARDEN RASPBERRY.

Our cultivated Raspberry is an importation from Europe. Our native Red Raspberry (*R. strigosus*), however, is so near it that the specific distinctness has been in doubt; and specimens from British America and the Rocky Mountains certainly occur which a botanist must needs refer to *R. Idæus* itself. In his studies of the European Rubi, Professor Areschoug (in "Botaniska Notiser," 1872, and in a translation by himself in

Trimen's "Journal of Botany," April, 1873), makes prominent and important the fact that *R. Idæus* has no near relative; or, in other words, is the sole Raspberry in Europe; but in mode of growth, in the bark, &c., as well as in the fruit, accords with American species; with one of them so closely that all who have come to the conclusion that species have a history must needs infer a community of origin. Areschoug concludes accordingly, that "this species did not originally have its home in Europe, but its origin is to be found in the east of Asia—viz., Japan and the adjacent countries, or perhaps in North America." It is one of the members of that old boreal flora, as we suppose, now mainly East Asiatic and North American, which has found its way to, or held its place in, the north of Europe, somewhat exceptionally. Both *R. strigosus* and *R. Idæus* inhabit Japan and Manchuria, and Maximowicz regards them as forms of a common species. Professor Areschoug adopts the now familiar idea "that the Asiatic and North American floras have reciprocally mixed with each other by passing Behring's Straits and the islands which in its neighbourhood form a bridge between the two continents," which is a partial explanation of a problem that has to be treated far more generally, now that we have reason to believe that this flora formerly filled the Arctic Zone.—(DR. A. GRAY, in the *American Journal of Science and Arts*.)

PLAS NEWYDD.

RESIDENCE OF THE DOWAGER LADY WILLOUGHBY DE BROKE, ANGLESEA.

No. 2.

THE house stands on a terraced eminence. The view from the terrace is beautiful, grand, and extensive; looking over a lawn sloping before it down to the woods which crown the bold cliffs of limestone, and across the Menai Strait to the wooded shore beyond, flanked by the mountain range of which Snowdon forms a portion. A vista has been cut through the woods to the left, so that the pillar crowned with the statue of the Waterloo Marquis of Anglesey may be seen in the far distance. It is about midway between the mansion and the Menai Bridge. It is a column 100 feet high, with a railed gallery around its summit, commanding one of the finest of panoramic views, for the rock on which it is erected is 260 feet above the sea level. The name of that rocky eminence, *Cras y Dinas* (the Hill Fortress), is appropriate to the military hero whose memorial it bears. The colossal bronze statue is the work of Mr. Noble. The lawn sloping from the terrace before the mansion-front is tastefully decorated with flower beds, the arrangement, planting, and culture of which testify to the skill of Mr. Wright. Our engraving furnishes a perspective view of the beds. It is from a photograph by Mr. Ambrose, of Beaumaris.

Mr. Wright most obligingly furnished us with a ground plan of the flower beds, but they are too numerous and too intricate for us to have engraved. Nor would an engraving give even a slight idea of the intense richness and beauty of the arrangement; it must be seen to be appreciated.

The stove represented in our engraving is small—26 feet by 18 feet, but in it Mr. Wright has contrived to cultivate the largest variety of plants we ever noticed in so confined a space. The plants are literally crowded, yet not one is unhealthy. There are two tanks 4 feet 4 inches, planted with Water Lilies, &c.; bed between, Palm in the middle, filled up with *Lycopodium*, variegated *Begonias*, *Sanchezia nobilis*, *Dracenas*, Ferns, &c. Climbers in Stove:—*Allamanda Schottii*, *Pergularia odoratissima*, *Ipomœa Learii*, *Stephanotis floribunda*, *Passiflora princeps*, *Bougainvillea glabra*, *Stigmaphyllon aristatum*, *Lagerstrœmia indica*. On Pillars:—*Begonia fuchsoides*, *Coleus Her Majesty*, &c. And in the greenhouse, also of diminutive size, are *Jasminums*, *Maréchal Niel Rose*, *Tacsonia Van-Volxemi*, *Heliotrope*, *Kennedy Comptoniana*, and *Camelias*. On the back wall—*Pelargoniums*, *Fuchsias*, *Coleus*, *Ferns*, *Begonias*, *Celosias*, *Balsams*, &c.

One of the peculiarities of the flower garden we must not omit; it is a remnant of the old style of bedding, and deserves not to be obliterated, having the beds enclosed by flat very broad edgings of Box instead of grass.

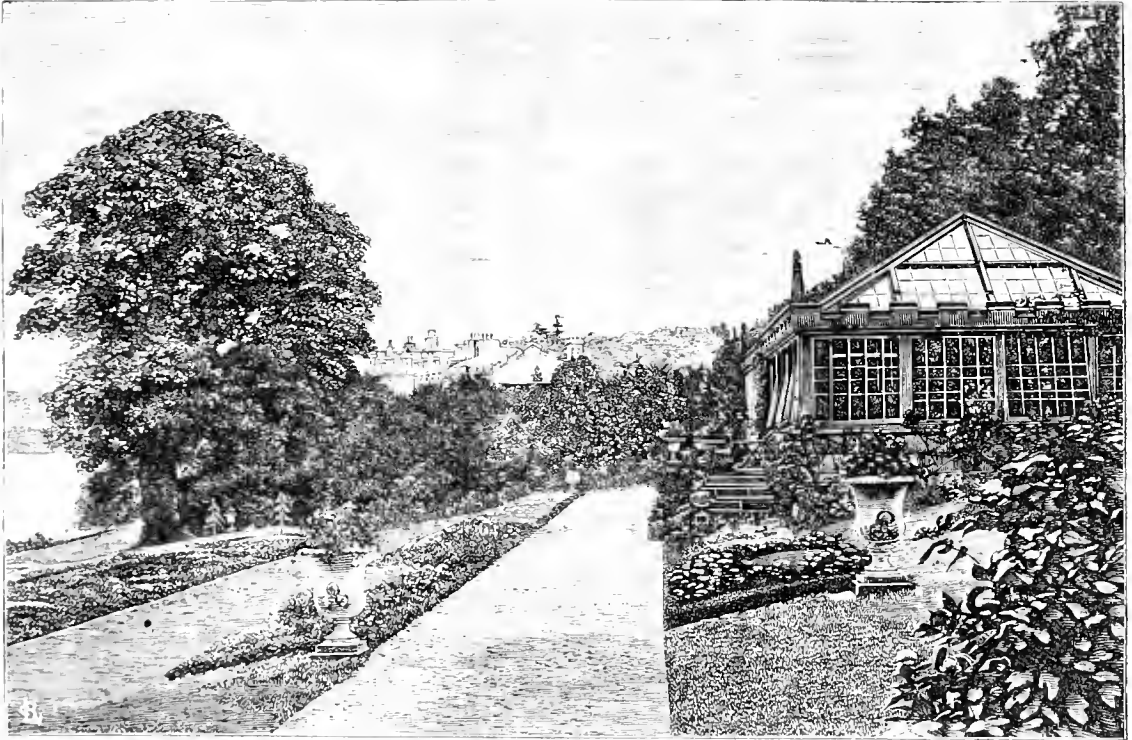
About three-quarters of a mile from the mansion is the head gardener's house, and it not only is such a residence as is fitting for the man who is the best educated man attached to an aristocratic establishment, but deserves a special notice for its own merits. It is a fine old house, with walls so thick that

each window is in a recess 2 feet deep. We are of opinion that it was the residence of Morus Gruffyd, who was the representative in Parliament of Beaumaris during Edward VI.'s reign, and who then lived at Plas Newydd.

At some distance from the gardener's house is the kitchen garden and orchard, the former occupying two and a half, and the latter two acres, the whole enclosed by a 10-foot wall. One observation applies to both—their tenants are productive, vigorous, and well cultivated. The trees in the orchard are full standards, and chiefly Apples. Although protected by the wall and a wood at a short distance, these fail to shelter effectually the trees from the S.W. gales; and as these, of course, sweep the Apples from the trees, the borders by the walks in the kitchen garden have been wisely planted with bush Apple trees about 5 feet high. Of these Mr. Wright told us the most productive are those trained like a cup, the centre branches being removed, for the circle of branches bears well

both on its inside and its outside. The crop on all was abundant.

The walls are well clothed with Plums, Pears, Cherries, and a few Apple trees. Of the last-named we especially noticed a Ribston Pippin, so fruitful and so healthy as to suggest that the complaints we hear of its being worn out are occasioned by the trees being subjected to an ungenial temperature. The Pear trees were all well loaded, and one, Green Chisel, had on it the heaviest possible crop. One wall, 130 feet long, devoted to Plums, has trained against it Victoria, Washington, Green Gage, Purple Gage, Coo's Golden Drop, Denbigh Seedling, Orleans, White Magnum Bonum, and Red Magnum Bonum. They were all heavily laden. In the kitchen garden is a ribbon border—1, *Cerastium tomentosum* and *Viola cornuta* alba; 2, *Geraniums*, various sorts, chiefly scarlet; 3, *Yellow Calceolaria*; 4, *Ageratum mexicanum*; 5, *Crystal Palace* Scarlet *Dahlia*. The front row of *Cerastium* and *Viola* produces one



PLAS NEWYDD.

of the most softened of tints by the blending of the white and blue flowers.

Long could we linger further over our reminiscences of this

and other attractive places and persons in this too-little-visited Welsh county, but we hope we have published sufficient to induce others to participate in its kindness.

WORK FOR THE WEEK.

KITCHEN GARDEN.

As the summer crops are removed, manure and dig or trench the ground before the autumn rains commence; in stiff soils this is of the greatest importance. Weeds are at this season very troublesome, if any have been allowed to drop their seeds during the summer. The autumn-sown crops, such as Carrots, Onions, Spinach, &c., must be kept clear of them, otherwise they will be soon overrun by them. Remove or dig-in all decayed leaves, and all litter that affords harbour for slugs. Cut down the flower-stems of the late plantations of *Artichokes* as soon as done with, and keep the plants free from dead leaves. Continue to plant-out the main crops of *Cabbages* as recommended last week; keep the late seed-beds free from weeds. The green pods of the large sorts of *Capaciums* should be gathered if there is any apprehension of frost. Slightly thin the autumn-sowing of *Carrots*, and keep it free from weeds. As soon as the main crops are full grown they should be taken up. The *Cos* plants cultivated in the forcing house must have every attention paid them, much of their future success depends on their growth at this time while the sun has some little power

and influence on vegetation. Keep the main shoots tied to the trellis, and when they reach the top of the house stop them, but not before; slightly sprinkle the plants every fine day with a fine rose on the syringe. If green fly makes its appearance, smoke the house with tobacco. Plant some of the Cabbage kind of *Lettuce* for winter use into frames as they become unoccupied. The soil in which they are planted should be very light; give but little air till the plants begin to grow. Prick-out on a sheltered border some of the *Cos* kinds previous to planting them where they are to remain through the winter. Slightly thin the autumn-sown *Onions* when they are a few inches high. Immediately the main summer crops have done growing pull them up and house them when dry. Cut down a portion of the spring-sown *Parsley* so that it may shoot again before winter. Put some good roots to plant in the forcing house for furnishing a supply during the winter.

FRUIT GARDEN.

Preparations should be immediately made for planting fruit trees. Where old trees are rooted-out the soil should be removed for a considerable distance round and to the depth to

which the roots are allowed to run, and replaced with good fresh loam, not highly enriched with manure, which only induces rapid growth when the young trees are young, and afterwards premature decay, which is partly brought on by the use of the knife and partly by the plethoric state of the tree, which is one of the great causes of canker and other diseases. If dung is used it should be in a state of entire decomposition and well mixed with the loam. If old trees are to be taken up and replanted, the soil in which they are again to be planted may be rather richer than for young trees. As soon as the fruit is gathered from wall trees wash them with the garden engine, which will greatly benefit them by destroying myriads of insects which usually attack them while the fruit is ripening, and which is particularly the case this season. Remove all foreright and misplaced shoots, so as to allow the sun and air to ripen the young wood. Destroy suckers of fruit trees. Continue to gather ripening fruit.

FLOWER GARDEN.

Where extensive alterations and improvements in pleasure grounds are contemplated, the sooner they are proceeded with after this time the better. There are many advantages in commencing early, for much more work can be done in a given time now that the ground is in a workable condition than after the rains of winter have set in; and not only can much more be done, but it can be performed in a more satisfactory manner. Again, by commencing early we have the choice of the nurseries for such plants as are required, and there is a better chance of the transplanted shrubs succeeding, because if the autumn is mild they will strike root at once, and if it is not mild they will get so firmly fixed in the ground as to receive little injury. New ground work should always if possible be got over before Christmas, and all planting should be completed by the middle or end of November. Choice evergreens, especially if removed from nursery beds, I prefer transplanting in April. The last and, perhaps, the greatest advantage of autumn planting is, that it sets the gardener's hands at liberty for spring work, and this, if anything like high keeping is desired in the grounds, is essential. Seeds of many sorts of hardy annuals may now be sown; they will be found to flower much finer and earlier than those sown in the spring, particularly the Larkspur, Eschscholtzias, Nemophilas, &c. Cut down the flowering stems of herbaceous plants, but not the leaves growing from the crowns of the plants. Keep the beds free from litter and dead annuals. Tulip seed may now be sown in shallow pans or boxes, covering it very slightly. Continue to make additions to your collection, always preferring quality to quantity. Now is a most excellent time to take off and pot Carnation layers. See that there are no wireworms in the compost; there is nothing like the grower's eye to detect these mischievous depredators. Do not delay another week the formation of beds of Pinks for next season's exhibition.

GREENHOUSE AND CONSERVATORY.

Everything in the conservatory should be clean and sweet; the plants should never be crowded, therefore little air is wanted through the ventilators while the plants are at rest; indeed, letting in strong currents of air after this time does a good deal of mischief by drying the soil in the pots too much, and thus rendering large doses of water necessary when none should be wanted. Plants in sitting rooms now require a very different treatment. Housemaids will ventilate their rooms as long and as often as they can, and make large fires in cold weather very much to the injury of plants, which must have water freely every day, and should be changed as often as the stock will permit. House the Orange trees which have been standing out during the summer, clean the leaves if necessary, and fresh-surface the soil in which they are growing. Fresh-surface and tie-up the plants in the general collection as they are, but in the house the pots should also be washed.

STOVE.

But little water should now be given to Cactaceous plants, very little will also suffice for Crinum, and all plants of succulent growth; ligneous plants must not be allowed to be quite dry, but if they have only just sufficient to keep them alive they will be the more likely to flower in the spring when an increase of heat and moisture is given them.

PITS AND FRAMES.

In about another fortnight the season for propagating will be gone by, therefore where sufficient stock is not already put in there is little time to lose. Plants that are standing out to be hardened should be so arranged as to be readily covered in case of frost which may now be expected, and choice plants in beds which it is intended to take up and pot should also be protected on cold nights. By the middle of September Violets should be planted out in pits within a few inches of the glass, afterwards to be well watered; lay half an inch of very dry soil over the surface in order to keep down the damp until the plants are firmly established and inured to confinement. Pots of Mignonette must also be protected from rain, but they should not be kept close. Heliotropes often get too strong about this time if they are in the open air; when this happens they never flower so

freely in winter, a short allowance of water with some covering will soon check them. China Roses of all classes that have been close-pruned in August should now be encouraged in pits, and they will soon begin to bloom.—W. KEANE.

DOINGS OF THE LAST WEEK.

OUT-OF-DOORS work is very apt to get behind during continued wet weather, and there is nothing to be gained by working outside while it rains; but in most gardens of any note there is always plenty to do in the potting-shed or under glass; so that if one department lags behind, another is being brought forward. During wet weather we have been making flower sticks, labels, pegs, &c. The last few days have been fine; wind from the south-west, with a rising barometer, gives us some assurance that this weather will continue.

FRUIT AND KITCHEN GARDEN.

We have been gathering many sorts of Apples and Pears in good condition, except that some of the best specimens have been injured by tomittis; these active little birds are very useful while their time is employed hunting for insects, but they rather annoy us just now. They puncture a small hole with their bills close to the stems of the finest Pears, these specimens speedily decay either before or after they are gathered. The slug caterpillar has been abundant this year, especially on Pear and Cherry trees. On some trees three-parts of the leaves have been skeletonised by them. Some persons throw dry lime on the leaves to destroy them; this it will do if they are smothered with it, but many escape. The most satisfactory way is to squeeze them with the fingers; when the trees are not very large a man will go over a considerable number in a day.

We hoed over all the fruit-tree borders, even if there are but few weeds to destroy. Any larvae of insects are brought to the surface, where they become a prey to birds. At this season of the year all weeds are raked off, as hoeing them up will not destroy them if they are left on the ground afterwards. All vegetable crops are looking well; hoeing and earthing-up when necessary is all the attention they require.

FRUIT AND FORCING HOUSES.

We are renewing the border of the early vinery—at least adding to it. When the Vines were planted at first the borders were not made out to their full extent, but a wall was built in front of the border to prevent the roots from travelling into what was thought unsuitable soil. However, on digging down outside of this wall, which was well built in cement, it was found that a large proportion of roots had got outside of this wall. It was one of our early houses, and there is a fact worthy of notice in connection with this house—it was found that, notwithstanding all our precautions, the Grapes were liable to shank. The border was carefully covered up with litter annually in the autumn, and shutters were placed over this to throw off the winter rains and melted snow, the drip being allowed to fall outside of the above cement wall. Of course an investigation showed that this drip was falling on the most active rootlets, and icicles have been hanging to the boards when the Grapes have been swelling and stoning, with a night temperature of 65° and 70° inside the house. In the future we will have a gutter to carry off the water from the shutters, and we fancy that this is the cause of the Grapes shanking. In late houses, where Grapes are hanging, we have removed all plants that require water, and when the weather is unfavourable, the atmosphere charged with moisture and no wind, the fires are put on in the day time. We must be watchful to cut out all decaying berries as soon as they are observed. The Grapes look as if they would not keep well this year. The Muscat of Alexandria, Mrs. Pince, and Lady Downe's are keeping better than Alicante, Trentham Black, and Royal Vineyard.

CONSERVATORY AND PLANT STOVE.

Orchids are now being freely exposed to the sun in order to mature the growths for the ensuing winter. Indeed, after the middle of September it is not necessary to shade any plants, except any subject that may be unhealthy and requiring peculiar treatment, or choice plants in flower. We have carefully looked over all plants that are subject to be attacked with bug, and washed them with soft soap and water. We have a plant of *Stephanotis floribunda* trained to the rafter, and in a position where it cannot be syringed without injuring the plants underneath, and it is very difficult indeed to keep it clean. Where such plants can be syringed twice a-day during summer, they ought not to be infested with vermin. Now is the time to get all stove plants thoroughly cleansed, and see that the plants are not crowded too closely together. Rather dispose of the surplus in some way than allow the house to be crammed with plants, as if this is the case it will not be possible to obtain good specimens of anything. Some specimens of hardwooded greenhouse plants were not potted at the time they ought to have been done, and when this is delayed late in the autumn the plants do not succeed well the following season, and much care is necessary as regards after-treatment, especially watering.

We are careful to see that the ball of earth is thoroughly moist before it is turned out of the pot in which it has been growing, and also as regards the compost. This should also be moderately moist, and composed for the most part of turfy peat. Heath, Azaleas, Epacris, &c., are potted exclusively in peat; *Leschenaultias*, *Staticee*, *Phacocoma*, &c., have a small proportion of turfy loam added; in all cases the compost should be made sufficiently porous with the addition of a little silver sand. It is also necessary to place the drainage very carefully into the pots, and cover the rocks over with the most turfy part of the peat or loam. The loose earth should be shaken from it; no plant will thrive if the drainage is stopped, and plants that have to remain long in the same pot should have the most careful attention. At this season of the year the freshly-potted plants should not be watered for, say, from three to six days after being potted. We allude to hardwooded plants. *Pelargoniums*, *Primulas*, *Cinerarias*, and other things of that nature are not so particular in that respect. Stage *Pelargoniums* have started into good growth, and the young shoots being fairly formed, we had them shaken out of their pots and repotted. Our largest specimens are grown in 8½-inch pots. When they are shaken out we re-pot them in 7-inch; this allows of their being repotted again in February into 8½-inch pots, which is sufficiently large for a plant 18 feet in circumference. The compost in which these are potted is turfy loam four parts, one part rotted manure and leaf mould in equal proportions, and some silver sand. The compost is made rather lighter at the first potting. *Cinerarias* and *Calceolarias* have also been repotted; we use the same compost for them as we do for the *Pelargoniums*, except that more leaf mould is added to make it lighter.

FLOWER GARDEN.

The recent fine weather has been beneficial to the flower borders, and have caused them to assume quite a gay appearance; the flower beds would be much improved if the decaying and dead flower trusses could be removed. All we have been able to do has been to run the lawn mower over the grass; the turf is very fresh and green. Cold nights are now setting in, the thermometer falling dangerously near the freezing point; we took warning, and are now getting in cuttings of all such tender plants as *Coleus*, *Iresine*, *Heliotropes*, &c.; but *Verbenas*, *Ageratum*, and all other bedding plants except *Calceolarias* will be put in at once. We have no other accommodation for them as yet except a cold frame; this will not suit the tender plants, they will be removed to a house where they can have a little artificial heat in a few days.—J. DOUGLAS.

TRADE CATALOGUES RECEIVED.

Drummond Brothers, 52, George Street, Edinburgh.—*Select List of Hyacinths, Early Tulips, &c.*

John Harrison, Grange Nursery, Darlington.—*Catalogue of Flower Roots.—Descriptive Catalogue of Roses.—Descriptive Catalogue of Fruit Trees, Hardy Ornamental Trees and Shrubs.*

TO CORRESPONDENTS.

"We request that no one will write privately to any of the correspondents of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to *The Editors of the Journal of Horticulture, &c.*, 171, Fleet Street, London, E.C.

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. *As also* never to send more than two or three questions at once.

N.B.—Many questions must remain unanswered until next week.

FRUIT FOR GARDEN NEAR BIRMINGHAM (Z. G.).—*Desert Plants*—St. Etienne, Green Gage, Jefferson, and Late Rivers. *Cooking Plants*—Early Rivers, Prince of Wales, Victoria, and Belle de Septembre. *Peaches* in your locality will be very uncertain producers unless protected by glass. *Frogmore Golden*, *Early Grosse Mignonne*, and *Early Victoria*.

ZINC TUBES FOR SHOWING ROSES (C. J. D.).—Where can they be bought for 4s. per dozen? Our correspondent says that the tinman at Chester has the most excellent charge for them. Some of our readers will oblige us by sending an answer.

CUTTING PINES AUSTRIACA (*Isabel*).—It is not desirable to cut back the shoots of this Pine, as it does not produce new shoots freely, and not in all cases any. Sometimes the branches cut in the back to the stem, especially when there are branches left unshortened. We therefore do not advise the further pruning of this tree than the cutting away of irregular growths. Let them grow.

ROSES ON MANETTI STOCK (*Omega*).—Roses on the Manetti stock may be safely moved in the autumn after budding, or, as you express it, whilst the buds are dormant; but they are much better left a year to grow before removal. The part of the stock above the bud should be cut down to it in spring when

the buds are beginning to grow. Cuttings of the Manetti Rose put in in November will be fit to bud next year in July or August.

TERRACE WALK—FLOWER GARDEN—TERRACE SLOPE, &c. (*Subscriber*).—Twenty-one feet from the house to the edge of the slope is an ample width for a super-terrace, but you have allowed only 9 feet of this space for the walk. A terrace walk ought always to be regarded more as a promenade than an ordinary garden path, for which reason and from its important and commanding position it should be 12 feet wide. It is not at all uncommon to see them much wider. In your case an additional 3 feet may very easily be taken from the turf and border, which latter after it is prepared for the creepers we would turf over. A narrow open border next a lofty mansion attests the dignity of its appearance, to which and to the prevalence of an air of repose, turf contributes so materially. As the terrace walk is 3 feet below the floor line, the level of the flower garden should not be more than 2 feet or 2 feet 6 inches below it, or the flowers will not be visible from the windows of the ground-floor. All the slopes should be of a uniform angle of 30°. A wall along the foot of the slope and about 3 feet from it would, we think, be an improvement to the flower garden, but it is not desirable to continue it in the American garden. The design for the flower beds, while it ought certainly to be strictly geometrical, should be of simple outline. Nothing makes a better appearance than a combination of circles and oblongs, with some groups of circles or modifications of that form, taking care to maintain a due proportion of turf. The size of the beds is a matter for the decision of individual taste. We prefer large beds and a massive style of colouring for a terrace garden. For the American garden we would have large beds of a somewhat long irregular outline, having high raised centres, with broad margins of turf and walks winding among them. There might be a grand central mass surrounded by other beds, or the entire series of beds might spring from or surround a central plat of turf. The general arrangement of the grounds is very good, and the situation of the groups is admirable; the shrubs between it and the drive should be of a dense growth and evergreen character, while the planting of the detached groups should be of a more mixed style, so as to include flowering and berry-bearing plants.

NEWLY-PLANTED STRAWBERRIES FRUITING (J. M. W.).—The Strawberries you have planted this month will give you some fruit next year; but to produce fruit the season following planting, the runners ought to be put out in July. It will be the second year that you will have a full crop on your plants put out so late as September, though if the autumn be mild you may have a fair crop next season. We should mulch between the rows and around the plants, but not cover the leaves with littery manure. It will save them from frost to a great extent.

REMOVING SOIL FROM GERANIUMS AND FUCHSIAS (*Idem*).—We presume by Geraniums you mean show *Pelargoniums*; and those should have all the soil shaken from them after they have been cut down and have made shoots at least an inch long, repotting them, after trimming in the roots a little, in a less size of pot. If they are zonal kinds they should have the soil shaken from them in spring, after they have been cut-in and are breaking afresh. The *Fuchsias* should have the old soil shaken from them in spring after they have been cut-in and have made fresh shoots an inch or so long. In all cases of dis-rooting, the plants ought not to have pots larger than those they were in before, but a less size if the roots can comfortably be placed in them, shifting into a larger size when the pots are full of roots.

PEAS TO YIELD A DISH DAILY (*Amateur, Dublin*).—To afford a dish of Peas daily from June to September inclusive, you will need to sow at each time two quarts, which with good cultivation will meet your needs, unless you require very large dishes, when you must sow more.

LILIUMS AND GLADIOLUS FOR RHODODENDRON BEDS (*Mrs. Henderson*).—*Liliums*: *L. auratum*, *L. Brownii* or *japonicum*, *L. bulbiferum*, vars. *umbellatum*, *erectum*, *fulgidum*, *grandiflorum*, *incomparabile*, and *maculatum*; *L. can. album*, *L. chalcidonicum*, *L. excelsum*, *L. eximium*, *L. longiflorum*, *L. lanceifolium* or *speciosum* and its varieties *album*, *punctatum*, *roseum*, *rubrum*, *rubrum* *erectum*, *corymbosum* *album*; *L. superbum*, *L. tenuifolium*, *L. Thunbergianum*, varieties *atrosanguineum*, *auratum*, *aurum* *maculatum*, *grandiflorum*, *multiflorum* *grandiflorum*, and *L. tigrinum*. *Gladioli*:—*Brencheleyensis*, *floribundus*, *ramosus*, *Bowleianus*, *gandavensis*, and varieties *Ne plus Ultra*, *Napoleon III.*, *John Bull*, *Powles*, *Auna Paulowna*, and *Queen Victoria*.

EARLY FLOWERS (W. H. T.).—Messrs. Standish, Royal Nurseries, Ascot; and Mr. Buck, Covent Garden Market. We know no special growers of them in Paris.

Climbing Roses (H. H.).—Jules Margottin, *Jaune d'Or*, *General Jacqueminot*, and *La Reine* are the best in your list for pillars, but none are sufficiently free except *Jules Margottin*, *General Jacqueminot*, and *Alba floribunda*. A few Hybrid Perpetuals for pillars are—*Antoine Dubocher*, *Anna Alexieff*, *Alpande de Rotaher*, *Gerthe Baron*, *Cantifolia rosea*, *Charles Kniphard*, *Comtesse de Jaucourt*, *Docteur Spitzer*, *Edward Morren*, *Elizabeth Vigneron*, *Empereur de Marie*, *Felix Genero*, *François Fontaine*, *Glory of Waltham*, *John Hopper*, *La Brillante*, *Louise Olier*, *Madame Fillon*, *Madame Charles Joligneaux*, *Mrs. John Berners*, *Prince de Joinville*, *Vicomte Vigner*, and *Victor Verdier*. The poles for training the Roses to are best of iron. Standard Roses as creepers are best trained to an umbrella wire trellis.

TREE SHOOT BROWNED (A. R. P.).—The tree if at all like the specimen sent us, is, we fear, beyond recovery. It appears scorched by lightning, and will probably die. It is unlikely the rats, by burrowing under the tree, would produce the effect your specimen exhibits, though it is possible they may have gnawed the bark or outer covering of the roots, and so destroyed them. All we can advise is the loosening of the surface soil from the stem as far as the branches extend, and giving a top-dressing an inch or two thick of turfy loam and leaf soil in equal proportions. We fear it will be of little use.

HARDY PERENNIAL (R. S. S.).—It is probably *Pentstemon Murrayanus*, but the specimen was very much smashed by the post-office punches. The *Begonia* we do not know, and we cannot undertake to name varieties of them, they are too numerous and too much alike. *Begonias* thrive in a compost of sandy peat, fibrous light loam, and leaf soil in equal parts, broken up rather small but not sifted, well mixed, adding a sixth part of silver sand, with good drainage. The plants should be kept rather dry during the winter, especially if wintered in a greenhouse, in which they should have the warmest part.

PEAT SOIL FOR PLANTS (*Idem*).—The peat used for fuel is not the kind suitable for plants. That for plants is of a very different nature. It is found on the dry parts of upland moors, and is covered with a thick growth of heath, the soil being full of its fibrous roots and containing a good quantity of fine white sand. It is the very opposite with that used for fuel, which is of a soft spongy nature, containing very little sand and partaking more of

the nature of a bog soil than peat. It is better to buy the peat you require of some nurseryman in your locality than to procure it of a questionable quality.

BLANCHING ENDIVE (J. A.).—There are various ways of effecting this. We take-up ours on the approach of frost, place in cold frames, and cover with mats, admitting a little air daily in mild weather, but not removing the mats. About three thicknesses of mats are needed to keep the frame dark enough to blanch the Endive. Against the sides of the frames litter is placed in severe weather so as to keep out frost. It takes about three weeks in winter to blanch this plant, so that we place in a two-light frame and expose fully in mild weather; but during wet, though the lights are kept on the plants, they are tilted so as to throw off the wet, at the same time air is admitted, continuing this treatment until wanted. Then cover the lights permanently with mats, laying over the Curled a mat inside directly on the plants. Of the Batavian we tie the leaves loosely together, and if the weather be severe we line the frame with hot dung. A two-light frame affords us a salad daily for three weeks to a month, and it takes three weeks to blanch. Another plan is to place pots over the plants and cover them with ashes, and over this other covering in severe weather; and another plan is to take up the plants, and tying the leaves together cover them with sand, but we prefer sawdust. We like the former by far the best, for we find to blanch well some growth is needed, and how can this take place in a cold place or out of doors? Pots are very good early in autumn, and even tying the leaves together, or covering the plants with pots, or the curled kinds with slates or tiles. In very severe weather we blanch in a Mushroom house.

PRUNING OVERGROWN LACRELS (Quatt).—Cut them in spring just when they are beginning to grow, or, if cold and frosty, at the beginning of April. Cut them in as much as you like; they will break freely either from old or young wood, and especially from the base.

ADIANTUM FARLEYENSE (P., Rochdale).—A Cucumber house is not too moist for this finest of Maiden-hair Ferns, and the temperature is very suitable. Sudden changes of temperature or of atmosphere are not good; but on this score alone we see no objection to its being grown well in a Cucumber house, shade being given the plant from bright sun.

PLANTING FLOWER GARDEN (C. T. H.).—The writer you refer to is too ill to bear correspondence. If you had our volume, "Flower Garden Plans," you would be able to be your own arranger. Its price is 5s.

FURBISAS (J. W.).—The flowers are above the average size and stout, but the colours are of the oldest varieties.

COREOPSIS (Romalho).—If the plant is a Coreopsis, it is unusual for the ray florets to be tubular.

PELARGONIUM (W. G.).—You must consult our advertisement columns.

ROOT-PRUNING FRUIT TREES—APPLES ON PARADISE STOCK (A Subscriber Eight Years).—Root-prune all your fruit trees at once. As you have practised summer-pruning, the soil in which the trees are growing must be too rich. Place some rotted turfy loam amongst the roots; they will grow freely into it, and will not have so much tendency to travel outwards. Root-pruning the trees now will cause them to form fruit buds this year, but it will check the luxuriant growth next summer, and cause the formation of fruit buds. Pears and Apples are treated alike as regards root-pruning. The leaves of the different sorts of stocks vary very much. The spray you enclose may be of the English Paradise stock.

BEST MARKET PEARS (G. C.).—Beurre Diel and Marie Louise are both good Pears to grow, but Marie Louise does not succeed on the quince. Marie Louise d'Ecce does as a bush or pyramid. The most profitable sort is Marie Louise de Jersey and Williams's Bon Christian. If you want more variety try Poyoune du Conice, Beurre Hardy, Beurre d'Anaulis, and Mar-chal de la Cour. Easter Beurre we have proved to be one of the best for diagonal cordons on a wall. Beurre Diel also succeeds.

PEACHES AS STANDARDS (R. N.).—Some varieties succeed as standards out of doors, notably Early York and Royal George, but the blossoms are very liable to be destroyed by spring frosts. One season we gathered a very good crop of fair fruit from an Elrige Nectarine growing as a standard in a shrubbery, and we are informed that a gentleman gathered a crop of fruit annually from a seedling Peach trained as an espalier, and planted in light soil facing south in a garden in Essex.

CAMELLIAS AND AZALEAS FOR SMALL GREENHOUSE (J. N.).—Camellias Double White, Imbricata, Countess of Orkney. Azaleas Alba, Verschaffeltii, Due de Nassau, and Brilliant.

ADDS (A. B.).—We know of no mode of preventing their coming into your garden from the adjoining common except by a low wall, or a very small-washed galvanised iron net.

NAMES OF FRUITS.—We have continued weekly to announce that we cannot name more than six specimens for any one applicant; yet, despite this announcement, we have almost every week boxes and baskets, to identify the fruits in which would occupy hours of our time. As we write this we have one package containing forty-two specimens, another containing thirty-eight, and a third thirty-six, besides eight other packages containing a dozen or more. We now say peremptorily that we cannot spare the time for naming so many, and that under no circumstances can we name more than six specimens of each fruit. (*Centurion*).—Apple No. 1, Pott's Seedling. The other not recognised. (*E. S. H.*).—Apples: 3, Manks Codlin; 6, Sturmer Pippin; 22, Waltham Abbey Seedling; 29, Cellini; 32, Duchess of Oldenburg; 35, Hawthornden. *Pears*: 3, Red Doyenne; 4, Easter Beurre. (*Pomona*).—1, Dumore; 2, White Doyenne; 3, Passe Colmar; 4, Beurre Gandy; 5, Duchesse d'Orleans. (*H. Curtis*).—1, Louise Bonne de Jersey; 2, Red Doyenne; 4, Winter Nellis; 6, Beurre de Louvain; 7, Nouveau Poiteau; 8, Beurre Châtrgeau. (*F. E.*).—1, Brown Pippin; 2, Gravenstein; 3, Not known; 4, Dumelow's Seedling; 5, Cellini; 6, Kentish Fillbasket. (*Viator*).—C. llin. (*G. E. B.*).—1, Pysnowood Russet; 2, Like Cellini; 3, London Pippin; 4, Herefordshire Pearmain; 5, Court of Wick; 7, Yellow Ingestrie. (*G. W. R.*).—1, Fearn's Pippin; 3, apparently Nonsuch. All the others are quite unknown to us, and appear to be local varieties. (*F. P. G.*).—1, Doyenne du Conice; 2, Easter Beurre; 3, Brown Beurre; 4, Belle de Louvain; 6, Williams's Bon Christian; 7, Van Mons Leon de Clerc. (*F. J. W.*).—Apples: 2, Winter Hawthornden; 4, Federal Pearmain; 7, Hawthornden; 8, Herefordshire Pearmain; 10, Autumn Pearmain; 11, Sugarloaf Pippin. *Pears*: 3, Catillac; 1, Beurre Duc; 5, Louise Bonne de Jersey; 7 and 10, Glou Moreau; 9, Williams's Bon Christian. (*H. H. H.*).—1, Baxter's Pearmain; 2, Ganges; 3, More de Montagne. (*W. L. W.*).—*Pears*: 1, Williams's Bon Christian; 2, Beurre Le-fevre; 4, Beurre d'Anaulis; 7, Easter Beurre; 8, Gansel's Bergamot. *Apples*: 2, Wornsey Pippin; 3, Nonpareil; 6, Federal Pearmain; 7, Henry

Morning; 9, Dumelow's Seedling; 11, Sykehose Russet. The Plum is Goliath. (*J. Green*).—The small Apples are Golden Russet; the other not recognised. (*G. Diss*).—Nelson Codlin.

POULTRY, BEE, AND PIGEON CHRONICLE.

INTERNAL INJURIES OF FOWLS AT SHOWS.

THE other day I had a letter from a well-known breeder of Light Brahmas, which directed my attention again to a subject I have often had in my thoughts. It was concerning a hen, one of his best, which although not fat had a constant tendency to go "down behind" after any little extra tax on the system, such as washing for exhibition, and she had not laid for several months. On feeling carefully, a moderate-sized tumour could be detected in the bowels, which there is very little doubt was the cause of whatever was wrong.

What struck me was, that I have come across various cases of this kind during the last few years, and I think in every one I can call to mind they relate to hens which have been at least once exhibited, and in most cases to regular show hens. I have a strong conviction that the cause in nearly every case has been the rupture of an egg within the body, or some other injury which prevents the egg being laid, and it thus forms the nucleus of a tumour. Such an accident is not necessarily immediately fatal, as I have seen stated. I once had a hen which I knew had a ruptured egg following a case of egg-bound, but she lived for months; the egg on her death being found to have formed a rather hard tumour of somewhat the consistence of cheese, with the broken shell, or a portion of it, mingled with the yolk. But sometimes I believe the egg is not actually ruptured, but detached or semi-detached from the ovary before the proper time, and thus forms only the exciting cause of a tumour. From the accident occurring almost invariably to exhibited birds, it is my firm conviction that it is usually caused by injury at shows, and that a word on the subject may, perhaps, be of use. I do not mean wilful injury, or such as we have known to be produced by the careless use of sticks or umbrellas. That injury is caused in this way too can hardly be denied; and it would be a useful rule and grateful to exhibitors, which should require all such implements to be "left at the doors," a reform which might easily be carried into effect. Still I believe that injuries from this cause are comparatively rare, and that in the vast majority of cases it is mere careless handling which is in fault. We all know it is not always persons experienced in handling fowls who are entrusted with the penning of birds. Too often mere labourers are hired for the occasion, who know no more how to handle a fowl than how to breed one. Most of us know from our own past experience how very easy it is for an active and frightened fowl to slip out of hands not accustomed to hold such gentry, while even a fancier well accustomed to handling Bantams, may easily lose his grasp of a gigantic Cochin which gives a sudden and unexpected start. I have seen it happen often, and if the bird thus dropped comes down suddenly with the breast, or still worse, the bowels, on the edge of the poultry basket, internal injury is very likely to result. In most cases, no doubt, the shock is recovered from; but should the bird be, as must happen occasionally, on the very point of laying, rupture of the egg, or, if not, some permanent injury to the organs, is very likely to be the result. It is my firm conviction that this is the real cause of such cases as that of which the fresh example was brought to my notice.

The practical remedy is very clear. It consists simply of allowing no one to pen the birds, or to pack them, who is not used to handling fowls. If such a man cannot be found or cannot be afforded, there is still an obvious remedy—let such of the committee as have the requisite experience do this work themselves. That used to be the good old fashion, and there are not even now wanting committeemen who keep it up; but too many are merely "ornamental," and do little beyond walking up and down with a badge at their button-holes, leaving the work to hirelings, who are naturally careless of the property entrusted to their charge.

It is right to say that I have never myself had a bird injured in the way I state, but I feel sure that in mentioning the matter thus generally, with no personal reference to anyone, I am speaking the feelings, and shall have the hearty good wishes, of many an amateur.—L. WRIGHT.

BIRMINGHAM SHOW CATALOGUES ISSUED WRONGFULLY.

THERE is one thing requires to be changed at Birmingham. It is a crying evil. While the Judges are at work among the poultry they are beset by people with their catalogues open at the classes they are judging, and are favoured with remarks and information they do not wish for. There should be no catalogue in the place while birds are being judged. The few

pounds gained by the admission of the public during judging, are dearly bought by the loss of that stern discipline that has hitherto kept the "mother of shows" above suspicion. If the public is to be admitted, at least withold catalogues fill the awards are made. All will rejoice who have the welfare of the Show at heart, and those who manage it may rest assured they will offend none of their supporters.—Q.

PRE-PUBLISHING JUDGES' NAMES—DRAGOON PIGEONS.

If the exhibitors of poultry and Pigeons who from time to time inundate our Journal with complaints of the non-publication of judges' names, would come to a general conclusion to follow the prevailing fashion, and strike against showing at any exhibition where the judges' names are not published a fortnight before the closing of the entries, I think there would be no question of committees attending to their wishes. As an amateur I should be very sorry to see dealers excluded from exhibiting, as I do not consider them so great an ogre to amateurs as your correspondents would have your readers believe. Taking the catalogues of several of our best shows, and scanning the list of exhibitors, I find that we amateurs come forth in good numbers to do battle at every exhibition where the committees are liberal in prizes and cups, and do not seek to make a private fortune out of the fanciers; as an example take the Bradford Show, with its 640 specimens of Pigeons alone. The dealers do not breed the good birds they show, and I think it is preposterous for amateurs to sell at heavy figures their best birds, and then try to deter the buyers from exhibiting.

As an exhibitor and fancier of Dragons, I should like to hear (through our Journal) the opinion of other fanciers as to the points of a real Dragon, as of late I find judges incline more to Dragons bred almost back to Carriers. Do fanciers consider a white-rumped Dragon able to win if correctly judged? I consider them foul-feathered birds, and as such they ought to be disqualified. I trust some fanciers of note will give us their opinion on the above points in Dragons.—BLACK JACOBIN.

AYLESBURY POULTRY SHOW.

This Show was held on the 16th inst. in the Market House, in connection with the agricultural show, and proved a great success, not so much from the number of entries, which, however, exceeded those of last year, but from the general superiority of the birds shown. Both old and young competed together, and, as will be seen, the latter carried off most of the prizes, as old birds now are generally out of condition. The day was fine and the attendance good.

Dorkings formed the largest class in the Show, nineteen entries. The five-guinea cup given by Mrs. Lee, of Hartwell Park, was awarded to a young pair of Dark birds of great size for this early period of the season, and in splendid condition. Second were a pair of Rose-combs, cockerel and hen. The third prize also went to a pair of chickens. In *Brahmas*, Lady Gwydyr performed the unusual feat of winning the cup for *Brahmas* generally with a fine pair of Light chickens, Mr. Ansell's well-known pair of old Dark birds being second. This award will, doubtless, give great satisfaction to breeders of the Light variety. *Spanish* were, as usual, only a small class. The cup pen were the only birds that were really good in comb as well as face. There were three classes for *Cochins*, Lady Gwydyr again taking the cup with a magnificent pair of Buff chickens, which, although evidently in their chickenhood, were of enormous size and grand colour. These birds were the gems of the Show, and attracted universal admiration; old birds were second. In Partridge, a grand pair of old birds were first, chickens second. A really splendid pair of chickens were second in Whites. The third-prize birds were only entered at 50s., and were at once claimed. Piles took the cup for *Game*, Mr. Matthews's beautiful pen of Black Red chickens arriving too late. In the variety *Bantam* class Gold-laced were first, and White-booted second. Mr. Fowler, as might have been expected, took the cup for Aylesbury *Ducks*, that for Rouens going to Mr. Walker.

DORKINGS.—Cup, T. C. Burnell, Michell's cr. 2 and 3, L. Patton, Hillmore, Tanton. *hc*, Rev. E. Barrum, Great Berkhamstead; O. E. Cresswell, Early Wood, Bagshot. *c*, Rev. E. Barrum.

BRAHMAS.—Cup, Lady Gwydyr, Stoke Park, Ipswich. 2, T. F. Ansell, Cowley Mount, St. Helen's. 3, Mrs. Tindal, Aylesbury. *c*, W. Mansfield, Cambridge.

SPANISH.—Cup, W. R. Bull, Newport Pagnell. 2, Mrs. Allsopp, Hindlip Hall, Worcester. 3, H. Feast, Swansea.

COCHINS.—*Buff*—Cup for best pen of Cochins, Lady Gwydyr. 2, J. K. Fowler, 2, C. H. Goodworth, Cheltenham. *Partridge*. 1, E. Tudman, Whitechurch, Salop. 2, J. K. Fowler, Aylesbury. 3, Capt. F. G. Coleridge, Wargrave. *hc*, Capt. F. G. Coleridge, Mrs. E. Prior, Welwyn. *White*. 1, R. S. S. Woodgate, Fombury, Tambridge Wells. 2, H. Beldon, Godstock. 3, W. Birch. *hc*, J. K. Fowler, C. H. Gurney, Jun., Aylesbury.

GAME. 1 and Cup, W. H. L. Clare, Tryeross, Atherstone. 2, J. Walker, Rochdale. 3, Mrs. Tindal.

FRENCH.—1, R. B. Wood, Uttoxeter. 2, J. J. Malden, Biggleswade. 3, J. K. Fowler. *hc* and *c*, Mrs. Tindal.

HAMBURGERS.—*Gold or Silver-pencilled*.—1, C. Bloodworth. 2, H. Beldon. 3, J.

Robinson, Garstang. *Gold or Silver-pencilled*.—1 and Cup, H. Beldon. 2 and 3, J. Robinson. *hc*, J. Messer, Reading. M. M. Cashmore, Loughborough. 3, J. Bantams.—*Game*.—1 and 2, R. Wingfield, Sidbury. 3, T. W. Anns, Clapham. *Any other variety*.—1 and *c*, M. Leno, Markyate Street. 2, R. S. S. Woodgate. 3, K. H. Ashton, Mottram. *hc*, Capt. F. G. Coleridge; G. Vigers, Hersham.

DUCKS.—*Aylesbury*.—Cup, 3, and *hc*, J. K. Fowler. 2, J. Hodges, Bienen.—Cup, J. Walker. 2, L. Patton. 3, J. K. Fowler. *Any other variety*.—1, M. Leno. 2, R. Wilkinson, Gifford. 3, J. Walker. *hc*, H. B. Smith, Droughton (2); J. K. Fowler. *c*, Mrs. H. J. Bailey.

DUCKS.—*Aylesbury*.—Cup, J. W. Hodges, Aylesbury. *hc*, W. Soton, Aylesbury. **SELLING CLASS**.—1, 3, and *c*, J. K. Fowler. 2, T. Kingsley, Tring.

JUDGE.—The Rev. Grenville F. Hodson, North Petherton, Bridgewater.

THE CREWE POULTRY EXHIBITION.

A QUITE unforeseen accident from the blowing down of the poultry tent, prevented the arrangements of the Crewe Poultry Show proving anything like as complete as they otherwise might have been; nevertheless, as the poultry at the time of this mishap were not penned, after some considerable delay the birds were properly placed, well fed and watered, without an injury to even a single specimen.

In *Game* the Brown Reds were decidedly the best of any, some few being very high-class ones. *Dorkings* were as good a class as any of this season, and the *Spanish* chickens were unusually fine well-shown pens. In *Cochins* it is only necessary to say Messrs. Tudman and Sidgwick were there with their well-known chickens. *Brahmas* were numerous, but mostly quite too young for showing, at least for two months hence. In the class for *French* fowls *Crèves* were first and *Houdans* second. Of the latter breed there were many excellent pens. In *Game Bantams* Mr. Entwisle obtained a great proportion of the prizes with birds of the highest merit. Silver-laced and Black Bantams were the winners in the Variety class for Bantams. Never were better *Hambourg* chickens shown than those of his Grace the Duke of Sutherland, whose birds were in the best of feather. The entry of Aylesbury and Rouen *Ducks* was of very superior character throughout, and of *Geese* and *Turkeys* few shows can boast a better display. In the Selling class Dark *Brahmas* and Light *Brahmas* were successful, but many pens of other breeds entered at much below their money value were among the competitors.

YOUNG BIRDS.

DORKINGS.—1, Mrs. Arkwright, Sutton Scarsdale. 2, Miss Davies, Chester. *c*, Mrs. Chiffely; J. Stott, Healey.

COCHINS.—1 and *c*, R. Hulse, Winsford. *hc*, J. Walker, Wolverhampton; W. Smallwood, Springfield.

COCHIN-CHINA.—1 and *hc*, E. Tudman, Whitechurch. 2, C. Sidgwick, Keighley. *c*, R. Scholes, Darnhall.

BRAHMA POOTRA.—1, C. Layland, Warrington. 2, J. H. Pickles, Birkdale. *hc*, Mrs. Arkwright; P. Unsworth, Loxton.

POLISH.—1 and *hc*, J. Fearley, Loxton. 2, P. Unsworth.

FRENCH.—1, R. B. Wood. 2, W. Dring, Faversham. *hc*, J. Pownall. *c*, C. Layland.

GAME.—*Black-breasted Reds*.—1, Duke of Sutherland, Trentham Hall. 2, J. Platt, Swaenlow. *Brown and other Reds*.—1, J. Postle, Nantwich. 2, J. Platt. *Any other variety*.—1, S. Jenson, Nantwich. 2, No competition. *Cockerel*.—1, S. Jenson. 2 and 3, J. Platt. *Pullet*.—1, C. W. Laxton, Nantwich. 2, J. Morrey, Wybanbury. *c*, J. F. M. Fitton, Ovenden; J. Mason, Worcester.

BANTAMS.—*Game*.—*Black-breasted Reds*.—1 and 2, W. F. Entwisle, Westfield. *hc*, T. Hindle, Little Budworth. *Any other variety*.—1 and *hc*, W. F. Entwisle. 2, S. W. Smith, Beckbury.

BANTAMS.—*Not Game*.—2, R. H. Ashton, Mottram.

HAMBURGERS.—*Golden-spangled or Pencilled*.—1 and 2, Duke of Sutherland. *Silver-spangled or Pencilled*.—1 and 2, Duke of Sutherland.

DUCKINGS.—*Rouen*.—1, J. Walker, Rochdale. 2, S. H. Stott, Preston. *hc*, W. W. Duncan, Moreton; T. Wakefield, Newton-le-Willows; P. Unsworth, Aylesbury. 1 and 2, J. Walker, Rochdale. *hc*, T. Scar, Tingswick; Mrs. M. Hobby, Darnhall; E. Shaw, Oswestry. *Any other variety*.—1, J. Walker. 2, T. Wakefield (Brown Call).

GOULDINS.—1, J. Walker. 2, S. H. Stott. *hc*, T. Coomer, Basford; E. Shaw. *c*, C. Richardson, Chorlton; R. Beckett, Hartford.

POULTS.—1, W. B. Eches, Whitechurch. 2, J. Walker. *hc*,—Trelfa, Weaver. *c*, J. Cowburn.

SELLING CLASS.—1 and 2, C. Layland. *hc*, J. Pownall (Crève-Cours). *c*, T. F. Lyon, Liverpool (Brown Red Game).

The Judges were Mr. Hewitt, of Birmingham, and Mr. Burgess, of Burleydam.

NEWCASTLE-UNDER-LYME POULTRY SHOW.

This was held on the 18th inst.

GAME.—*Black-breasted and other Reds*.—1, Duke of Sutherland, Stoke-on-Trent. 2, W. H. L. Clare, Fwyeross, Atherstone. *Any other variety*.—1, Withheld. 2, Duke of Sutherland.

SPANISH.—1, J. Walker, Standeford, Wolverhampton. 2, H. Wilkinson, Earby, Skipton. *hc*, E. W. Stratford, West Malling.

DORKINGS.—*Coloured except Silver-Greys*.—1, Mrs. F. S. Arkwright, Sutton Scarsdale, Chesterfield. 2, J. D. Hewson, M.D., Stafford. *hc*, T. Braden, Earby, Skipton. *Silver Grey or White*.—1 and 2, A. Darby, Fridesworth.

COCHINS.—*Cinnamon or Buff*.—1, H. Tomlinson, Birmingham. 2, C. Sulgwick, Keighley. *Brown, Partridge-feathered, or other varieties*.—1, T. Sheppard, Humberstone. 2, R. S. S. Woodgate, Fombury, Tonbridge Wells.

BRAHMA POOTRA.—*Dark*.—1, Mrs. F. S. Arkwright. 2, E. Kendrick, jun., Lichfield. *Light*.—1, H. Chawner, jun., Houndhill, Uttoxeter. 2, E. Kendrick, jun. *hc*, T. A. Dean, Marden, Hereford.

HAMBURGERS.—*Golden-pencilled*.—1 and 2, Duke of Sutherland. *Silver-pencilled*.—1 and 2, Duke of Sutherland. *Golden-spangled*.—1, Duke of Sutherland. 2, W. T. May, Wolverhampton. *Silver-spangled*.—1, Duke of Sutherland. 2, W. M. Ditcham, Walsall.

HOUDEANS.—1, H. Maskery, Leek. 2, W. Dring, Faversham. *hc*, R. B. Wood, Uttoxeter.

CRÈVE-CŒUR.—1, R. B. Wood. 2, W. Dring. *hc*, F. Lantour, Hexton, Amptill.

TURKEYS.—1, Rev. N. J. Edlby, Newbury. 2, F. E. Richardson, Bramshill, Uttoxeter. *hc*, L. Kendrick, jun.

GEESE.—1, Duke of Sutherland. 2, J. Lycett, Stafford. *hc*, E. Kendrick. *Ducks*.—*White Aylesbury*.—1, Duke of Sutherland. 2, H. Feast, Swansea. *Rouen*.—1, W. H. Crewe, Fwail, Derby. 2, R. Johnson, Kirkcaldy, W. W. King, E. Kendrick, jun. *Any other variety*.—1, J. Watts, King's Heath, Birmingham. 2, Duke of Sutherland. *hc*, R. S. S. Woodgate (Black). *ANY OTHER VARIETY*.—1, T. Boulton, Hanford, Stoke-on-Trent (Black Hamburgs). 2, Duke of Sutherland.

MIDDLETON (NEAR MANCHESTER) POULTRY SHOW.

This great annual Show of poultry has taken place once more with great success. Here we look forward to finding the first great contentions in all classes of young poultry. Those fowls which are prominent here are usually heard of again at many of our leading shows during the year. The Show being late in September, the owners of most yards of any note like to send here to compare as a test how they are likely to rank for the season. If not up to the standard, then, here is the chance if needed of buying.

The working Committee were well up to their work, and everything seemed to be done that was necessary for the well-being of the fowls. Worcester and the Staffordshire Poultry Shows being held the same day, took away several of our best exhibitors, or divided their pens, therefore the competition was not so severe and closely run as might have been.

The Judges were divided as follows.—Mr. Fielding, Game and Game Bantams; Capt. Heaton, Spanish, Dorkings, Brahmas, and Cochins; Mr. Martin, Hamburgs, Ducks, Geese, &c.; Pigeons by a local gentleman, which seemed to give general dissatisfaction. The judging of the poultry was very satisfactory.

In Game our principal exhibitors were well represented, but the cup for the best pen of cockerel and pullet was won with a grand cockerel good in all points, but we thought the pullet hardly up to the mark. In the cockerel classes the same owner was again first, and obtained the cup with a good coloured bird and grand style, but a little shy in the pen. No doubt when penned again he will show to more advantage. Several very good cockerels were shown in this class. Cockerels and pullets of Ducks and Piles we did not think well represented, the first going to a pen of rather indifferent Pile cockerels; Piles and Duckwings went to a grand Duckwing cockerel. This class was very fairly represented. In single Game pullets the competition was very severe, Black Reds, Brown Reds, and Piles being all well represented, the cup going to a most beautiful Black Red, free from any pencilling or ruddiness on the wings. The second prize was awarded to a very grand pullet. All the prizetakers were grand pullets. *Spanish* were deficient in many points considered necessary for a first-class bird. In the cockerel class one only was of sufficient merit for a prize. Pullets were better, the winning pens indicating by their appearance to be related in blood to Mr. Teebay's well-known strain. *Dorkings* of all classes had a great want of substance, and were deficient in all points to make a really good Dorking. The first-prize cockerel and pullet were a moderate pen considering the yard they came from. Cockerels were a little better represented. Pairs of Dorking pullets were the best of the Dorkings. The first-prize birds were a pair of very young but remarkably well-framed birds. They took the cup for the best Dorkings in the Show. *Brahma Pootras* were numerous and well represented, but nothing could approach the cockerel winning the cup. He was a massive good-coloured bird, and was admired by all the Brahma breeders. *Cochins* were well represented, and competition very severe. *Hamburgs* were not so numerously represented, but were good. The cup was won with a grand pen of Silver-spangled which no Hamburg breeder could find a fault with. Spangles, colour, and comb, and all other points good. *French Fowls* were but poorly represented, the cup going to a pen of *Croque Coqs*. The *Any other variety* included Polands, Malays, &c. In *Bantams, Game*, the first-prize cock was really the only good pen shown. Bantams, any other variety, were well represented, but we thought the cup might have been better placed. The Selling classes were but poor lots. *Ducklings* were well represented. The cup was won by a remarkably fine pen of Aylesburys. *Rouens* were both numerous and good. The first-prize birds were well coloured and heavy ducklings. *Goslings* were good. *Turkeys* were represented but by one very good pen. Many birds changed hands at good prices.

GAME.—*Black-breasted and other Reds*.—*Chickens*.—Cup, J. Fletcher, Stone-clough, Manchester. 2, F. Walton, Horncliffe, Rawtenstall. 3, T. P. Lyon, Liverpool. *hc*, W. H. L. Clare, Twycross, Atherstone; E. Mann, Wallfield, Manchester; J. Peet, Ormskirk. *Cockerel*.—Cup, J. Fletcher. 2, E. Mann, *hc*, J. Wood, Wigan; H. Ashton, Prestwich; E. Mann. *GAME*.—*Any other variety*.—*Chickens*.—1, F. Walton. 2, J. Fletcher. 3, E. Bell, Burton-on-Trent. *hc*, W. Huggan, Ulverston. *Cockerel*.—1, J. Fletcher. 2, J. Goodwin, Liverpool. *GAME*.—*Any variety*.—*Pullet*.—Cup, J. Fletcher. 2, J. Cox, Worcester. 3, S. Matthew, Stowmarket. 4, E. Bell. *hc*, J. Fletcher; C. W. Brierley, Middleton. 5, W. H. L. Clare. *SPANISH*.—*Chickens*.—1, J. Clews, Walsall. 2, W. Harvey, Sheffield. 3, Pallister & Hawkins, Topcliffe, Thirsk. *Cockerel*.—1, R. Halsall, Halwood, Liverpool. 2, Witheld. *Pullet*.—1, J. Boulton, Bristol. 2, J. Leeming, Broughton, Preston. *DORKINGS*.—*Chickens*.—1, Mrs. Arkwright, Sutton Scarsdale, Chesterfield.

2, J. Robinson, Garstang. 3, J. White, Waraby, Northallerton. *hc*, T. Statton, Whitefield, Manchester. *Cockerel*.—1, Mrs. Arkwright. 2, W. W. Rutledge, Storthend, Kendal. *Pullet*.—Cup, J. Fletcher. 2, J. White, *hc*, R. W. Richardson, Beverley; A. Darby, Bridgorth.

BRAMA POOTRA.—*Chickens*.—1 and 2 Mrs. Arkwright. 3, J. Pickles, Birkdale, Southport. *Cockerel*.—Cup, Horace Lingwood, Cretingham, Newtham Market. 2, J. Lyndal, Marr's Brook, Warrington. *hc*, J. H. Pickles. *Pullet*.—1, T. F. Ansell, Corley Mount, St. Helen's. 2, C. Layland. *hc*, Mrs. A. Wilkinson, Leicester.

COCHIN-CHINA.—*Buff and Cinnamon*.—*Chickens*.—Cup, C. Sidwick, Keighley. 2, W. A. Taylor, Manchester. 3, W. P. Richards, Erdington, Manchester. *Cockerel*.—1, W. A. Burnell, Southwell. 2, W. A. Taylor. *Pullet*.—1, W. A. Taylor. 2 and *hc*, J. Royle, Manchester.

COCHIN-CHINA.—*Any other variety*.—*Chickens*.—1, C. Sidwick. 2, J. S. Glesall, Northrop, Westmoreland. 3, W. A. Taylor. *Cockerel*.—1, W. A. Taylor. 2, J. R. Fowler, Aylesbury. *Pullet*.—1, W. A. Burnell. 2, W. A. Taylor.

HAMBURGS.—*Gold-pencilled*.—*Chickens*.—1, J. Bowness, Newchurch. 2, J. Robinson. 3, W. E. Clayton, Keighley. *Cockerel*.—1, J. Robinson, Lindley, Otley. 2, J. Wrigley, Middleton. *Pullet*.—1, W. Speakman, Nantwich. 2, J. Eowness.

HAMBURGS.—*Silver-pencilled*.—*Chickens*.—1, H. Smith, Keighley. 2, J. Robinson. 3, J. Bowness. *Cockerel*.—1, H. Smith. 2, J. Robinson. *Pullet*.—1, J. Robinson.

HAMBURGS.—*Gold-spangled*.—*Chickens*.—2, T. W. Oden, Middleton. 3, G. and J. Duckworth, Church, Accrington. *Cockerel*.—1, T. E. Jones, Wetherhampton. 2, J. Bowness. *hc*, J. Buckley, Taunton, Ashton-under-Lyne. *Pullet*.—1, J. Bowness. 2, T. May, Wolverhampton. *hc*, J. Oden, Tonge; T. W. Oden; T. May.

HAMBURGS.—*Silver-spangled*.—*Chickens*.—Cup, J. Fielding. 2, J. Robinson. 3, J. Robinson. *Cockerel*.—1, J. Fielding. 2, J. Robinson. 3, J. Robinson. *Pullet*.—1, J. Fielding. 2, E. Gill, Fearncliffe, Buncley. *hc*, J. Robinson; J. Davis, Cowhill, Oldham; J. Robinson; T. Smith, Keighley.

HAMBURGS.—*Black*.—*Chickens*.—1, N. Marlor, Denton, Manchester. 2, D. Lord, Stacksteads, Manchester. *hc*, C. Sidwick; J. Robinson; Stott & Booth, Huntley Brook, Bury. *c*, J. Holt, Middleton; Rev. W. Serjeantson, Acton Burnell Rectory, S. Stephenson. *Cockerel*.—1 and *hc*, H. Hoyle, Newchurch. 2, J. Bowness. *c*, Rev. W. Serjeantson. *Pullet*.—1, J. Bowness. 2, N. Marlor. *hc*, Rev. W. Serjeantson; H. S. S. Woodgate, Pembury, Tunbridge Wells; Stott & Booth. *hc*, W. Bell, Keighley; J. Lee.

FRENCH.—*Chickens*.—Cup, J. J. Madden, Biggleswade. 2, W. Dring, Faversham. 3, H. Feast, Swansea. *hc*, Mrs. Vallaria, Aymers, Suttonbourne. *Cockerel*.—1, Rev. A. J. L. D. Dobbin, Rodington Vicarage Nottingham. 2, W. Dring. *Pullet*.—1, Mrs. E. Williams, Ilanlys Berriew, Montgomeryshire. 2, B. Heald, Mapperley Plains.

ANY OTHER VARIETY.—*Chickens*.—1, J. Fearnley, Lowton, Newton-le-Willows. 2, Rev. A. B. Brooks, Sraarcliffe Rectory, Shawbury. 3, J. Robinson. *hc*, J. K. Fowler; F. Walton; P. Unsworth, Lowton, Newton-le-Willows. *Cockerel*.—1, P. Unsworth. 2, J. Fearnley. *Pullet*.—1, J. Fearnley. 2, P. Unsworth. *hc*, J. Hamilton, Openshaw, Manchester.

BANTAMS.—*Game*.—1, T. Barker, Burnley. 2, G. Hall, Kendal. 3, T. Sharples, Rawtenstall. *Cock or Cockerel*.—1 and 3, G. Hall. 2, T. Barker. *hc*, R. Brownhe, Townsend, Kirkcaldy, N.B.

BANTAMS.—*Any other variety*.—Cup, R. H. Ashton, Mottram, Manchester. 2, W. A. Taylor. *hc*, H. B. Smith; M. Leno, Dunstable; W. Harvey, Sheffield.

SELLING CLASS.—1, W. A. Burnell. 2, A. Bamford, Middleton. 3, R. Hutchinson, Littleborough. *Cock or Cockerel*.—1, C. W. Brierley. 2, W. A. Burnell. *hc*, T. Wakfield; H. Ashton. *Pullet*.—1, T. Whiting, Leven, Beverley. 2, C. E. Barnett, Biggleswade.

DUCKINGS.—*Aylesbury*.—Cup and 2, J. Walker. 3, R. Hutchinson. *hc*, J. K. Fowler; T. P. Carver, Langthorpe, Boroughbridge (2). *Rouen*.—1 and 3, T. Wakfield. 2, J. Walker. *hc*, J. Walker, Beckersham, Wigton; P. Unsworth; J. Walker, Kendal; S. H. Stott, Preston. *Any other variety*.—1, M. Leno. 2, J. Walker. 3, H. B. Smith. *hc*, G. S. Samsbury.

GOSLINGS.—1, J. Walker. 2, W. Penny, Preston. *hc*, J. Walker; S. H. Stott. *TURKEYS*.—1, J. Walker.

KETTERING POULTRY SHOW.

The following awards were made at the Northamptonshire Agricultural Society's Show, held at Kettering, on the 17th and 18th inst. :—

DORKINGS.—*Cock*.—1 and 2, J. Longland, Grendon, Northampton. 3, R. Wood, Clapton, Thrapstone. *hc*, K. Sykes, Gedding, Kettering. *Cockerel*.—1, J. Long and 2, Rev. E. Bartrum, Berkhamstead. 3, H. Yardley, Ermingham. *hc*, J. J. Sharp, Broughton, Kettering.

DORKINGS.—*Hens*.—1, Rev. E. Bartrum. 2, J. Longland, and 3, R. Wood. *Pullets*.—1, J. Longland. 2, Rev. E. Bartrum. *hc*, J. Chisman, jun., Winterbourne, Swindon; H. Yardley & H. Logan, Oundle.

SPANISH.—*Cock or Cockerel*.—1, W. V. Bull, Newport Pagnell. 2, C. Wright, Northampton. *hc*, T. Cook, Wellingborough. *Cockerel*.—1, W. R. Ball. 2, J. T. Parker, Northampton. *hc*, C. Wright, Northampton.

SPANISH.—*Hens*.—1, W. R. Bull. 2, J. T. Parker. *hc*, H. Yardley. *Pullets*.—1, J. T. Parker. 2, W. R. Bull.

GAME.—*Cock*.—1, S. Deacon, Oundle. 2, R. E. Duckering, Northorpe, Kirton Lindsay. 3, B. Cox, Moulton, Northampton. *Cockerel*.—1, B. Cox. 2 and 3, H. Logan, Oundle. *hc*, S. Deacon; T. Hancock, Northampton. *c*, G. W. Sanders, Wollaston, Wellingborough.

GAME.—*Hens*.—1, B. Cox. 2, S. Deacon. *Pullets*.—1 and 2, B. Cox. *hc*, S. Deacon.

COCHIN-CHINAS.—*Cock*.—1, W. A. Taylor, Manchester. 2, H. Yardley. *hc*, J. N. Beasley, Northampton. *Cockerel*.—1, W. A. Taylor. 2, J. Goodfiff, Hittingdon.

COCHIN-CHINAS.—*Hens*.—1, W. A. Taylor. 2, R. S. S. Woodgate, Pembury, Tunbridge Wells. *Pullets*.—1, J. Goodfiff. 2, W. A. Taylor. *hc*, A. F. Faulkner, Thrapstone (2).

BRAMA POOTRA.—*Cock*.—1, Rev. N. J. Ridley, Newbury. 2, M. Leno, Markyate Street, Dunstable. *hc*, H. Yardley. *Cockerel*.—1, G. R. Chettle, Weekley, Kettering. 2, J. S. Clarke, Oundle.

BRAMA POOTRA.—*Hens*.—1, Witheld. 2, A. F. Faulkner. *Pullets*.—1, M. Leno. 2, J. S. Clarke.

HAMBURGS.—*Cock*.—1, T. Love, Kingshorpe, Northampton. 2, Rev. R. M. Rogers, Northampton. *hc*, B. H. Bon. 3, W. Hunt, M.P., Oundle. *Cockerel*.—1, G. Thompson, Northampton. 2, T. Love.

HAMBURGS.—*Hens*.—1, T. Love. 2, E. Robinson, Kettering. *Pullets*.—1, A. F. Faulkner. 2, T. Love. *hc*, J. Foster, Kettering.

BANTAMS.—1, 2, and *hc*, Capt. T. Wetherall, Loddington, Kettering. *Any other variety*.—1, H. Yardley. 2, W. A. Taylor, Manchester.

ANY OTHER VARIETY.—1, Rev. N. J. Ridley, Newbury. 2, A. Faulkner. *GESE*.—1, S. Deacon, Oundle.

DUCKS.—*Aylesbury*.—1, Rev. C. Vernon, Grafton Underwood, Kettering. 2, M. Leno. *hc*, R. Wood; C. Richards, Glendon, Kettering. *Any other variety*.—1, M. Leno. 2, R. S. S. Woodgate. *hc*, J. Goodfiff.

TURKEYS.—1, M. Kew, Market Overton, Ockham.

SELLING CLASS.—*Cock*.—1, J. T. Parker, Northampton. 2, J. Sheffield, Great Oatley, Kettering (Grand). *Hens*.—1 and 2, B. Cox, Moulton, Northampton (Round Duck). *hc*, J. Foster, Kettering (Black Hamburg).

MISCELLANEOUS CLASS.—1, W. Nottage, Northampton (Black Spanish).

2. T. Hancock, Northampton (Brown Red Game). 3. J. Longland, Grendon, Northampton (Dorking). 4. T. Love.

PIGEONS.—*Any variety*.—1 and 4, T. Chambers, jun., Northampton (Dun and Black Carriers). 2. J. Martin, Kettering (Pouters). 3. H. Yardley, *hc*, H. Yardley (2); W. Nottage, Northampton (Blue Pouters); L. Watkin.

Judge.—Mr. R. Teebay, Fulwood, Preston.

NORTHALLERTON POULTRY AND PIGEON SHOW.

This Show, which was one of the sections of a grand agricultural meeting, was held on the 19th inst. The pens (which are substantial and made of wood, all excepting the front, which is a loose frame covered with wire netting), were very comfortable and the property of the Society. The entries, though good, were not so large as those of last year, partially in consequence of the lists being closed before the entries were received from some exhibitors. Of *Dorkings* only four entries, but the winners (chickens), were large and good. *Game* were more numerous, but poor. *Spanish*, *Cochins*, and *Brahmas* had many good pens, the first-prize birds in the two latter classes being chickens of good promise. *Polands* and *Hamburghs* were mostly in bad feather, though there were among them birds of many honours. In the Variety class *Crève-Coeurs* were first and *Sultans* second, both pens being very good. *Game Bantams* were numerous, and the winners (Black Red) nice birds, the first-prize pen containing a grand gamey-looking old cock. In the next class *Silver Sebrights* were first, and *White-booted* of great excellence second. *Rouen Ducks* were extremely good, but the *Aylesburys* only moderate; and in the Variety class *Black East Indian* were first and *Pintail* second. There were some large *Turkeys*, and the *Goslings* were also fine, *White Embden* winning the prizes.

Of *Pigeons* little can be said, and this will remain the case while only one money prize, and that small, is awarded in each class; but we would remind the Society that, if well encouraged, this is one of the best paying sections.

DORKINGS.—1 and 2, J. White, Warlaby, Northallerton, *hc*, W. Daville, Osmostrey, Northallerton.

GAME.—1, T. Fintoft, Newby, Stockton-on-Tees, 2, W. Bearpark, Ainderby Steep, Northallerton, *hc*, W. Youngusband, Darlington.

SPANISH.—1, T. Fintoft, 2, G. Holmes, Great Driffield, *hc*, H. Dale, Northallerton.

COCHIN-CHINA.—1, W. G. Purdon, Driffield, 2, D. & J. Ibeston, Whitby, *hc*, D. & J. Ibeston; F. Horseman, Boroughbridge.

BRABMA POOTRA.—1 and *hc*, Miss E. O. Powell, Bedale, 2, F. Horseman, Northallerton.

POLANDS.—1, W. Bearpark, 2, C. Walker, Boroughbridge, *hc*, Mrs. Lloyd, Northallerton.

HAMBURGHS.—*Gold-pencilled*.—1, G. Holmes, *Silver-pencilled*.—1, W. G. Purdon, Driffield, 2, G. Holmes, *hc*, G. Lennard, Wharfedale, 2, T. Fweedy, Thrusk.

HAMBURGHS.—*Gold-pencilled*.—1, W. G. Purdon, 2, D. Waller, *hc*, G. Holmes, *Silver-pencilled*.—1, W. Bearpark, 2, G. Holmes, *hc*, W. G. Purdon.

ANY OTHER VARIETY.—1, T. P. Carver, Lanthorpe, Boroughbridge, 2, W. G. Purdon, *hc*, J. Tasker, Wensley, Leyburn (Houdans), *hc*, W. G. Tancock, Ripon (Black-Crested-Courts), Hon. W. O. Powell, Bedale (Crève-Coeur).

BANTAMS.—*Game*.—1 and 2, W. C. Dawson, Whitby, *hc*, T. P. Carver; W. Bearpark; W. Maynard, Northallerton, *hc*, G. Oliver, jun., Northallerton; W. G. Purdon. *Any other variety*.—1, T. P. Carver, 2, J. H. Cartwright, Bishop Akeley, *hc*, G. Holmes.

DUCKS.—*Rouen*.—1, T. P. Carver, 2, C. Graham, Aldborough, Boroughbridge, *hc*, R. Tarbotton, Cawton, Gilling East, York; J. B. Braithwaite, Northallerton (2). *Aylesbury*.—1 and 2, T. P. Carver, *hc*, J. Ward, Hutton Bonville, Northallerton. *Any other variety*.—1, J. White, Warlaby, Northallerton, 2, T. P. Carver, *hc*, J. Ward.

TURKEYS.—1, T. P. Carver, 2, J. B. Braithwaite, Northallerton, *hc*, C. Me. C. Swarbrick, Sowby, Thrusk; A. Eden, Catterick; T. C. Booth, Northallerton.

GOSLINGS.—1, R. Garnett, Welbury, Northallerton, 2, J. E. Braithwaite, *hc*, R. Garbutt, Watergate, Ampleforth; Mrs. Storry, Stokesley.

SELLING CLASS.—1 and *hc*, T. P. Carver, 2, H. Dale, *hc*, F. Horseman; W. Bearpark.

EXTRAS.—1, Mrs. Lloyd, Northallerton (Silver Polish).

PIGEONS.—*Carriers*.—1 Hon. F. C. Shore, Northallerton, 2, G. Sadler, Boroughbridge. *Pouters*.—1, G. Sadler, 2, R. Wilson, Thrusk. *Jacobins*.—1, T. Dale, Seorton, Catterick, 2, E. Marshall, Northallerton. *Tumblers*.—1, F. Ratcliffe, jun., Northallerton. *Fantails*.—1, R. Wilson, 2, T. Kettle, jun., *hc*, R. Mewburn, Northallerton; R. Mairs, Northallerton. *Trumpeters*.—1, G. Gibson, Kirby Sigston, 2, T. Kettle, jun., *hc*, R. Wilson, 2, J. W. Smith, Thrusk. *Nuns*.—1, R. Wilson, 2, G. Gibson. *Mignons*.—1, G. Gibson, 2, Hon. F. O. Powell, Leburn, *hc*, R. Wilson. *Any other variety*.—1, E. Marshall, 2, G. Sadler, *hc*, Hon. F. C. Powell; M. Donkin, Northallerton.

RABBITS.—*Any variety*.—1, A. Robson, Norton-on-Swale, *hc*, J. S. Robinson, Darlington (Lop-ears). *hc*, J. Oliver, Northallerton; Miss H. O. Powell, Bedale (Himalayan). *hc*, J. Gramer, Northallerton; T. Smith, Thrusk.

Mr. E. Hutton, Pudsey, was Judge.

NEWCASTLE-UPON-TYNE POULTRY, PIGEON, AND CANARY SHOW.

The schedule of prizes to be awarded at the fifth annual Exhibition of this Society, to be held the 6th and 7th of November next, is good. The poultry department is comprehensive, separate classes being given for adults and chickens in all the principal varieties, while good prizes are also offered for dead poultry. The Pigeon classes are very numerous, single birds competing in all, except one of the selling classes and in a collection class, which is for the best four pairs, exclusive of Pouters, Carriers, Short-faced Tumblers, and Rabbits. In addition to the ordinary prizes, fourteen silver cups and ninety gold medals are offered for competition. The Corn Exchange is very spacious, allowing all specimens to be placed on the same level. The Judges are—for Poultry, Mr. Teebay; Pigeons,

Messrs. Esquilant and Charlton; Canaries, Messrs. Lowrey and Calvert.

OSWESTRY POULTRY SHOW.

ALTHOUGH the day seemed somewhat threatening, the attendance at this year's Show proved how great an interest attaches to this meeting in the surrounding district; the results were, therefore, most satisfactory. Oswestry has always been in high repute for the extraordinary amount of poultry for table purposes sold in its weekly markets, dealers from Manchester, Birmingham, Liverpool, Wolverhampton, and other densely populated districts drawing from this market their general supplies. Any visitor walking round the Show just held could not fail to notice the general excellence of the Turkeys, Geese, Ducks, and useful breeds. True it is, though some of the prize *Game* fowls were excellent, the majority of those shown were not nearly equal to those of bygone shows, two or three noted breeders of *Game* fowls being no longer residents of the neighbourhood. Some few good *Brahmas* were among the competitors, being well shown, and well arrived at maturity. Most of those entered were, however, quite too young for successful exhibition. In *Cochins*, Mr. Tudman was the principal winner with two pens of very fine strongly grown Partridge-feathered ones. *Spanish* chickens proved much better than at former Oswestry shows. Among the *Game Bantams* were some first-rate Red Piles and Black-breasted Reds, and some very pretty pens of *Black Bantams* were also on view.

GAME.—*Black-breasted*.—*Cockerel*.—Cup, W. C. Phillips, Worcester, 2, F. Winwood, Worcester, *hc*, P. A. Beck, Gulsfield, Welshpool. *Black-breasted Red*.—1, W. C. Phillips, 2, E. Winwood, *Duckwing Greys* and *White or Puls*.—1, W. Jones, Worcester, 2, E. Smith, Morla, Oswestry.

DORKINGS.—1, Mrs. Somerville, Chirk, 2, Mrs. P. J. Bailey, Rosedale, Tenbury.

CHIN-CHINA.—*Brown or Partridge*.—1 and 2, E. Tudman, Whitechurch, *hc*, T. Shepherd, Humberstone, Leicester (2). *White or Buff*.—1, H. M. Wynn, Hunsington, Worcester, 2, C. Sidwick, Keighley, *hc*, R. Chase, Birmingham.

SPANISH.—1, H. Wilkinson, Farby, Skipton, 2, H. M. Wynn.

BRABMA POOTRA.—*Dark*.—1, C. Layland, Warrington, 2, J. H. Pickles, Eirdale, Southport. *hc*, H. B. Morrell, Gae Mawr, Clyn; R. B. Wood, Woodland, Uttoxeter. *Light*.—1, T. A. Deau, Marden, Hereford, 2, C. Layland, Warrington.

HAMBURGHS.—*Silver or Gold-pencilled*.—1, W. Speakman, Nantwich, 2, W. Clayton, Keighley. *Silver or Gold-pencilled*.—1, T. Breakman, Tettenhall, Wolverhampton, 2, J. Carr, Swansea.

CRÈVE-COEUR.—1, R. B. Wood, 2, H. Feast, Swansea.

HOUDANS.—1, Rev. J. Price, Bath, 2, Miss E. Williams, Henllys Berriew, *hc*, H. V. Storey, Nottingham.

GAME BANTAMS.—1, S. W. Smith, Beekbury, 2, A. Ashley, Redhill, Worcester, *hc*, W. F. Entwisle, Westfield, Bradford; E. W. Southwood, Fakenham.

BANTAM.—1 and 2, H. H. Ashton.

POLDS.—1, W. B. Etches, Whitechurch, 2, J. Cowburn, Maesygarredd, Corwen, *hc*, Mrs. Somerville, Chirk.

GOSLINGS.—1, W. Penny, Preston, 2, E. Shaw, Plas Wilmot, Oswestry, *hc*, W. B. Etches.

DORKINGS.—*Aylesbury*.—1, E. Shaw, 2, J. Cowburn. *Rouen*.—1, E. Shaw, 2, W. B. Etches, *hc* and *hc*, W. Penny.

DUCKS.—*Any other variety*.—1, Miss E. Lloyd, Oswestry (Muscovy). 2, E. Shaw (East Indian).

SELLING CLASS.—1 and 2, E. Smith, Morla (Black-breasted Game and Duckwing Greys). *hc*, E. Shaw (Rouen Ducks).

LOCAL CLASSES.

TURKEYS, GEESSE, DUCKS, OR FOWLS.—1 and *hc*, E. Shaw (Geese) and Aylesbury Ducks). 2, Mrs. Somerville (White Turkeys), *hc*, Mrs. R. Venables, Oakhurst (White Turkeys).

BANTAMS.—*Black-breasted*.—1, J. Wainwright, Gulsfield, Welshpool, 2, T. Allison, Underhill, Oswestry. *Any colour*.—1, P. A. Beck, 2, Rev. P. G. Bentley, West Felton.

DORKINGS.—1, Mrs. Somerville, 2, E. Shaw.

AMATEUR'S PRIZES.—*Game*.—*Cock*.—1, E. Shaw, 2, Rev. P. G. Bentley.

Mr. Edward Hewitt, of Sparkbrook, Birmingham, was the Judge.

WORCESTER POULTRY SHOW.

This was held on the 18th and 19th inst. We have notes on the Show and its surroundings, which we must postpone until our next number.

DORKINGS.—1 and Cup, J. Martin, Claines, Worcester, 2 and 3, Rev. E. Bartram, *hc*, Miss Osborne, Yantton.

SPANISH.—1, Cup, and *hc*, Mrs. Allsopp, 2, W. R. Bull, Newport Pagnell, 3, T. Bamfield, Clifton, Bristol, *hc*, E. Jones, Clifton, Bristol.

BANTAMS.—*Dark*.—1 and Cup, Horace Langwood, Clent, 2, H. B. Morrell, Carmarthen, Clyn, 3, P. Unsworth, Lawton, Newbold Willows, *hc*, Rev. J. Bowen, Targath (2).—1, Hargreaves, Raup, *hc*, Dr. Holmes, Chesterfield.

BRABMAS. *Light*.—1, Horace Langwood, 2, Miss A. Williamson, 3, Lady Gwydyr, *hc*, H. Chawton, jun, Uttoxeter, *hc*, T. A. Deau, Marden, Hereford; H. Owen, Compton, Wolverhampton; P. Haines, Diss; J. Turner.

GAME.—*Black-breasted* and *other Reds*.—1, S. Field, Eicester, 2, F. Winwood, Worcester, 3, J. Andrews, Worcester, *hc*, T. Dyson, Hulfax, *hc*, S. Mathew, Stockmarket, Miss Osborne; H. E. Martin, Ekehampton.

GAME.—*Any other variety*.—1 and Cup, W. H. L. Chu, Tryeross, Atherstone, 2, J. Andrews, 3, T. Dyson.

HAMBURGHS.—*Silver-pencilled*.—1 and Cup, H. Beldon, Bingley, 2, J. Carr, Swansea, *Gold-pencilled*.—1, C. Bloodworth, Cheltenham, 2, W. Speakman, Nantwich, *hc*, H. Beldon.

HAMBURGHS.—*Silver-pencilled*.—1, H. Beldon, 2, J. Fielding, Newchurch, Manchester, *Gold-pencilled*.—1, T. May, Wolverhampton, 2, W. A. Taylor, 3, H. Beldon, *hc*, Capt. F. G. Colridge; P. Unsworth.

FRENCH FOWLS.—1, J. J. Malden, Biggleswade. 2, J. K. Fowler. 3, Mrs. Whinfield, Worcester. *he*, R. B. Wood; W. Dring; K. Wingfield.

ANY OTHER VARIETY.—1, H. Ebdon. 2, J. Hinton, Warrminster. 3, R. S. S. Woodgate. *he*, O. E. Cresswell, Bagshot.

GAME BANTAMS.—*Black-breasted and other Reds*.—1, Cup, and 2, W. F. Entwistle, Westfield, Braiford. *he*, W. F. Entwistle; J. Nelson, Hexham; W. Shenton, Worcester. *c*, A. Ashley; J. Andrews; J. Martin.

GAME.—*Any other variety*.—1, 2, and *he*, W. F. Entwistle.

BANTAMS.—*Black and White*.—1 and 2, W. A. Taylor. *he*, R. Parrott, Hom-bury, Bristol (2); R. H. Ashton, Mottram, Manchester. *c*, T. Cropper, Bacup.

BANTAMS.—*Any other variety*.—1, M. Leno, Dunstable. 2, Rev. C. Spencer, Naunton, Beauchamp. *he*, R. S. S. Woodgate; O. E. Cresswell. *c*, P. Foxwell.

DUCKINGS.—*Aylesbury*.—1 and 2, J. K. Fowler. *vic*, Mrs. G. M. Rolis, Mon-mouth; J. Groves, Worcester. *hc*, T. Sear, Tingewick, Buckingham. *houn*.—1, T. Wakefield, Golborne. 2, P. Unsworth. *vic*, J. Nelson. *he*, J. H. Hoyt, St. Austell; Mrs. H. J. Bailey, Tenbury; W. Stephens, Gloucester. *any other variety*.—1 and Cup, G. S. Sainsbury, Devizes. 2 and *he*, M. Leno. *c*, H. B. Smith, Brompton, Preston.

SELLING CLASS.—1, T. Sear. 2, E. L. Harrison, Looesmore. 3, Mrs. Whinfield. *he*, W. A. Burnell; P. Unsworth; H. Gwynne. *c*, W. A. Burnell (2); J. Hughes, Kidderminster; D. Young, Leamington.

PIGEONS.

CARRIERS.—*Cock*.—1 and Cup, R. Fulton, London. 2, H. Yardley, Birmingham. *he*, S. D. Baddeley, Hereford. *c*, R. Spencer, Hereford. *Hen*.—1 and 2, R. Fulton. *he*, H. Yardley.

POUTERS.—*Cock*.—1, H. Pratt, Lozells, Birmingham. 2 and *he*, R. Fulton. *c*, H. Yardley. *Hen*.—1 and *he*, R. Fulton. 2, H. Pratt.

BARBS.—1 and 2, R. Fulton. *he*, H. Yardley.

TUMBLERS.—*Almond*.—1, Cup, and *he*, R. Fulton. 2, H. Yardley. *any other variety*.—1, H. Yardley. 2, R. Fulton. *he*, S. D. Baddeley; W. Mapplebeck, Sparkbrook, Birmingham.

FANTAILS.—1, O. E. Cresswell. 2, R. Fulton. *he*, R. Spencer. *c*, H. Yardley.

DRAGONS.—1 and *vic*, F. Graham, Birkenhead. 2, W. H. Mitchell. *he*, H. Yardley. *c*, W. H. Mitchell, Moseley, Birmingham; J. Watts, King's Heath, Birmingham.

ANTWERPS.—1 and 2, T. Clulec, Birmingham. *he*, H. Yardley. *c*, W. H. Mitchell.

JACOBS.—1, Cup, and *he*, R. Fulton. 2, H. Yardley.

TRUMPETERS.—1, H. Yardley. 2, R. Fulton.

NUSS.—1, J. Watts. 2, H. Yardley.

ANY OTHER VARIETY.—1, H. Yardley. 2, C. Hitchcock, Oxford. *he*, H. Yardley; Rev. C. Spencer. *c*, S. D. Baddeley.

WHITBY BIRD SHOW.

I KNEW he was ill. Five years ago when I first visited Whitley I could see that Asthma had seized him with a strong hand; and a year after, when an acquaintance begun through the Journal had ripened into something very like friendship, and B. B. and I and the black bay went down the night before the Show to share his hospitality, I thought it held him with a firmer grasp. How time flies, doesn't it? It seems only as if it was yesterday night when we drove-up to the door, which was standing wide open, the light streaming out into the dark with a warm glow, and he standing in the porch with outstretched hands to bid us welcome. I remember how I noticed that night, when he reached from its place the grand old Book and read from its pages, that he did so with an effort. I have frequently heard him read from it since, and when I last heard him at Christmas I wondered if I should ever hear him again. I knew he was ill, very ill, and yet I was hardly prepared for the black-edged envelope when it came a month or two back, and we knew that a good man had gone to his rest. To many who have taken an interest in Whitley Show for years past, the intelligence that Mr. Wilkinson is gone will be received with sorrow. He passed away quietly on the morning of the July flower show, with which and similar pure pleasures he had been so long identified. Surely a fitting day for such a gentle spirit to take its flight! Everyone missed him at the Show last week. The Judges and those engaged in active arrangements seemed to move about with quieter steps than usual, and to talk in whispers as if afraid to disturb his rest; and the very birds appeared to hush their song, warbling and twittering in low sweet tones, as though the stillness and quiet affected even them. But with this short "In Memoriam," I must get on to a review of the Show.

Everybody expects to see something new, something remarkable at Whitley Show. Year after year the celebrities of the season have made their first appearance on the stage at Whitley. But this year will long be remembered as bringing in a new era in Canary-breeding. It ought to be called Bemrose's year, for the fact is simply this—"Bemrose first, and the rest nowhere." It will be remembered that at the last Crystal Palace Show Mr. E. Bemrose, of Derby, exhibited two birds of surpassing beauty which were quietly ignored by the Judges without any reason being assigned. A week or two after, in an anonymous contribution to the Journal, it was stated that the Judges had passed them over because they were of an unnatural colour. It struck me at the time what a funny thing it was that any writer should be able to publish a Judge's opinion when such opinion had not been publicly expressed. I think if one takes hold of one end of that chain it would not be hard to find one's way to the other. However, that's a useful word for "Bring you up when you are danger of going off at a tangent." However, Mr. Bemrose was hurt, and I think justly so, at the slur so quietly cast on his name, because these two birds were so superlatively excellent that each ought to have been first in its respective class, while to pass them in silence was to give the exhibitor a blow beneath the belt. I may be wrong, but I think grave responsibilities rest upon Judges, and I don't think it's right to impute by silence that which cannot be substantiated. To pass

those birds was to say they were not genuine, and to say that was to say Mr. Bemrose was not honest. But the birds were genuine, and Mr. Bemrose's reputation stands on no sandy foundation. He assured me on his word of honour as a gentleman, that the birds were in every respect genuine, that he had moulted them himself, that their brilliant colour was solely attributable to a method of feeding, and that this year, instead of two birds, he would produce a string of them which should be exhibited at every show in England from Whitley to the Crystal Palace. And he has kept his word. I have examined the birds carefully, and unhesitatingly pronounce them to be genuine, and the grandest specimens ever exhibited. The colour is something wonderful, and must be seen to be believed. I have no doubt many won't believe it even then. But there are none so blind as those who won't see, and none so deaf as those who won't hear. I am sorry to notice a disposition not to give these birds fair play elsewhere, about which I shall have something to say by-and-by.

A reference to the award of prizes will show that Mr. Bemrose swept all before him. Apart from the excellence of his birds, the rest were vastly inferior as a whole to the display of previous years, with the exception of the Cinnamons and Lizards, which were remarkably fine. Mr. Ritchie, of Darlington, is strong in Lizards, and Mr. Watson, of the same place, is not far behind.—W. A. BLAKSTON.

NORWICH.—*Clear Yellow*.—1 and 2, E. Bemrose, Derby. 3, Adams & Athersuch, Coventry. *he*, G. Cox, Northampton. *c*, H. & D. Audley, Leicester. *Clear Buff*.—1 and 2, E. Bemrose. 3, Brown & Ganton, Northampton. *he*, W. Forth, Pocklington. *c*, Adams & Athersuch.

NORWICH.—*Evenly-marked*.—*Clear Yellow*.—1, Adams & Athersuch. 2, S. Tomes, Northampton. *Clear Buff*.—1 and 2, E. Bemrose. 3, Adams & Athersuch. *he*, R. Simpson, Whitley; Adams & Athersuch; J. Goode, Leicester. *c*, F. T. Robinson, Norton, Malton; Clark & Jarvis, Scarborough; Wilson and Irons, Lofthouse; Barwell & Sons, Northampton. S. Tomes.

NORWICH.—*Unevenly-marked or Ticked*.—*Clear Yellow*.—1, Brown & Ganton. 2, Adams & Athersuch. 3, J. Clemminson, Darlington. *he*, Adams & Athersuch; G. Cox. *c*, C. Hampton & Chamberland, Leicester; M. King, Scarborough; J. Clemminson. *Clear Buff*.—1 and 2, E. Bemrose. 3, Adams & Athersuch. *he*, Adams & Athersuch; J. Greenfield, Stockton. *c*, H. & D. Audley; G. Cox.

NORWICH.—*Clear Yellow or Buff*.—*Green, Grey, Buff or Yellow Crest*.—1, S. Tomes, Northampton. 2, Lamplough & Baxson, Derby. 3, W. Simpson, Crokering. *he*, J. Deady, Knaresborough. *c*, Clark & Jarvis; Barwell & Sons.

BELGIANS.—*Clear Yellow*.—1, W. Forth. 2, L. Belk, Dewsbury. *Clear Buff*.—1, R. Hawman, Middlesborough. 2, W. Forth. 3, L. Belk.

YORKSHIRE.—*Clear Yellow*.—1, T. Fawcett, Baildon, Leeds. 2, R. Ritchie, Darlington. 3, H. W. Winter, Guisborough. *he*, W. H. Batchelor, Whitley; R. Ritchie. *c*, R. D. Waite, Norton, Malton. *Clear Buff*.—1 and 2, T. Fawcett. 3, L. Belk. *he*, W. Forth. *c*, J. Garbutt, Great Brougham.

CINNAMON.—*Clear Yellow*.—1, Adams & Athersuch. 2, H. Johnson, Derby. 3, J. Devaney, *he*, Ellerton & Mounsey, Darlington; J. Taylor, Middlesborough; J. Stevens, Middlesborough. *c*, M. King; R. Hawman; W. Johnstone, Northallerton. *Clear Buff*.—1, Adams & Athersuch. 2, J. Taylor. 3, H. Johnson. *he*, R. Hawman; Barwell & Sons. *c*, M. King.

LIZARD.—*Golden-spangled*.—1 and 2, R. Ritchie. 3, W. Watson, Darlington. *he*, C. Greenwood, Scarborough. *c*, Adams & Athersuch. *Silver-spangled*.—1 and 2, R. Ritchie. 3, W. Watson, jun. *he*, R. Ritchie; W. Watson, jun. *c*, Adams & Athersuch; Ellerton & Mounsey; J. Taylor.

CANARY.—*Green*.—1, R. Hawman. 2, H. & W. Winter. 3, T. Tomiswood, North Aeklan, Middlesborough. *any other variety*.—1, E. Bemrose. 2 and 3, J. Stevens.

SIX CANARIES IN ONE CAGE.—*Young*.—1, R. Simpson. 2, Ellerton and Mounsey. 3, W. Henderson, Whitley. *he*, R. & J. Burrows, Whitley.

MULES.

GOLDFINCH AND CANARY.—*Yellow*.—1, J. Goode. 2, R. Hawman. *Buff*.—1, R. Hawman. 2, J. Stevens.

ANY OTHER VARIETY.—1, J. Stephen. 2, J. Goode.

PARAKEET.—1, E. Coates, Whitley.

DISTRICT PRIZES.

NORWICH.—*Yellow or Buff*.—*Young*.—1, J. Dickinson, Whitley. 2, W. H. Batchelor. 3, R. Robinson, Whitley. *c*, R. & J. Burrows; W. Henderson.

NORWICH CRESTED.—*Yellow or Buff*.—*Young*.—1, I. Dickinson.

MARRED CANARY.—*Yellow or Buff*.—*Young*.—1, H. Dale, Whitley. 2, G. Blakestone, Whitley. 3, W. Porritt, Rnspar. *any other variety*.—1, R. Pearson, Whitley. 2, R. & J. Burrows. 3, G. Blakestone.

MULE.—*Young*.—1, 2, and 3, M. Thompson.

GOLDFINCH.—1 and 2, R. Pearson. 3, W. Thompson, Whitley.

LIZARD.—1 and 2, I. Dickinson. 3, W. H. Batchelor.

BRITISH BIRDS.—1, J. Smith, Whitley. 2, R. Pearson. 3, J. Haw, Gosmont.

JUDGE.—Mr. W. A. Blakston, Sunderland.

FEEDING BEES.

THOUGH 1873 has been pretty favourable for the growth of grass, grain, and root crops, it has not been, generally speaking, a good year for the production of plums, pears, and apples; neither has it been a favourable season for bees—probably the worst we have experienced for ten years past. Whilst agricultural and garden crops have done so well, how is it, I am frequently asked, that bees have gathered so little honey? When those putting this question are asked to account for the fact that so few, if any, dogs have been seen panting for breath during 1873, they reply that the weather has not been hot enough. When dogs pant—when the human body perspires, and is dewed over to the finger points, flowers yield honey, and bees gather it. In many of our counties this has not been a honey year; in these counties many late swarms are now at starvation point, and some are already dead from sheer hunger. Sugar never was cheaper in England than it is now, and it is pretty evident that great numbers of our bee-keepers are desirous to attend to their bees better than they have hitherto done. From various parts of England letters are coming to me, asking how much syrup should be given to hives of this and that weight, also

which is the best way to give it. It is no light matter for me to reply to these private letters, and it is no light matter to find stamps to carry the information sought. As THE JOURNAL OF HORTICULTURE is read by some, if not all, of the parties who write to me, I will in this letter dwell on the question of autumn-feeding. First, the best kind of artificial food for bees; secondly, the quantity needed; and thirdly, the time and manner of giving it.

The best kind of artificial food for bees is syrup made of the best sugar and pure water, mixed at the rate of 1 lb. of sugar to one pint of water, and boiled for about half a minute. When I say best sugar I mean loaf or soft sugar refined, now sold for 4d. per pound. Brown raw sugar contains, I daresay, more saccharine matter than refined sugar, but it is more relaxing; hence I use and recommend the whiter sugars for winter food for bees. Many bee-keepers use a syrup thicker and sweeter than that which I have here recommended. They use 2 lbs. of sugar with one pint of water. Mixed at this rate it is quite as thick in substance as real honey; it is much thicker and sweeter than the sweet juice which bees find in and gather from flowers. This statement must be made plain and intelligible to the reader by amplification. All honey proper and genuine has been swallowed and disgorged twice by bees. On being swallowed the second time it undergoes a chemical change—a sweetening and thickening process. Thus it is made into honey proper.

A valued and old correspondent of this Journal, I mean "B. & W.," when he reviewed the "Handy Book of Bees," hinted that my statements might be the outcome of mere fancy. On reading his review it did appear strange to me that a bee-keeper of his experience did not know these things—things that have both been seen and handled hundreds of times during the last half century. For instance, this year I placed a large hive full of empty combs, with a strong swarm in it, near a four-acre field of horse beans. From the bean flowers this swarm gathered nearly 20-lb. weight in three days. On the evening of the third day the bees were driven into an empty hive and the honey taken; no, it was not yet honey, for it had not been re-swallowed. It was nearly as thin as water, bright, sparkling, and as genuine as any ever collected by bees, but not yet changed or made into honey. About 15 lbs. of this syrup was put into a jar, and kept till my wife told me it was becoming sour. Then it was given to a hive on which I had a super, and doubtless the bees in that hive converted it into as good honey as ever was eaten. Honey merely collected into hives and not re-swallowed does not keep or crystallise, it moulds like badly-preserved fruit.

The syrup made of sugar and water at the rate mentioned in this letter is equal for subsistence to the natural juice collected by bees, and is also swallowed and disgorged twice before it is stored-up in the combs.

How much should be given depends on the condition of the hive and the number of bees in it. It takes 15 lbs. of food stored-up to keep my strong large hives from September till March. Much less will serve small hives during the same space of time. Much better it is to give a couple of pounds more than enough than an ounce too little.

Now I come to notice the best time when autumn-feeding should take place. The sooner it is done the better. To have to feed bees late in autumn and in winter is an indication of great ignorance or inattention, if it could conveniently be done earlier. Feeding in cold weather is objectionable, for it may set the bees breeding at an unseasonable time, and thus expose them and their brood to the chilling effect of frosty weather. It may be laid down as a rule, that all feeding should be completed in September. If hives are weak in bees, and the owner has no surplus stock wherewith to enrich them, he may commence early in September, or even in August, to feed, and continue for three or four weeks to do so, and thus secure a hatch of brood; but this is not "advanced bee-management." If the hives have bees enough, it is good management and good policy to give all the food necessary as speedily as possible, and let the bees settle down into the quietness of winter life.

There are hundreds of ways of administering food to bees, and it often happens that everybody thinks his own way is the best. The inverted bottle with a rag on its mouth is certainly the worst I know for autumn, because it does not let hands enough get to work. No system, however, will I condemn, but say that the easiest and speediest appears to me the most desirable. I use large tin dishes and garden saucers for hives that are not filled with combs. These dishes hold about 1 lbs. of syrup, on which are laid a few chips of wood or chopped straw. A strong hive empties the dishes in a few hours. When the hive is filled with combs I frequently pour the liquid over bees and combs, about 2 lbs. at a dose, and three doses a-day, thus giving 6 lbs. in twenty-four hours. Sometimes I raise these full hives off the board by ekes, thus making room for a large dishful of syrup on the board. An inverted empty hive, with the food placed in the bottom of it, and the hive to be fed placed on it, are sometimes used. Thus I give 4 lbs. up to 8 lbs. in one feed to a hive.

Other contrivances for feeding at the tops and sides of hives

are used by bee-keepers; they are excellent. As feeding generally attracts robbers, it is better to feed at sunset, and thus avoid fighting.

Bees that are kept on sugar during the winter are generally very healthy, and therefore if hives are well fed now we may expect to have strong healthy stocks next spring. I want to help everybody I can, and trust that the discouragement of a bad season will not make any of my readers bankrupt in bee-keeping. Let them be kind to their bees. The sun is behind the clouds, and may come out next year, filling our hearts with gladness, and our supers and jars with honey and honeycomb.—A. PETTIGREW, *Salv. Cheshire.*

BEES ON A TREE.

About three weeks ago it was discovered that a large colony of bees had made a settlement on and under the branch of an apple tree in a small orchard close to the house. The appearance is singular. At the top, on the branch, a flat surface of comb, which a plate could hardly cover; the cells are empty—not a bee to be seen about that part. Beneath the branch, and with some protection from its foliage, there is a pendent mass, about a foot across, encrusted with bees. What they are working at cannot be seen. The mass increases daily in size; it hangs 7 or 8 feet from the ground, and begins to weigh down the branch it adheres to. The bees are very small and dark. They must have been some time at work before they were perceived, as their structure was so far advanced. I should like to know whether what I have tried to describe is an uncommon thing, and if it would be better to take them; and if so, how? We are averse to destruction, as, of course, we are told that, being new settlers ourselves, the bees are giving us a welcome.—J. M. C.

It is not of very common occurrence for bees in this country to construct so much comb on the branches of trees, or to continue alive so long. The bees are a stray swarm. The upper piece of comb was probably at first built upright, and fell over, being then attached to the branch where the side came in contact. I should advise "J. M. C." to try to secure the bees and unite them to some other stock. Blow a little smoke on the surface of the bees and comb, and particularly on the top of the latter near the bough. Hold the comb with one hand, and pass a knife through it from side to side at the top. Having previously inverted a live on a table underneath, quickly lower the comb and attached bees into it; place a floor-board on the hive, and turn the latter over to its proper position. Or, at once, brush or shake off the bees into the empty hive, and put it resting on the branch to which they were previously hanging. No doubt all the bees would soon collect within the hive. I should much doubt the bees being sufficiently populous or well-provisioned to survive the winter if not united to some other colony.]

[The above was mis-sent to a contemporary, and published in its columns last week.—EDS.]

BEES SUFFERING FROM DAMP—HONEY HARVEST IN WEST NORFOLK.

I HAVE two straw hives, the supers of which, one of wood the other of glass, are partially filled with comb now deserted by the bees. In both cases the comb is worked-up thickly from the stock hive. Will there be any objection to leaving them on during the winter? I should not ask this question if the stock hives were of wood, as the rising vapours would certainly damage the comb. I may observe, that an old cottager, a neighbour of mine, put a straw super upon a hive last year at my suggestion, and, at his own, left it on all the winter. The consequence this year is some of the finest and purest honey in the comb I have ever seen. He has also had a good swarm from this hive.

Here, in West Norfolk, we can bear rain better than your apianian correspondents in more favoured and favourite counties, but we want more warm weather than has fallen to our lot this year.

I started with six hives, and my bees have produced 42 lbs. of honey in the comb, most of it free from brood, and about 62 lbs. of run honey. I have also two additional stock hives, besides having (I grieve to say), sacrificed a strong "turn-out" to an experiment. Of my present eight stocks, six are strong and heavy, whilst the other two will require a little feeding.—E. H. R.

We see no great objection to the supers remaining on in the case of your straw hives, but if you have a dry place in which to put them, why run the risk of their suffering from possible damp or other damage?—EDS.]

OATMEAL-AND-WATER DRINK.

You rightly noticed a short time since this admirable drink, rightly observing that, although it might be new to our American

cousins, it was not so to English workmen in foundries and factories. When, for many years, a great iron foundry and railway works were open near me, the master was wont to give out regularly a quantity of oatmeal for the purpose of being converted into this drink. The men always spoke to me most highly of it, and that, although the heat was very great and they drank much, yet they never were the worse for it, catching no cold, and not suffering in any way. But my object in writing is to note that there was one addition made to the oatmeal and water, which was a few grains of cayenne pepper. This was considered, especially by the Lancashire men, to be a great improvement to the drink. I suppose the cayenne pepper prevented any cold on the stomach, and was relished in the heat on the same principle or by the same instinct that curry is most relished in the heats of India. The proportion of oatmeal used was about a table-spoonful to a pint of water. Would that British workmen generally would adopt such a healthy and supporting drink. *Beer—beer—beer* is their bane, and much evil would be avoided of this innocent thirst-appaiser could be adopted in the place of that headache-causing, muddle-brain-making drink, which does not quench the thirst, and unless good, which it usually is not, imparts no support.—WILTSHIRE RECTOR.

OUR LETTER BOX.

DEALERS AND AMATEURS (*Tyneside*).—The tone of your communication is too offensive to effect any good.

TURKEY FATTENING (*L. A. B.*).—A certain quantity of food is necessary to fatten Turkey, fowl, Goose, or any other bird. Proper management reduces this quantity to a minimum, while waste and carelessness increase it, till the captious outcry of a friend of ours every time a sack of barley or bushel of meal is wanted, "Drat the birds! every morsel I eat costs me 3s. 6d. per pound," becomes nearly true. Birds that are intended for fattening should be well fed from the first. Fattening should be that which it professes to be—the process of adding fat to lean. Poultry intended for the table and killed in running condition needs no fattening. If well kept it is full of flesh, and sufficiently fat for ordinary purposes. When, however, it is wished to send poultry to market something more is required. Presuming your Turkeys are in good fleshy condition, and only require fat, we advise you to put them in an outhouse where they can perch, and where there is plenty of air. They should be fed from a pig-trough or such vessel, and be well fed three times per day. Ground oats or barley meal mixed with milk, if to be had, if not, with water. Many people add a little bean and peameal; we believe it does good. The part should be as one in twenty to the oats or barley meal. Nettle tops are also good mixed with it. In a fortnight, or at most three weeks, your birds should be fat enough for any market. They should also increase greatly in weight during that time. As you intend to send them to market we advise you to fast them from all food or water for fourteen or fifteen hours before killing them. It makes them more saleable, and though they may weigh a pound less, they will make more money. We omitted to mention the three feeds per diem must be each time fresh-mixed food. If any of the former feed is left, give it to the runners, and mix rather less.

BRAHMAS WITH DORKING COCK (*A. B.*).—You will not require more than one cock to the six hens. When you buy, always buy pure birds. If you buy crosses you never know what you are buying. If you keep your own birds, keep one of each, one pure and one half-bred.

CAROLINA WITH EAST INDIAN DUCKS (*A. A.*).—The Carolina will not cross with the East Indian Duck. It seldom takes up with any other than its mate, but it has been known to do so with the Wild Duck and Pintail. The Carolina will neither lay on the ground nor make a nest. It will therefore be necessary either to provide a pollard stem to stand upright in the water, or to put a hut like a small dog-kennel on the top of a pile driven fast into the ground at the bottom of the water. It should have a small plank leading from the point to the water. It should be sufficiently long to reach the water at all times, even if very low, and should have small bars nailed across it, to give the Ducks footing to ascend and descend.

GROUND OATS (*Experientia Doct.*).—We are satisfied you will find no food so cheap as the best, and your 38-lbs. oats will be less costly than the rubbish that is sold at a low price, and called chickens' meat. Fowls do not like whole oats, and will only eat them when starved out. We have described the properly-ground oat so often, there is no occasion to do so again. It is the best and cheapest food we know, and we find the better the oats the longer the food lasts. We do not for a moment believe the mixed breed of your fowls had anything to do with your failure. Our notion is to give no potatoes at all. Your food should be ground oats, barley meal, scraps, and a little greaves. On these your birds will do well.

EGGS UNPLEASANTLY FLAVOURED (*T. S.*).—Your fowls are evidently suffering from weakness. Give them some ground instead of whole corn. Give them barley meal slaked with water or milk night and morning, some Indian corn and some scraps for a mid-day meal. We suppose from the fowls' yard being dug over once a year, and always covered with under ashes, it is not laid down in grass. Encourage your birds into the meadow as much as you can. The eggs may be flavoured by the scraps. An egg takes any pervading smell into its composition—thus, it will smell of garlic or onion if the hen be fed on them. There should be no smell in your orchard. Put the chickens in the meadow.

YOUNG PIGEONS WITH MAGGOTS IN THEIR CROPS (*H. E. H.*).—We are at a loss to know how this could be, but have heard of similar cases. The only thing we can think of is that the birds were diseased from close-breeding. This idea is strengthened by the fact that of a former batch from the same pair one died similarly. So many fancy Pigeons are scrupulous from close interbreeding, this appearing from wing disease and going light. We should change the strain by buying one fresh bird. In your case it could not be bad food or want of exercise.

RABBITS FOR PROFIT (*T. G.*).—There are methods of making Rabbits pay, but all depends upon their kind and quality. If they are valuable Loops, with ears from 20 to 23 inches, and well marked, or of other varieties equally superior in their points of excellence, there will be no lack of purchasers if

you advertise them, for all fanciers are ever on the alert for really first-class specimens; and if you aspire to the honours of the prize-winner, and are successful, about which there is no doubt with good habits, their value will be greatly increased. If you wish them to pay for domestic purposes, the Belgian Hares or Patagonians will be found the most profitable, as they are so large, hardy, and soon arrive at maturity. If for turning down in semi-wild state, the Silver-Greys will be found adapted to this mode of life, and with profit if well managed. The floor of the stable may be damp, as the cause of your want of success in rearing young ones, more especially if they are of a delicate kind, and for which a hatch would be more suitable. Seek information from some large breeders.

CANARY FEATHERS SEEMINGLY YELLOW (*Dat.*).—The feathers in the mealy cock are not yellow. They appear so at first, and are of a much deeper colour than they will ultimately be.—W. A. R.

BOOKS (*J. K.*).—Read "Bee Keeping for the Many." You can have it free by post from our office if you enclose five stamps with your address.

BEES ON A FIR TREE.—If "A. R." has not yet touched his out-door bees, let me beg him to try whether he cannot keep them through the winter by giving them a roof. In 1866-7 Major V. Hruschka, the inventor of the centrifugal honey machine, contrived to secure an out-door swarm and to keep it through the winter, making many interesting observations. It is true that he brought it into a room for the winter, but it was without sun or fire, and exposed to a temperature varying from 23° to 41° Fahr.—Euzz.

METEOROLOGICAL OBSERVATIONS,

CAMDEN SQUARE, LONDON.

Lat. 51° 32' 40" N.; Long. 0° 8' 0" W.; Altitude 111 feet.

DATE.	9 A.M.				IN THE DAY.				Rain.	
	Barom.	Hygrometer.		Direction of Wind.	Temp. of Soil at 1 ft.	Shade Temp.		Radiation Temperature		
		Dry.	Wet.			Max.	Min.	In sun.		On grass.
1873.										
Sept.										
We. 17	30.758	57.3	55.7	W.	54.2	68.0	46.1	101.7	39.5	—
Th. 18	30.915	55.3	50.0	W.	55.4	63.7	46.7	104.4	39.9	—
Fri. 19	30.128	53.6	49.9	W.	54.6	62.4	47.1	98.0	43.1	0.10
Sat. 20	30.030	62.2	39.0	W.	55.7	70.9	53.4	115.0	52.7	—
Sun. 21	30.256	59.4	54.7	S.	56.8	64.5	45.0	112.0	44.5	—
Mo. 22	30.531	52.3	47.8	N.	55.8	62.9	40.3	106.3	36.0	—
Tu. 23	30.458	53.1	48.7	N.W.	54.5	65.7	41.0	104.3	39.2	—
Means	30.151	56.2	52.3		55.3	65.3	45.7	106.8	42.1	0.010

REMARKS.

- 17th.—Dull morning, slight rain at 10.20 A.M.; fine afternoon.
 - 18th.—A very pleasant day, morning, noon, and night.
 - 19th.—Fine morning; rather dull in the afternoon, a slight shower at 4.30 P.M.
 - 20th.—A sprinkle of rain at 10.15 A.M.; fine afternoon and evening.
 - 21st.—Fine morning; but rather cloudy all the after part of the day.
 - 22nd.—The early part of the day fine; but rather cloudy evening and night.
 - 23rd.—The whole day bright and enjoyable.
- A slight increase in temperature, a barometer, the mean of which is higher than during any week since the early part of June, and such slight rain as to be scarcely measurable, has rendered the past week much more agreeable than many of those which have preceded it.—G. J. SYMONS.

COVENT GARDEN MARKET.—SEPTEMBER 24.

Supply and demand about equal, the principal attendance now being Tuesdays and Saturdays. Very little wall fruit is coming forward, and that not of very good quality, owing, no doubt, to the sunless wet weather that has prevailed. Among foreign imports some good Dutch Peaches are to hand, and also some Pines from St. Michael's and Madeira.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples.....	½	0	10	6	Mulberries.....	½	1	0	0
Apricots.....	doz.	0	0	0	Nectarines.....	doz.	4	0	0
Cherries.....	½	10	0	6	Oranges.....	½	100	10	2
Chestnuts.....	bushel	0	0	0	Peaches.....	doz.	4	0	0
Currants.....	½	0	0	0	Pears, kitchen.....	doz.	1	2	0
Figs.....	doz.	0	6	2	Pears, dessert.....	doz.	2	0	0
Fuerts.....	lb.	1	0	1	Pine Apples.....	lb.	3	0	0
Cobs.....	lb.	1	6	0	Plums.....	½	0	0	0
Gooseberries.....	quart	0	0	0	Quinces.....	doz.	0	0	0
Grapes, hothouse.....	lb.	1	0	5	Raspberries.....	lb.	0	0	0
Lemons.....	½	100	10	0	Strawberries.....	½	1	0	0
Melons.....	each	2	0	5	Walnuts.....	bushel	10	0	16
					ditto.....	½	100	2	0

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes.....	doz.	3	0	6	Mushrooms.....	pottle	1	0	2
Asparagus.....	½	100	0	0	Mustard & Cress.....	pound	0	2	0
Beans.....	doz.	0	0	0	Onions.....	bushel	3	0	0
French.....	doz.	0	0	0	Peas.....	quart	0	6	0
Kidney.....	½	0	0	0	Parsley per doz.....	bunches	0	4	0
Beet, Red.....	doz.	1	0	3	Parsnips.....	doz.	0	9	1
Broccoli.....	bundle	0	3	1	Peas.....	quart	0	8	1
Cabbage.....	doz.	1	0	1	Potatoes.....	bushel	4	0	6
Black.....	do.	0	0	0	Roady.....	do.	0	0	0
Capsicums.....	½	100	1	6	Romney.....	do.	0	0	0
C. Fruits.....	bunch	0	6	0	Rushes.....	doz.	0	0	0
Cauliflower.....	doz.	3	0	0	Radishes.....	doz.	1	0	1
Celery.....	bundle	1	6	2	Rhubarb.....	doz.	0	6	1
Colewort.....	doz.	2	6	4	Salsify.....	bundle	1	0	1
Cucumbers.....	each	0	3	0	Savoy.....	doz.	0	0	0
pickling.....	doz.	0	0	0	Scorzoneria.....	bundle	1	0	0
Endive.....	doz.	2	0	0	Sea-kale.....	basket	0	0	0
Fennel.....	bunch	0	3	0	Shallots.....	lb.	0	3	0
Garlic.....	lb.	0	3	0	Spinach.....	bushel	2	0	2
Herbs.....	bunch	0	3	0	Tomatoes.....	doz.	1	0	2
Horseradish.....	bundle	3	0	4	Turnips.....	bunch	0	5	0
Leeks.....	bunch	0	3	0	Vegetable Marrows.....	0	1	0	2
Lettuce.....	doz.	1	0	1					

WEEKLY CALENDAR.

Day of Month	Day of Week	OCTOBER 2-8, 1873.	Average Temperature near London.			Rain in 43 years		Sun Rises		Sun Sets.		Moon Rises		Moon Sets.		Moon's Age.	Clock after Sun.	Day of Year.		
			Day.	Night.	Mean.	Days.	m.	h.	m.	h.	m.	h.	m.	h.	Days.				m.	h.
2	Th	Length of day 11h. 30m.	64.4	43.9	54.1	19	4	af	6	34	af	5	41	4	1	0	11	10	43	275
3	F		63.7	41.5	52.6	16	6	6	32	5	2	5	31	1		12	11	2	276	
4	S		63.7	42.1	53.1	21	8	6	30	5	19	5	4	3		13	11	29	277	
5	SUN	17 SUNDAY AFTER TRINITY.	60.5	40.3	50.4	21	9	6	27	5	34	5	35	4		14	11	18	278	
6	M		61.8	43.2	52.5	23	11	6	25	5	49	5	5	6		15	11	56	279	
7	Tu	Twilight ends 7.15 P.M.	63.7	43.4	53.6	21	13	6	23	5	6	6	35	7		16	12	13	280	
8	W		61.7	42.0	51.8	22	14	6	21	5	26	6	4	9		17	12	30	281	

From observations taken near London during forty-three years, the average day temperature of the week is 62.8°; and its night temperature 42.4°. The greatest heat was 80°, on the 5th, 1834; and the lowest cold 25°, on the 5th, 1865. The greatest fall of rain was 1.06 inch.

ORNAMENTAL PLANTING.—No. 9.



IN the various examples which have been selected to illustrate as clearly as might be the most important parts of this work, it is by no means intended to imply that the method described is the only good one; yet it is hardly possible to deal with the subject in any other than a general way, because every undertaking of the kind, however similar in its general details, is almost certain to be influenced by those local pecu-

liarities which invariably occur. Take, as an instance of this, my last paper, in which it was advised that when a drive passed through plantations of underwood it should be embellished with an ornamental avenue. Now, there are undoubtedly instances in which the adoption of such advice would be decidedly a mistake, and I think this paper may usefully be devoted to the consideration of, perhaps, the most important exception to the rule. A drive passing through woodland of an uneven and very irregular surface, along the face of a boldly sweeping slope, over embankments or bridges, between the steep sides of cuttings, opens up scenery which is naturally so picturesque that it may very readily be rendered ornamental, however unkempt or wild in the first instance; and I need hardly add that an avenue would be totally out of place in any part of such a drive.

Let us first of all take a steep bank or long slope, which, springing from one side of the road to a considerable altitude, offers a large expanse of surface that is visible at a glance, and thus affords an admirable situation for the formation of a scene that may be rendered as beautiful as it is uncommon. Just a few lofty-growing trees arranged in a scattered informal order, an occasional Oak or Beech near the margin of the road, a Birch waving its pendant wreaths high up upon the ridge of the slope, a clump of Larch, a Deodar or other favourite Conifer midway between the two, will serve to grace the scene with the dignity of their presence, without crowding or unduly shading it. Then, where the sun and air have full play, come bold groups of the poet's Eglantine (*Rosa rubiginosa*), and the wild Dog Rose (*Rosa canina*), that in its free wild growth produces wreaths of its tiny buds and flowers charmingly interspersed with fresh green foliage, possessing such rare grace and loveliness as is but too often vainly sought for among cultivated Roses. Here, too, the wild Clematis, Honeysuckle, and yellow Broom should find a place, and with them the Hawthorn, wild Crab, and some of the garden varieties of both genera; the Lilac, Guelder Rose, Laburnum, Mountain Ash, and Scarlet Elder, with the common Holly for greenery in winter. Trees of a pendant growth might also be introduced with good effect; but whatever kinds of trees are selected should be planted, not so much for the effect of individuality as for the production of relief or contrast, so as to enhance the beauty of the mingled mass of which most of the occupants would form a part. When the ascent becomes more abrupt and precipitous,

this stage of planting might merge into that of masses of dark-foliaged Pinuses, which are most suitable for clothing very steep banks either by carriage drives or near buildings.

In making a drive over such an irregular surface, cuttings have frequently to be made in order to reduce the hills to suitable gradients, and it then becomes of importance to clothe the bare sides as quickly as possible. This is not usually an easy matter, owing to the poverty of the exposed soil; for if planting is attempted upon the face of the sides, holes must be excavated and suitable soil put in them, and even then the results are not altogether satisfactory; so it is best to plant hardy trailers along the tops and train the growth downwards to the bottom. Any of the free-growing Ivies answer admirably for this purpose, and so does Cotoneaster microphylla, which has an additional merit from the beautiful contrast which its dark foliage presents to the white flowers or scarlet berries as they occur. If there were no difficulty about the soil, so that planting could be safely and easily practised upon the sides themselves, greater variety could, of course, be obtained by mixing with the Cotoneaster some Mahonias, Vinea major and minor, St. John's Wort, Gorse, Broom, and hardy Heath.

The common Willow has, under peculiar circumstances, been found to flourish tolerably well in very poor soil upon banks that are not in a very prominent position. It was one of those cases of necessity which tend so materially to sharpen one's wits that taught me this useful fact, and this was how it happened: During last year, having made an artificial bank, one face of which was necessarily of so sharp a gradient as to be quite unsafe, and which it was not desirable to cover with turf, it occurred to me to drive a lot of short Willow stakes into it about a foot apart, as I knew such stakes usually emit roots, and, in fact, become living plants. I am glad to say they have done so in this instance, and I do not doubt that the roots will eventually become so much interwoven as to maintain the soil in its present position perfectly well.—EDWARD LUCKHURST.

AURICULA CULTURE.

It is not often that the blooming of a favourite flower is unwelcome and vexations, yet the Auricula is one which does at times aggrieve its cultivators by coming into bloom when they would much rather it did not. In the economy of this plant there is much for it to do in the period of its autumnal growth. Some growers give it then the trouble of establishing itself after repotting; for the plant certainly exhibits in the autumn considerable root-action. It is also at the same time busy with the heart, from which the future truss shall rise; and, in preparation for the winter rest, casts off the free large foliage of its active life, putting on a low dress of small and fleshy leaves of the very texture for withstanding keen dry cold, and of patterns so distinct that many a variety may be perfectly well known by its winter habit. But when the autumn growth sets in there are always plants, often young and

inexperienced ones, that will send up a blooming stem, and thus spend energies that were best stored up for spring. This is how it happens that the blossom of a favourite flower comes without a welcome.

The question whether autumn-blooming is preventable would probably be answered by all growers in one way. Roughly I could reply in four words, It cannot be helped. Yet I conclude from practice with my own plants, and from observation of other collections, that the extent of autumn blooming may be affected and reduced by adhering with all patience to proper treatment in the summer, so that autumn trusses shall arise alone from causes over which we can never have control. First among such I would account the fact that a tendency to autumn blooming "runs in the family." Instances of this are afforded us by those Auriculas and Polyanthus of low extraction in the garden borders, and by the untutored pretty Primrose of the woods and hedgerows. The florist may, therefore, expect an interference with his plans by this characteristic, just as another family feature, the dimorphous arrangement of the stamens, now above and now below the pistil, leaves it freely open to his seedlings to choose the alternative of a "pin-eye"—one of the grossest insults they can offer him.

Again, there is a propensity amounting almost to a property in some varieties of Auricula to bloom in autumn, and I rarely escape being thus favoured by Lady Willbraham, True Briton, Beeston's Apollo, General Niell, and a few selfs and others, though I have never had more unseasonable bloom than seems constitutional with certain sorts. There seems also a tendency this way in some of the vigorous young plants, that, just missing bloom in spring, have been in almost unabated growth till autumn.

In the foregoing remarks I have stated what I believe to be causes of autumn blooming which can scarcely be considered under our command, being connected rather with the nature of the plant than with our powers over it.

I have next to say that I have reasons to think that an unclean and unhealthy state of the plant during summer is calculated to excite this property of the Auricula. I have noticed that plants suffered to fall out of condition by being heated and baked in the sun, or kept too dry, or allowed to be ravaged by pests, have in a marked manner struggled into bloom in autumn; for one thing which a plant in danger of its life will do is to try and preserve its species by hurriedly forming seed, to which flowering is of course the prelude. I am quite sure that what has no right whatever to be blamed for autumn blooming is spring potting. I report all my Auriculas as they pass out of bloom, except such as are to stand for seed, and every autumn I have only a very healthy quiet set of plants—beautiful rosettes of mealy leaves and green—busy with forming stout hearts down among crisp short foliage, and getting such doubly-established root-hold now as I like to see.

I will not here say more for spring potting than that I know what has been said against it, and by practice what I could say for it. I have at times been obliged to pot late, yet would always choose early. But I would wish it known that indeed early potting seems no exciting cause of autumn blooming, but a check may be. Have your Auriculas established early, set them in a north aspect the summer through, keep them cool and airy, take care to have them clear from every insect, love to see them in full unbroken health, and then, though a few precocious sorts and some young plants will bloom in autumn, and seedlings, if you have them, will drop in upon you at all possible times to amuse, perplex, disappoint, reward, yet shall you have as little as may be of untimely blooming from your established plants. But here let me confess that I never in my heart affect to call a flower out of season whenever it may bloom. I am in truth not sorry to see a few Auriculas just now, though colours and properties have largely to be excused, and though the beauties are as little like their loveliness in spring as that ghost of a thing a moonlight rainbow is to the bright living reality created by the sun.—F. D. HONNER, *Kirkby Malzeard, Ripon.*

PHYLLOXERA VASTATRIX.

SPECIMENS of the *Phylloxera vastatrix* have lately been forwarded from France by Monsieur de Luza, which agree exactly with those which have been observed in England. Its appearance at present in France is local. It has done great mischief in the Rhine districts, but has happily at present not established itself in the Medoc vineyards. It has, however, made

its appearance on the opposite side of the river in what is called the Cotes and Palus district, which lies between the rivers Dordogne and Garonne. It, however, has not been so virulent as in the south-east of France, and there appears to be some hope that, like other imported plagues, it may die out.—M. J. B.

ZONAL PELARGONIUMS.

THE notice of the awards of first-class certificates given to the Zonal Pelargoniums at Chiswick, which has been recently made public, leads me to make a few remarks. First, I do not think it right that the name of the donor of the plants should appear appended to the certificated plant instead of the raiser, as it is misleading. For instance, among the Bronzes Crown Prince has G. Acton's name after it. Reine Victoria, E. G. Henderson & Son. Now both of these were raised by Mr. Laing, of the firm of Downie, Laird, & Laing. Again, Chunder Sen appears as E. G. Henderson & Son, instead of its raiser's name, Mr. J. R. Pearson. I know in some lists it is distinctly said that the name of the donor only is given, but as in some instances the donor is the raiser, and in others it is not so, it becomes confusing; and many persons are inclined to think, "Oh! there must be two Crown Princes, one G. Acton's, the other Downie, Laird, & Laing's; or two Chunder Sens, one E. G. Henderson's, the other J. R. Pearson's."

I should suggest that at trial grounds like Chiswick, only the actual raiser be invited to send plants on trial, and that only the raiser's name should appear on the awards. I should not either keep any of the very old well-established sorts on for trial; for instance, I see among Gold Tricolors, Mrs. Pollock and Sophia Dumaresque; among pinks, Christine and Blue Bell; among scarlet selfs, Punch, Vesuvius, Excellent, and so on. Now I should fancy nearly every gardener must have made up his mind about such sorts as these, and unless a few of the old sorts were kept merely as a standard of merit, there can be no use keeping such sorts as these for continued trial.

Would it not be better to select out every year such as appear of sterling merit for a second trial, to give no certificate till after a two-years trial, but to give a list of those considered of sufficient merit for the second year, and to invite all raisers of Pelargoniums to send each year a selection of their best seedlings, limiting them as to numbers, and to give no certificate till, after the second year's trial, it has been decided that the individual plant under notice is either distinct in habit, colour, &c., and sufficiently superior to other sorts sent out? I know some will say that this would not suit the trade. Perhaps it might not, but I am not in this instance thinking of the trade, but we want to put a stop to the introduction of novelties as mere duplicates. In the catalogue of one firm two years ago, I calculated no less than forty-eight new Bronzes sent out in one year, none of which hardly are known to fame now, and the next year nearly the same number of new ones appeared, to say nothing of Zonals, and Nosegays, and Tricolors, &c. Brutus is very often so like Pompey, or as the adage sometimes reads, Brutus and Pompey are very much alike, especially Pompey. Chiswick, moreover, is a difficult trial ground for the dwarfier and more tender sorts, and these require at least two years to try them, so that good plants may be raised for the next year's trial, and all the stock treated alike.

And now I am going to anticipate a few remarks on the Pelargoniums of Mr. Pearson's, which I shall afterwards enlarge on; and I would refer your readers back to some notes of Mr. Quintin Read's in your number of June 12th, page 465. He and I, though agreeing in the main, did not quite come to the same conclusions. It seems to me that the stronger growers have done better with him than with me, and that the dwarfier ones have succeeded best here. Both Shakespeare and Mrs. Vincent Fenn have been good again this year. Dr. Tait, I regret to say, I had not put down for trial in a bed; this I was sorry for after Mr. Read's encomiums. Col. Holden has decidedly been too strong a grower; but the Rev. F. F. Fenn is good, though I do not think quite so good as I expected. I am obliged to endorse what Mr. Read says about Miss Rose Peach; the petal is too delicate for out-door work, but it is beautiful as a pot plant, and for winter decoration will be invaluable, the colour being such a decided acquisition. My namesake, too, throws the flower-truss too much on the ground; but will, I expect, be often seen as a pot plant on the exhibition table, as for pureness of colour and size of truss there are few to equal it. But the Geranium I particularly wish to take notice of now is Mrs. Lowe. Last year, owing to

the wet, I was afraid it was going to be too coarse. This year I had a good-sized bed of it, and from first to last it has been the best pink bed I have ever seen, the trusses immense, pure fresh pink—not so deep-coloured as some of Mr. Pearson's other pinks, but very fresh and bright, standing both sun and rain, the flower-trusses well above the foliage, but the stalks not too long. I can recommend everyone who has it to propagate it freely, and those who are not fortunate enough to have it I should strongly recommend to procure it. As a companion to it, of a deeper shade of pink, which I am more inclined to call lilac, Amaranth has been nearly as good, and has been much admired by many: this, however, as Mr. Read remarks, has become better known, and having been certificated at Chiswick, will be more readily sought after. Florence Durand has been nearly as good, especially late on in the season, and is remarkably fine as a pot plant. I can also say the same of Mrs. Lowe, of which I had two trained plants which made beautiful specimens. One I have cut down for propagating to save having to cut into my beds; the other has still trusses 5 inches in diameter in my greenhouse. Now Corsair, too, which I thought likely only to make a good pot plant, has been good as a bedder.

And here I may remark again, as I have, I think, before noticed, that the pure Zonals which have no Nosegay blood in them, do not stand sun, their petals seem to drop in hot weather, especially in beds that face the direct rays of the sun at midday. This is especially the case with Jean Sisley, which is very good both spring and autumn, but in the summer both Chunder Sen and Charley Carbon surpassed it.

I have not time at present to enter into further details of other sorts; but I can recommend those who have a desire to improve their pinks, and to get rid of Christine, Pink Stella, and others, to propagate Mrs. Lowe, Amaranth, Florence Durand, Comtesse Quarto, Mrs. Fytche, Mrs. Musters, and Mrs. Young. I will, however, refer again more at length in a future number to the Zonal Geraniums.—C. P. PEACH.

SHADES AND SHELTERS.—No. 5.
FRUIT-TREE PROTECTION.

Among the various appliances in use for the protection of fruit trees in bloom from injury through spring frosts, cutting

height of the wall, but in this case it is about 7 feet, and each division is fitted with shutters.

Fig. 1 shows the shutters closed over the trees. The upper shutter, *a*, is made of boards from a light kind of wood such as deal, and the lower one is made of clean straight straw in the manner described in my paper on straw mat making; if straw were preferred to boards the upper shutter might be made of that material also. The shutters are hinged to the frame by stout pieces of leather, and when closed the top of each is fastened by a wooden button shown at *a*. I ought to mention that the framework is fastened to the wall by wire and small iron studs or staples, and at the bottom stout wooden pegs are driven into the ground at equal distances to keep the frame in its place.

Fig. 2 shows the shutters open for admitting light and air in the daytime, and after being let down they are kept in their place by narrow leather straps or cords, as shown at *b* in the top shutter, and at *c* on the lower one.

Fig. 3 is given to show the construction of the framework

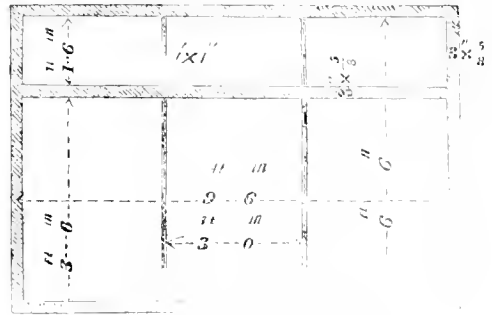


Fig. 3.

with the measurement attached to the whole length as well as to each division; it also shows the size required for each shutter in order to fit properly in the framework. On the whole I consider this an excellent contrivance, and very suitable for amateur gardeners, the walls of whose gardens are

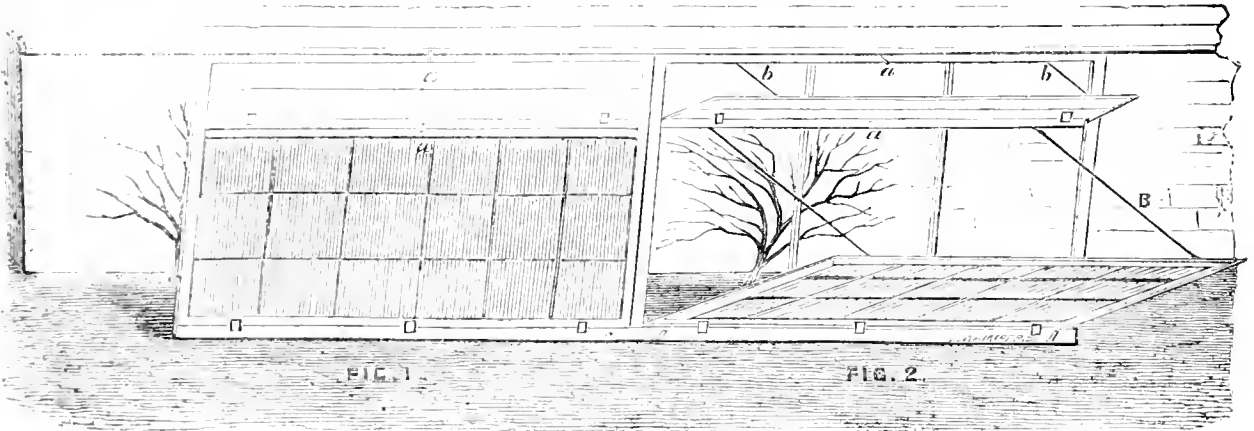


FIG. 1.

FIG. 2.

winds, and wet, there may be room to place the simple yet effective contrivance for the purpose shown in the accompanying woodcut. It is neither put forth as a new invention or as a model of what the generality of fruit-tree protectors should be, but it is worthy of notice nevertheless, as it is a home-spun contrivance, and on examination it will be seen that there is something ingenious in its construction and mode of working. Doubtless glass is the best and safest protection for wall fruit trees, because it is more effectual in every sense of the word; but there are some persons who have no desire to go to the expense of glass coverings, cheap though they be, therefore the more likely are they to stand in need of some such contrivance as that illustrated. It will be seen that it is a framework of wood five-eighths of an inch thick and 3 inches wide, extending from under the coping at the top of the wall down to the earth's surface. This, as shown, is divided into lengths of about 9 feet 6 inches, and the width may be regulated by the

seldom built so high as those round a garden of a large establishment.—THOMAS RECORD.

DESTROYING WASPS.

I wish to ask committees of flower and fruit shows to offer prizes for the best collection of wasps' nests. It would be the means of destroying these garden pests, and not only would the gardener derive a benefit from it, but the bee-keeper would be pleased to get rid of them; and I am sure it would be a great novelty, and would attract great notice, for there are hundreds who never saw a wasp's nest. Of course the wasps must be all dead when exhibited.

I am sorry that I have let the season go so far before speaking about it, but I hope that I am soon enough for next year, and we can commence as early as March or April. We can begin with individual wasps, for by destroying the early one

we kill the queens, and thereby destroy a nest indirectly. I would remind all gardeners to burn all they discover. To obtain the nest as perfect as possible, I roll up a piece of brown paper about 6 inches long and tie both ends with a piece of twine, I then melt some roll sulphur in an old frying-pan or any old tin, and then put the paper in the liquid until it is saturated; the fuse is then ready. Go after all the wasps are in (which will not be before it is dark), find the entrance to the nest, light the fuse, place it in the hole, and blow with a pair of bellows until it is entirely burned, after which you may safely dig the nest out.—JAMES R. POCOCK, *Bromborough Hall, Cheshire.*

BUSH AND PYRAMID FRUIT TREES.

ANY observer of fruit-tree growth can attest, and not a few, I dare say, can add a testimony of costly disappointment in their hope of fruitful bush and pyramid trees of lasting fertility and health. Every fruit tree—dwarf, graft, pinch, prune, or lift as you please—has its own inherent constitution, and will grow wood and fruit after its own natural aptitude and kind, subject only to moderate restriction of form or symmetry, or become a barren, scabbed, stunted scarecrow. Be the stem a dwarf of but a few inches or feet, as of bush and pyramid, still an expansion of branches, twigs, and foliage must be attained, approaching or equalling the head of the standard, else any permanent success is hopeless. I say so, the cordon system of growth, horizontal, oblique, and vertical alike notwithstanding, as lawyers say, for such a system induces but a morbid precocity of temporary duration, and results in decay, involving removal and renewal of stock in succession. Premature fruitfulness is acquired certainly by art, but Nature ultimately resumes her sway or death ensues. "Soon ripe, soon rotten," is an adage old as true.—S.

[So totally at variance with our own reasoning, observations, and experience, are the foregoing theoretical conclusions, and so important is it to be assured as to the merits or demerits of dwarf fruit trees, that we sent our correspondent's letter to one of the best of fruit cultivators, and the following are his observations:—

"Anyone reading the above observations would be led to believe that bush and pyramid-trained trees are worthless to plant in a garden, and that Mr. Thomas Rivers and other eminent cultivators have made a mistake in recommending them. When the soil is suitable, and the garden of large size, I would plant the largest proportion of Pears and Apples on the Pear and Crab stock, because I find the best fruit is produced on trees grafted on the above stocks. But all gardens are not large, and many of them are composed of soil very unsuitable for growing fruit trees. Let your correspondent fancy a garden like that at Loxford Hall. When I undertook the charge of these gardens ten years ago, there were at least two hundred fruit trees in every stage of canker and decay, and on examining the soil I found it to be very light and sandy, ranging in depth from 6 to 18 inches over a bed of sand and gravel. I saw that young Apple trees had been planted on the Crab stock, and that many of them were severely cankered, especially the Ribston Pippin. Well, what was I to do? We must, if possible, have Apples, Pears, Plums, and Cherries. Borders were marked out about 7 or 8 feet wide, the ground was trenched to the gravel, and where the soil was very shallow as much as a foot of gravel was taken out. Some clayey loam was added to the soil in trenching, and in planting the pyramid and bush trees (Cherries on the *Cerasus Mahaleb*, Pears on the Quince, and Apples on the Paradise stocks), fresh loam was placed around the roots. Some of the trees have been lifted once, and others twice, and on referring to my book the last time they were lifted was in 1865. My object in lifting the roots was to spread them out near the surface of the soil to prevent their going downwards into the gravel. I soon found, however, that this was unnecessary, as roots both of Apples and Pears were emitted quite close to the surface of the soil, and that by covering the surface of the ground over thinly with rotted manure, the soil was soon matted with roots close to the surface. This would not have been the case if the Pear and Crab stocks had been used. Well, then, as to longevity, I believe that the trees will keep in good health for half a century. They are now in full bearing, loaded this year from base to summit with fine fruit, and canker is unknown; and should 'S.' or any of your correspondents be able to come to Ilford, they can see such sorts as Blenheim Orange or Pippin studded with fruit; the trees, only six years

planted, are 7 feet high and 8 feet across. These are on the Paradise. Horizontal cordons I have not tried, nor will they ever become so useful as the bush and pyramid form. But where space is limited I can strongly recommend upright and oblique cordon Pear trees on the Quince planted on walls. I may also add that there are some varieties of Pears which do not thrive on the Quince, but, on the other hand, there are some which produce fruit larger in size and of better quality from this stock."—J. DOUGLAS.]

HISTORY OF CLEOPATRA BEDDING GERANIUM.

Now that the Royal Horticultural Society have published their list of awards on the merits of the bedding Geraniums which they have proved in their trial grounds during the summer of 1873, and as in that list is the name of one with which I am well acquainted, I thought a word or two on its history would not be unacceptable to the bedding-Geranium-loving readers of THE JOURNAL OF HORTICULTURE.

In the list of pink bedding Geraniums *Cleopatra* is one selected for special mention, and has three asterisks (equivalent to a first-class certificate, I suppose), to her name. *Cleopatra* is a sport—a freak of nature, thrown off by that old favourite and most profusely flowering Geranium, *Trentham Rose*. The sporting branch was taken off some plants of it growing in the flower garden of J. B. Taylor, Esq., of Radcliffe-on-Trent, Notts, by his then gardener, Frederick Walker. This was done in the latter part of the summer of 1865. When Walker had one plant nicely in flower he showed it to the vicar of Radcliffe (a very good judge of a bedding Geranium), who was so struck with its good properties that he made him a very fair offer for the plant, which Walker refused. He propagated it through the summer of 1866, and raised twenty plants. A neighbouring nurseryman on seeing them offered him a very good price for them, but on the advice of all his brother gardeners, who all thought he might do better with it, he refused it. In the spring of 1867 he passed his stock of it into the hands of Mr. Samuel Barratt, of the Vicarage Nursery Gardens, who has worked it and sold it largely up to the present time. So extensively has it been distributed about here, that no other pink Geranium is grown in anything like the same quantities. In the summer of this year I strongly advised my friend and neighbour Barratt to send up a plant or two in bloom to the Floral Committee of the Royal Horticultural Society. He did so, but all he received for his pains was a reply from some official at South Kensington saying that the plants were not distinguishable from *Trentham Rose*, and therefore not worthy of notice. He was so disgusted, and naturally so, with this reply that he destroyed it. I wish he had not. It would be worth while sending it to South Kensington for them to compare it with the decision of the Floral Committee on *Cleopatra's* performances the last two years.

About this time Mr. Barratt put in an advertisement of it in THE JOURNAL OF HORTICULTURE, thinking that when the decision of the Floral Committee was made known he should be able to do something with it, but as nothing came of it he did not repeat the advertisement. In 1870 or 1871, when the Royal Horticultural Society advertised for new varieties of bedding Geraniums for trial in their grounds, I again strongly advised Barratt to send up plants to the Society's garden. I said I thought he might rely upon Mr. Barron's faithfulness and honour, who would see that all the varieties he received, by whomsoever sent, should have fair and honest treatment; and now in the autumn of 1873, at last, *Cleopatra* receives her patiently-earned reward. We find out, however, by one thing and another, that the Royal Horticultural Society's gardeners have not been idle nor slow to perceive the merits of *Cleopatra*, for we hear that it is considered by them their best and most useful pink bedder; and this opinion not only appears to be the opinion of the gardeners at South Kensington, but of Hyde Park, for one of the best pink beds by Park Lane this year is *Cleopatra*. It was, after Mr. Pearson's *Amaranth* (which is a perfect wonder in that line of colour—lilac purple), the best pink bed there on August 19th, when I saw it. I recognised it at once; and on looking at the tally and finding my judgment confirmed, I was both struck with surprise to see it there, and filled with pleasure too. I sent it some time ago to Mr. R. Fish, who after this may have a word to say about it. (How we miss our veteran teacher's words of wisdom!) I also sent it to Mr. D. T. Fish, of Hardwicke, Bury St. Edmunds, whose opinion I should also like to know. You will begin to think that I have more than a professional interest in the success of

Cleopatra. I assure you I have not; but in a small place like ours there is a strong community of interest running through all our belongings, so that if one member suffer all the members suffer with it, and if one rejoice all the other members rejoice with it.—N. H. P.

GARDEN LABELS.

Many contrivances have been used for labelling trees and plants in gardens and pleasure grounds, varying it their design and usefulness. One of the first objects to be attained in a label is durability, and the other is distinctness. Both of these requirements are to be found in those of which we have received specimens from Messrs. Bell & Thorpe, of Stratford-on-Avon. They are of various sizes, and either round or oval in form, some being adapted for hanging on a tree, and others for sticking in the ground; but all are made of metal which is galvanised, and of a substance securing great durability, while the names of the plants are cast so sharply in relief that one cannot imagine that they will ever be effaced. We consider these very valuable as labels, and the cost is marvellously cheap.

NOTES ON LILIES.—No. 3.
LILIAM TIGRINUM SPLENDENS.

This Lily, which well deserves its name, was first shown before the Floral Committee at South Kensington in July, 1872,



Liliun tigrinum splendens.

when we received a first-class certificate. Liliun tigrinum Fortunei had been several times exhibited in the belief that it was tigrinum splendens. The difference between the two varieties is most marked. In splendens the flowers are much larger, the spots much larger and closer, the colour richer, and

the growth much greater. We have grown the two varieties and the old tigrinum sinensis in pots side by side, under exactly similar treatment. The order of blooming is, first L. tigrinum sinensis; about a fortnight later L. tigrinum Fortunei; then, about a fortnight later, L. tigrinum splendens. The plant of tigrinum splendens photographed threw three stems from the one bulb. The height with the pot was 8 feet 10 inches. One stem had twenty-six blooms and was 22 inches across. The other two had respectively twenty-two and eighteen blooms, making in all sixty-six blooms. At the back of a north conservatory it was indeed "splendens."—GEORGE F. WILSON.

[All our engravings of the Lilies are copied from photographs taken by Mr. Ward, photographer, Weybridge.]

CAPE GERANIUMS.

I AM always pleased to give any information in my power to others, and so have the less hesitation in asking for it.

If any of the readers of "our Journal" are acquainted with the culture of Cape Geraniums I should be very glad of directions how best to grow these curious plants. I have a fine lot of plants of Geranium echinatum which appear in perfect health, but just as I expected them to come into flower they lost every leaf, and look now like a lot of Cacti. I wrote to a good gardener, who also grows a lot of these pretty plants, and he says he is just in the same predicament, and his are as bare of leaves as mine. What makes me the more vexed, I had last year a beautiful hybrid of this class, and it has also lost its leaves without producing a bloom this season.

Many of the Cape Geraniums are so curious, and some so beautiful, that I am anxious to grow and also to breed from them, and any information would be very acceptable.

Is there anyone who makes their culture a speciality, or any place where a good collection can be seen?—J. R. PEARSON, Chilwell.

THE POTATO DISEASE.

IN various places contiguous to Gravesend, I am sorry to report that the crop has suffered within the last few weeks, though the farmers and market-gardeners are now digging-up some sound and healthy tubers, and even in the infected fields a good moiety has escaped harm. The change came over the crop with that suddenness which has often been remarked. During August the Potatoes could hardly have looked more promising, and I was congratulating a grower on the prospect of a heavy yield, and he remarked that he had seldom seen the crop so free from insect blight. There is a general belief, I find, that the disease, be it what it may, is in some way brought to the plant through atmospheric conditions, and is not to be attributable to anything in the state of the soil and the mode of cultivation. Men will, with certainly a show of reason, point to the haulm, and show you parts of it affected and others untouched on the same plant; even of opposite leaves, one will be healthy and the other blighted, and they ask, "If the disease came up and the plant was radically sickly, would it not entirely wither?" And you may pull-up plants terribly diseased above ground, and not find an unsound tuber below, though such cases are exceptional. From a limited observation in this district, I fancy the accession of disease here occurred during some hours of cold rain and easterly wind; yet as I cannot demonstrate this, my theory must only be taken for what it is worth. Nor can I say that the condition of the land as to drainage made any difference, though in one extensive field sloping down from a chalk ridge to some marsh land, I noticed a belt of Potatoes in the lower portion of the field was affected, while on the higher ground only here and there a straggler looked sickly.

The practice recently so strongly urged on growers of at once cutting off the haulm close to the ground is not carried out here, and on inquiry I was told that they had tried it in some rows, but that it "was no good." Happening just at a busy time, some gardeners may not be able to spare the labour requisite for the work being done effectively at once. As to its non-utility, I beg to differ from these individuals, as the disease is thus somewhat checked in the instance of the particular plants affected, and we may expect to dig-up a smaller proportion of diseased tubers; also it is probable that some subtle influence is borne from field to field. I noticed likewise, that in a field partly cropped with Potatoes and partly with Kidney Beans, the latter had evidently suffered materially from their proximity to the former, as shown by their

blackened leaves and withered stalks, while these plants were healthy in other fields. Turnips growing among diseased Potatoes do not appear to be at all affected thereby.

If the haulm be not cut off on the first symptoms of disease, it must surely be at least advisable to dig up the Potatoes as soon as possible, so that those uninjured by the disease may be removed. But it seems that many are in the habit of digging their Potatoes in small lots at a time, so that they will not have all the tubers out of the ground perhaps before Christmas. Like the Turks, they are moved by a species of fatalism, and argue that those tubers that are diseased cannot be recovered, and so they may as well rot away, while those that are sound will be so whenever dug up. Under false notions of economy in Kent, and elsewhere, some persons are accustomed to plough-up their Potatoes instead of "forking" them out of the ground. The result is, as is quite apparent, that a larger proportion are lost than by the other plan, and of those that are turned up more are cut about.

It would be interesting to ascertain in what relation, if any, the Potato disease stands to the succession of crops. In some of the fields I went through there had been grass or Clover growing the previous year, in others corn. It is not usual here to make any particular selection as to soil, &c., in putting-in Potatoes, but we may discover hereafter that Potatoes are more likely to be diseased when they follow certain crops.—J. R. S. C. *Gravesend, Kent.*

[Whatever may be the cause of the disease, one fact has been clearly established—Potatoes dug up early in August usually are not diseased. Whoever leaves the tubers in the ground until September subjects them to far more liability to be affected.—*Ens.*]

ROYAL HORTICULTURAL SOCIETY.

OCTOBER 1ST.

THE chief features on this occasion were the edible and poisonous Fungi, of which several extensive collections were shown, and the display of Grapes. As regards Fungi, which are especially plentiful this autumn, we are promised a special report next week; we shall therefore here confine ourselves to giving the names of the successful competitors. For Mr. Wilson Saunders's prizes for collections of edible and poisonous Fungi, arranged separately, Mr. English, of Epping, was first with numerous species very neatly set up, and Mr. B. J. Austin, 6, Russell Street, Reading, second. For the best collection of edible Fungi, Mr. W. G. Smith, Mildmay Park, was first, Miss E. Hubbard, Leonardslee, Horsham, second, and Mr. B. J. Austin third. In the class for cultivated edible Fungi there was no competition.

Prizes were offered for six pots of autumn Crocuses, but none were exhibited, and the only collection of Colchicums was that shown by Mr. R. Parker, of Tooting, consisting of fine potsful of *C. autumnale* and its varieties *pallidum* and *album*, and *C. byzantinum* and its varieties *variegatum* and *maximum*. Mr. Parker had an extra prize for cut blooms of *Pyrethrums*, very double, and a fine collection of *Aster Amellus*, discolor major, *Tritoma Uvaria glaucescens*, and other hardly autumn-flowering plants, among which *Pyrethrum serotinum* was very conspicuous.

Prizes were offered for collections of Black and White Grapes. In the class for the former Mr. Bannerman, gardener to Lord Bagot, Blithfield, Rugeley, was the only exhibitor, and gained the first prize with a dozen sorts; Champion Hamburgh, Alicante, Lady Downe's, and Gros Colman were pretty good. The first prize for a collection of White Grapes was given to Mr. T. Wattam, gardener to A. H. Longman, Esq., Shendish, Hemel Hempstead, he had very good Muscats and Buckland Sweetwater. The best single bunch of White Grapes was a well-finished one of Muscat of Alexandria, from Mr. J. Woodbridge, Sion House, Brentford; the same variety from Mr. T. Wattam, was second. Mr. Wattam had the best single black bunch, a well-finished Alicante. Mr. Woodbridge was second with Madresfield Court Muscat.

FRUIT COMMITTEE.—Alfred Smee, Esq., F.R.S., in the chair. Mr. Sweeting, gardener to J. Y. Venn, Esq., Sneyd Park, Bristol, sent a seedling Black Muscat Grape named Venn's Seedling Muscat; the flesh is very firm, and the Muscat flavour well developed. None of the bunches sent were in good condition. Three bunches were shown. A small one cut from a graft on the Dutch Sweetwater was the best-finished, and had been ripe since May; it was in good condition and well coloured. The bunch cut from the parent Vine was very badly coloured. The Committee asked to see this variety again in March.

Three seedling Apples were sent by Mr. John Webster, Gordon Castle. The Committee could not express any opinion upon them until they saw examples of established sorts grown at the

same place to compare with them. Princess Christian Apple was sent by Mrs. Hitching, Upminster Common, Essex. They were not in condition, and were passed. Mr. Ford, gardener to E. G. Hubbard, Esq., Leonardslee, sent Apple Beauty of Leonardslee. The cooked fruit was a bad colour, and was thought inferior to established sorts. Mr. S. Foulsham, gardener to N. Surridge, Esq., Romford, sent a dish of dessert Apples, which were passed. Messrs. Bunyard & Sons, Maidstone, Kent, sent Alexandra Nonpareil; this is a very good-flavoured early Apple, and sufficiently distinct. The Committee asked to see it next year, as the fruit was shrivelled from having been gathered too early. Mr. Dancer, of Little Sutton, Chiswick, sent beautiful examples of Yellow Ingestrie Apple of good flavour.

Mr. W. Paul, of Waltham Cross, N., exhibited a bunch of Waltham Cross Grape, which has already been certificated by the Committee. It well maintains the character it received last year; the flavour was very good. Winter Muscadine was also sent by Mr. Paul. This is a very large-bunched variety, a sweet Grape of pleasant flavour. Mr. Pearson, of Chilwell, Nottingham, sent a seedling white Grape, the berries round, juicy, and of a pleasant Muscat flavour; also a very handsome bunch of Dr. Hogg—this fully maintained its character as being one of the very best Grapes with Frontignan flavour. Pond's Seedling and Reine Claude de Bayay Plums, and a dish of Pears, were sent by Mr. Jack, gardener to the Duke of Cleveland, Battle Abbey, Sussex.

Mr. Dancer, of Chiswick, sent thirty-eight varieties of Pears, thirty-five of Apples, and two of Plums. The fruit were remarkably large and of excellent quality, reminding one of the best examples from Jersey. Of Pears, Durandean, or De Tongres, was very fine, and will probably be a good market Pear; Gratioli of Jersey; Seckle, very fine and highly coloured. Beurré Hardy, Marie Louise d'Uccle, Doyenné du Conice, General Todtleben, Beurré Bachelier, Baronne de Mello, and Forme de Bergamotte were really grand. He also exhibited such Apples as Cox's Orange Pippin like good-sized Blenheim's, Ribston Pippin, Braddick's and Scarlet Nonpareils, Golden Noble, Dumelow's Seedling, Cox's Pomona, Reineette de Chaux, much thought of by Mr. Dancer. The Committee expressed their thanks to Mr. Dancer for these collections, and recommended that the Lindley medal be awarded for them.

A collection of Apples and Pears was also sent by Mr. T. Sadler, gardener to R. H. Wyatt, Esq., Wandsworth Lodge, Tooting. They contained very good examples, and received a cultural commendation. Mr. C. Turner, of Slough, sent some very fine examples of White Spanish Onion. A cultural commendation was awarded. Splendid examples of the Large Yellow Tomato were sent by Mr. J. Perkins, gardener to Lord Henniker, Thornham Hall, Suffolk, and received a cultural commendation.

A first-class certificate was awarded to Barchard's Seedling Apple, sent by Mr. Dancer. It is a very handsome Apple, very free-bearing, especially on large standards. It was stated that the tree would be effective as a lawn tree, from its regular habit of growth being naturally quite umbrella-shaped.

Messrs. Veitch & Sons, of Chelsea, sent a collection of Beet, including the highly ornamental Chilian Beet. Of the kinds cultivated for culinary use, which were in a cooked state, to our taste Whyte's Black, Pine Apple Short-top, and Dull's were the best, standing in point of merit in the order named. Messrs. Stuart & Mein, Kelso, sent a collection of Turnips.

FLORAL COMMITTEE.—Mr. J. Fraser in the chair. Mr. J. Baines, gardener to H. Micholls, Esq., Southgate House, had a first-class certificate for a Cattleya imported from Bogota, with a deep purple lip, yellowish cream towards the base; the rest of the inflorescence slightly flushed with purplish pink. This was subsequently named *C. speciosa Bassetii*. A like award was made to Messrs. L. G. Henderson & Son, Wellington Nursery, St. John's Wood, for Golden Fleece Thyme, with broader leaves and more yellow than *Thymus citriodora aurca*. Mr. Williams, of Holloway, sent *Pouretia achnupolia*, with gracefully arching leaves upwards of a yard long, bright green, turning to crimson at the extremities, and in the younger leaves partially blotched with the same colour. This was awarded a first-class certificate. From Mr. W. Bull, Chelsea, came *Ricinus refulgens* from Burnah, with dark bronzed leaves—an effective Castor-oil Plant. Messrs. E. G. Henderson exhibited Dahlia *viridiflora*, a green Dahlia raised by M. Sieckmann, also scarlet Begonias Dr. Kellock and Prince of Wales. From the Society's garden at Chiswick came two nice plants of *Lomaria gibba* Bellii, and Lady Middleton Geranium sported, producing both rose and scarlet-coloured flowers.

Mr. R. Parker, Exotic Nursery, Tooting, sent *Chrysanthemum indicum nanum*, very dwarf and in excellent bloom, lifted from the open ground. Mr. Wimsell, Ashburnham Park Nursery, Chelsea, contributed a group of dwarf Palms, Crotons, and Dracaenas suitable for table decoration. Mr. Coulter, Haydon Hall, Eastcote, Middlesex, sent a plant of *Eucharis amazonica* in fine bloom and having large flowers.

Mr. S. P. Harris, Orpington, sent a stand of seedling Dahlias,

including Mrs. Harris, recently certificated; and from Mr. Rawlings, Romford, came a dozen fine blooms of kinds already in commerce. Mr. Strahan, gardener to P. Crowley, Esq., Waddon House, Croydon, sent *Cologyne cristata variegata* with the leaves broadly striped with white. It was not in flower, but is a handsome variegated Orchid. Calver's patent flower-pot was submitted to the Committee. Essentially it is a pot within a pot, and the interval between the two can be filled with water, which the patentee considers will be an advantage.

Fine stands of cut Roses were shown by Messrs. Paul & Son, of Cheshant, and Mr. William Paul, of Waltham Cross. The former sent for this late season excellent examples of Gloire de Dijon, La France, Alfred Colomb, Alice Dureau, Countess of Oxford, Victor Verdier, Belle Lyonnaise, Madame Berard, La Fontaine, Paul Neron, Duke of Edinburgh, Maurice Bernardin, Madame C. Joigneaux, and Marquise de Castellane, together with the new pink Tea Rose, Cheshant Hybrid. Mr. W. Paul sent fine examples of La France, Alfred Colomb, Duke of Edinburgh, Princess Beatrice, Madame Trifle, Edward Morren, Paul Neron, Senateur Vaisse, Lyonnaise, Dr. Andry, Marquise de Castellane, Gloire de Dijon, Souvenir d'Elise Vardon, Belle Lyonnaise, Dupuy-Jamain, Etienne Levet, and some others. From Mr. R. Clarke, market gardener, Twickenham, came upwards of a hundred pots of *Cyclamens* in good bloom.

PROPAGATING LOBELIA AND CENTAUREA RAGUSINA.

My plan is to strike a few cuttings in autumn, taken from the best plants, and these cuttings constitute the stock plants. The system is to strike in saucers with sand and water, placed on bottom heat: two or three days is sufficient to have them ready for potting-off; but I prefer boxes, as they take less space and are more convenient for moving about. After potting-off they are placed in heat for a few days till growth has commenced, when they are gradually hardened-off. In spring the plants are cut over, and the cuttings treated again in the same way.

In regard to propagating *Centauras* by cuttings, the same method may be followed with perfect success; in fact, mostly all of our softwooded bedding plants can be struck in sand and water. I have tried it successfully with some of our most delicate *Geraniums*, such as Mrs. Pollock, &c. It only requires judgment in the amount of water to be kept in the saucers, as some plants will stand more than others. It is the simplest means of propagating *Fuchsias*, *Verbenas*, *Heliotropes*, and *Iresines*.—ROBERT STEVENS (in *The Gardener*).

NOTES AND GLEANINGS.

THE battle of the site of FARRINGTON MARKET was fought out at the last meeting of the Court of Common Council. Plans and estimates are to be prepared for the construction of a fruit and vegetable market on the site of the existing Farrington Market. Are the trade to be consulted as to their requirements? The large market gardeners and fruit-growers within twenty miles of London are the persons who will bring their goods to the market for sale, and should be heard as to their requirements. Would it not be well to give the committee power to advertise for plans and estimates, and permit the architect whose plan was successful to carry out the work, and obtain the proper reward for his ingenuity and industry? The best intelligence and the most practical information should be at the disposal of the Corporation in all these questions. This can only be obtained by open competition; and when the designs, with estimates, are obtained, the Court should select, after careful consideration as to the requirements of those who are to use the market. Large space is required, not, perhaps, so much for the immediate use of the present men, but for the growth of the trade for twenty-five years to come. Street frontage is not so essential as good wagon entrances and exits, as the goods are wanted to be drawn into the market and sold from the waggons. The fruit trade, foreign and British, is carried on wholesale, and is conveyed to the public through the street hawkers and retail shopkeepers. This would be a market where the commodities would be sold wholesale. The whole should be under cover; no goods are more injured by sun and rain than gathered fruit and vegetables, and nothing consumed by the public of the metropolis so much appreciated but so rarely obtained as these articles perfectly fresh. It may be broadly stated that the three-quarters of a million persons who get their midday meal in the City get better and fresher vegetables than the remainder of the population of the metropolis. And the reason is this: The eating-house keepers and cook-shop proprietors of the City make their purchases

from the grower or wholesale vendors daily in either Farringdon or Covent Garden Markets, and take great care, in the interests of their business, that the articles they purchase are of that day's supply. That large portion of the public who get their vegetables from the nearest greengrocer, seldom obtain any that have not been gathered within four or five days; vegetables leaving the market gardens on the Monday, standing Tuesday's market at Covent Garden; perhaps sold on the wagon to go to Farringdon or the Borough the following day, and then sold to the greengrocer. The consumer may get it the same day; and it is very seldom that all he purchases he consumes that day, so those gathered on Monday are often not consumed until the Friday or Saturday. But the poor of London, what do they get? In the midst of the season, when the supply of all kinds of vegetables and fruit is large, and there is what is called a glut, they obtain the freshest and best that comes to market, through the medium of that much-abused but very useful class the costermongers—fine large Lettuces three a penny, a Cucumber and two Onions for the same money, Cauliflowers a halfpenny each, and Cabbages six for twopenny; but in scarce times slug-eaten Cabbages, heated and yellow Turnip tops, in fact the refuse of the markets, are all they can obtain. There cannot be a more fruitful source of disease than the consumption of stale vegetables by the poor. If it is necessary to examine and cause to be cleansed the cisterns in London houses, and watch and test the articles that are sold by other tradesmen as food or beverages, it is equally necessary, or more so, to turn out and condemn the filth often to be found in the cellars and stores of the greengrocers of London. If a better supply of vegetables could be obtained in London, so much meat would not be consumed.—(*City Press*).

— AN INTERNATIONAL FRUIT AND PLANT SHOW is to be held at Edinburgh in 1875, under the auspices of the Royal Caledonian Horticultural Society.

PLANTING A FLOWER GARDEN.

RICHNESS VERSUS GLARE.

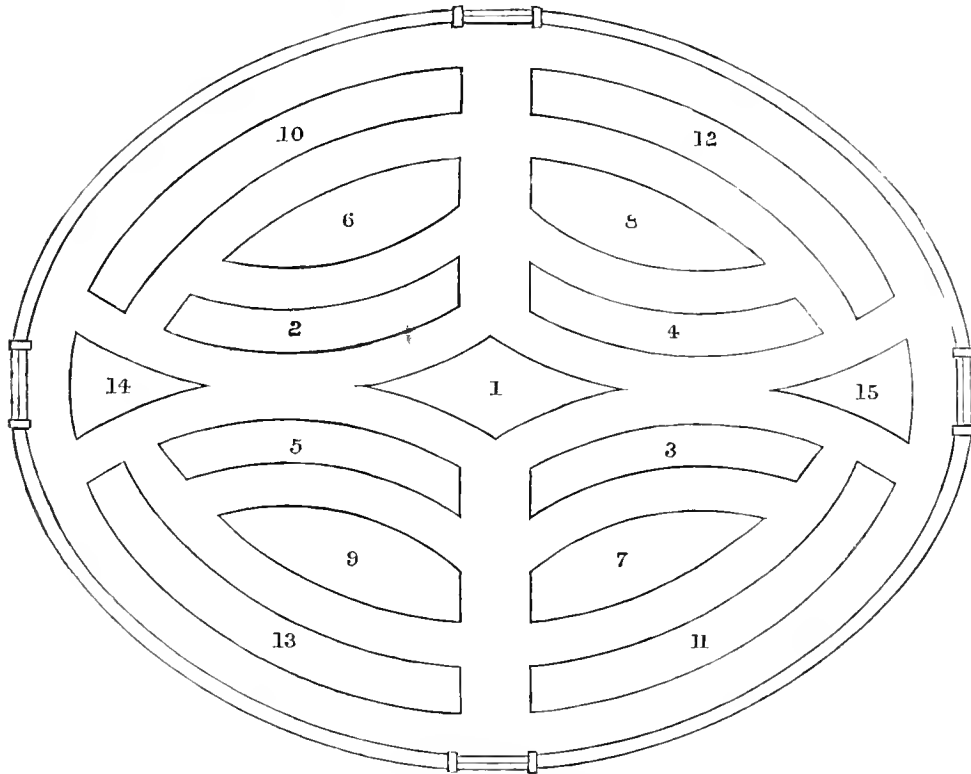
A FONDNESS for tinsel, a liking for gaudy colours, is characteristic of humanity in a savage state or in a condition of semi-civilisation. The barbaric splendour of eastern courts is proverbial, and may be taken as conclusive evidence of the force and truth of the assertion; for the maxim, "Like master, like man," holds good the world over. Civilisation, on the other hand, implies culture, inclining those who are so happy as to enjoy its benefits to a fondness for Nature in repose; for softness, harmony, and quiet beauty; for the play of light and shade; for that intricacy and delicacy of tint which is so wonderfully interwoven in many a fair landscape; for the brilliancy, freshness, and varied beauty of the dawn, or the mellow richness of the setting sun, rather than the full glare of its mid-day splendour. It follows, therefore, that for a work of art to excite the interest and sustain the attention of persons of refined taste, it must possess some of these desirable properties, and the degree of admiration awarded to it will be very much in proportion to its excellence in this respect.

A flower garden is a work of art. Its position is generally a prominent one—often so much so, that it may very justly be regarded as one of the most important adjuncts to a building of stately proportions and that is rich in architectural embellishments. The management of every part of it, but more especially the tasteful arrangement of the colours of the flowers, is consequently a work of much importance, and which certainly ought not to be undertaken by an incompetent person. Whether this is so, or that sufficient thought and study are not given to the work, I am unable to say, but it is an undoubted fact that delicacy of colouring and repose are frequently wanting in combinations that are pretty satisfactory in most other respects. The primary colours—scarlet, blue, and yellow—prevail in endless repetition; a bold, often glaring style of colouring, which should be tolerated only in very large gardens, is but too often followed in places of moderate extent, to the exclusion of that repose and quiet beauty, that air of refinement, which it is so eminently desirable to impart to such a scene. The hard, uncompromising, almost startling effect of the bright masses of colour is so pronounced as to rob the surrounding beds of all interest, however lavish may be the use of neutral colours. I have actually seen the principal walk of a garden, with a ribbon border on each side filled with alternating rows of scarlet, yellow, and blue, that glowed in the full bright sunshine with a dazzling brilliancy that was

perfectly bewildering. Fancy a person of refined taste selecting such a walk for a promenade! It is full time that all this faulty work should cease. Richness and brightness are not incompatible with repose; for, while striving to avoid vulgarity, great care must be taken not to run into the counter evil of insipidity. Considerable breadth of colour is always desirable; a few rich colours skilfully blended and toned to quietness and harmony by a judicious use of neutral tints, are quite certain to be appreciated. Let this plan only be more generally followed, and greater attention given to the various important shades of grey, purple, pink, and crimson, so as to impart a softer tone, striving for harmonious blending rather than vivid

contrast, and many flower gardens will be far more enjoyable than has hitherto been the case.

The two arrangements of bedding plants A and B, appended to the plan, will serve to illustrate my meaning. The arrangement A, sent by "HIGHFIELD" for criticism, while it is faulty, is very far from being an extreme case. An excess of yellow is the principal fault; four beds of yellow, with two more bordered with bright yellow, and other edgings of a yellow hue, are by far too much of this strong colour for so small a garden. Then, too, the edgings of 5 and 9 and 4 and 8 would clash; and I do not think the dark-leaved *Coleus* is a suitable edging for white variegated *Geraniums*. The contrast is certainly



FLOWER GARDEN ARRANGEMENTS.

A.

1. Clematis Jackmani, bordered with *Cerastium tomentosum*.
2. *Calceolaria Anrea floribunda*, bordered with *Fresine*.
3. *Calceolaria Anrea floribunda*, bordered with *Alternanthera amabilis*.
4. Crimson-flowered Ivy-leaved *Geranium*, bordered with variegated *Saxifrage*.
5. Scarlet *Verbena*, bordered with variegated *Saxifrage*.
6. *Petunia*, bordered with *Lady Plymouth Geranium*.
7. *Verbena Purple King*, bordered with *Lady Plymouth Geranium*.
8. Dwarf *Ageratum*, bordered with *Cloth of Gold Pansy*.
9. Double *Lobelia*, bordered with *Cloth of Gold Pansy*.
10. Mrs. Pollock, bordered with *Fresine Lindenii*.
11. Golden Chain, bordered with *Fresine Lindenii*.
12. Bijou *Geranium*, bordered with *Coleus Verschaffeltii*.
13. Flower of Spring, bordered with *Coleus Verschaffeltii*.
14. White-flowered Ivy-leaved *Geranium*, bordered with *Mesembryanthemum cordifolium variegatum*.
15. White-flowered Horseshoe-leaved *Geranium*, bordered with *Mesembryanthemum*.

B.

1. Clematis Jackmani, border Golden Pyrethrum; deep violet, pale yellow.
- 2, 3. Maid of Kent or Amaranth *Geranium*, border *Santolina incana*; deep pink, soft fleecy grey.
4. Flower of Spring *Geranium* (flowers picked off), border *Alternanthera amona*; white, pink.
5. Miss Kingsbury *Geranium* (flowers picked off), border *Alternanthera amona*; white, pink.
6. Mrs. Pollock or *Lady Cullum* (flowers picked off), border *Coleus Verschaffeltii splendens*; yellow, deep crimson.
7. Golden Chain or Crystal Palace *Geranium* (flowers picked off), border *Coleus Verschaffeltii splendens*; yellow, deep crimson.
- 8, 9. *Lobelia speciosa*, border *Fresine Lindenii*; blue, deep crimson.
10. Purple *Petunia*, border *Lady Plymouth Geranium*; purple, pale yellow.
11. Purple King *Verbena*, border *Lady Plymouth*; purple, pale yellow.
12. Douglas Pearson *Geranium*, border *Mesembryanthemum cordifolium variegatum*; crimson scarlet, pale yellow.
13. Rev. F. F. Fenn *Geranium*, border variegated *Mesembryanthemum*; deep crimson scarlet, pale yellow. † deep blue.
- 14, 15. White Ivy-leaf *Geranium*, border *Lobelia pumila grandiflora*; white,

striking, but the soft effect of a blue or light pink edging is far more pleasing. In the re-arrangement B, it will be seen that the *Calceolarias*, yellow *Pansy*, scarlet *Verbena*, and old crimson Ivy-leaf *Geranium* are discarded. The soft yellow Golden *Pyrethrum* is substituted for the grey edging around the central bed, which will be very rich, making a lovely centre with the four surrounding beds, which with it form a pleasing sprightly harmony of white, pink, soft grey, deep violet, and pale yellow; while in 6, 7, 8, and 9, the colours of bolder type make a pleasing—not a harsh—contrast, leading the eye agreeably to the deep rich colour of the outer beds. I would also call especial attention to the fact that all the flowers are to be kept picked off the variegated *Geraniums*; for if this were neglected, and the

flowers suffered to appear, the effect of the arrangement would be quite spoilt.—EDWARD LUCKHURST.

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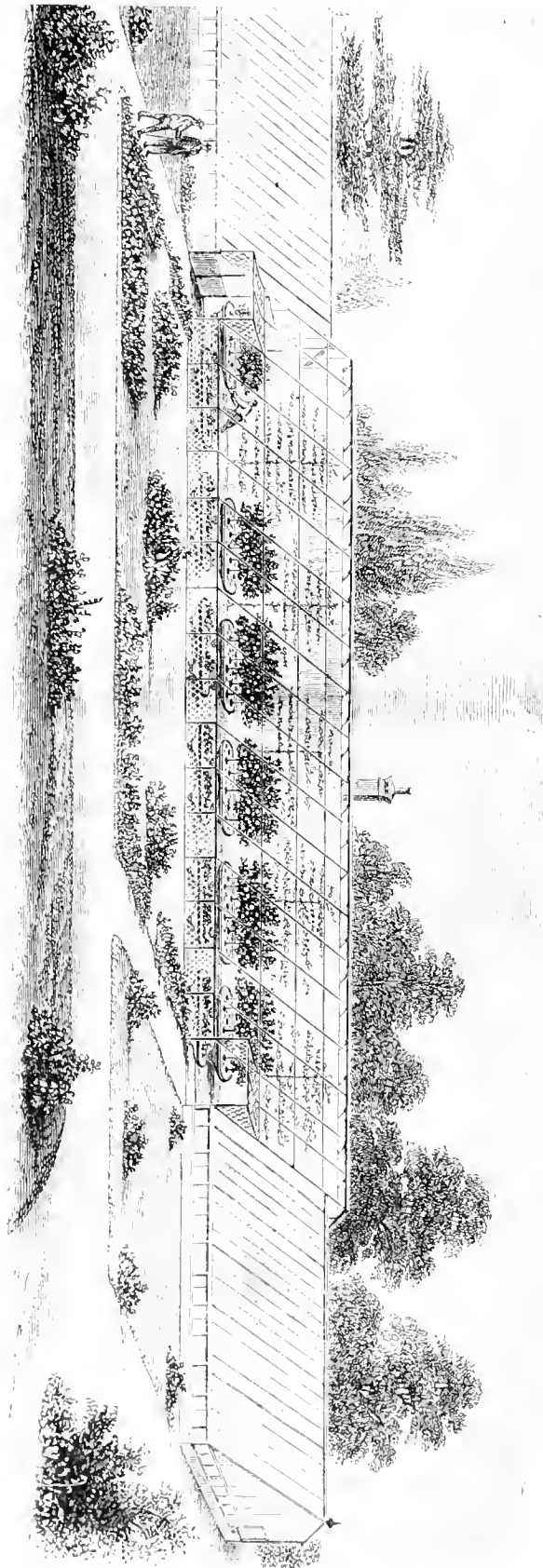
A GARDEN FOR STONE FRUIT, FLOWERS, AND GRAPES.

THE houses are represented with the folding doors, for the ingress and egress of the small trucks closed, to prevent confusion in the drawing. The houses are heated from one boiler at the back of wall in the centre, the sunk pipes running at the base of the wall to both houses; the potting-sheds, fruit-rooms, &c., at the back of the wall are heated or not as desired, by the application of open gratings over the passing pipes

wherever wanted. The rafters of the roof of these back sheds are elongated and brought fine at the ends, so as to project over front wall, and act as a coping covered with glass, to protect from frost the trees trained on the wall—this is, I believe, an entirely novel idea for attaining that end, and certainly a cheap and efficacious one. The back sheds may be built of any width desired, and covered in continuation from the wall at the back with either slate or glass. I much prefer the latter, especially if the expense of fluted glass is not objected to, as this is warm in winter and cool in summer; even for fruit-rooms, the covering of glass with a north aspect brings the fruit forward but little earlier than a dark room, and certainly improves its flavour. The other sheds with the advantage of being able to utilise the hot-water pipes *en passant*, are most useful for protecting cuttings, Strawberries in pots, extra fruit trees, &c., till they are wanted on the front trucks; they are also pleasant and light to work in. The rods which extend from the face of overhanging coping to front of truck-yard, are very light, only made for holding moveable common bird-netting, which is stretched to meet at the front of this yard, an upright fence of galvanised wire bird-proof netting 4 feet high, so as to range with the houses. Thus the whole is closed-in from birds, and a lock on the light folding-doors at each end, which are also covered with galvanised-wire net, keeps out all intruders. These doors are not shown in the drawing, only the openings, to prevent confusion. The rafters of front houses at each end of the wall are extended to meet the projecting coping, and the corner space filled-in with upright glass, which shuts out draughts. The cold north winds, instead of eddying over the top of the wall on to the trees, are shot off by the angle of back roof and projecting coping—no brick coping will be required for the wall, only the wooden sill on which the rafters are fastened, and the space between these will give ample ventilation to the back houses at the top, where it is required. There is a 3½-foot walk between the trucks and the wall, one of 4 feet between the two rows of trucks, both in and out of the houses. The squares in which the fruit-tree pots are set in the trucks are all moveable, and may be replaced with squares of fret-work, should it be desirable to keep the whole entirely for flowers. A small turn-table may be placed at the front of folding doors in the centre of the entrance path which runs at right angles to the house, so that if it is desired to change the position of any of the trucks, they can be turned and run down the centre of this path through the wire doors, these being for that purpose made the same size as the folding-doors of the houses. This turn-table with a lid to open in its side between the rows of trucks may form the cover of a sunk tank to receive the rain water from both the front and back houses, each truck full of trees or flowers as they require syringing or watering, may thus be brought over the tank instead of the water having to be carried to them, and an immense amount of labour and time saved thereby. Where this forms the only fruit garden, I prefer the back wall covered with choice Pear trees, which in this climate will well repay the care bestowed which they so seldom really get; the trees on the trucks do not shade them in the least, the trucks will always grow a superabundance of Peaches and Nectarines, &c., so long as they will last, in proportion to the size of the garden required for a family.

N.B.—Where conservatories for flowers are built at one or both ends of the front of a dwelling-house, with a terrace or level space between, on which to rear ornamental flower

A GARDEN FOR STORE FRUIT, FLOWERS, AND GRASSES—on the Rev. John Pountney's plan.



tracks in front of the windows in summer, the wire fence in front and iron rods for the support of net would, of course, be dispensed with, as intercepting the general view from the windows, and, moreover, not be required as for the protection of fruit from birds.—(Extract from *Fontaine's New Method of Growing Fruit, &c.*)

ROSE SHOW AT BRIE-COMTE-ROBERT.

[The following was accidentally omitted, and as it refers to an important part of the Exhibition we insert it:—]

I CANNOT conclude my remarks without referring to the very polite manner in which we were received, and also, I would add, that our Royal Horticultural Society might very well take a leaf out of their book with regard to the way in which the Judges or Jury were recognised. We do these things better in the large exhibitions in the north of England than the R.H.S. do at their provincial shows: witness the manner in which at the Manchester Show the Judges were entertained at one of the chief hotels, and every cost defrayed from Tuesday night till Friday morning. Here at Brie-Comte-Robert, after the Jury had finished their task of going round the different exhibits, they were all invited to assemble at the Hotel de Ville, and in the presence of the Prefect of the Arrondissement the different awards were read out and entered into the Secretaries' book, and any mistakes corrected. The medals and prizes were then placed on the table, for, as I before remarked, no money prizes were given; but medals and objects of art, such as raised ornamental stands for fruit and other table ornaments, were adjudged as prizes, and no awards whatever were made unless the proper standard of merit was reached. The medals, twelve in number, and four other ornamental prizes, were then adjudged to the different exhibitors, but they were not given away till the following day at two o'clock, when the ceremony of presentation by the Prefect took place in a tent especially erected for the purpose.

After the awards had been finally settled a grand banquet was held, under the presidency of the Prefect, to which the Jury and principal exhibitors were invited; we were, however, unwillingly obliged to leave in order to return to Paris, so that I cannot give any particulars of the banquet.

I think the system of summoning the Judges together to have the awards read out and verified might be adopted by us, and would often save the inconvenience which at times arises from the wrong exhibitor's name being attached to the prize cards. I fear the English are such an eminently money-loving nation, that medals will not readily take the place of £ s. d.; but if at every large exhibition medals were awarded as additional prizes for successful culture, or for the introduction of novelties of decided merit, or the hybridisation of plants, &c., and these awards publicly given either at an advertised time in one of the tents, or at an evening *soirée* or dinner, it would add much to the *clat* of the Exhibition. I have no doubt that at the next provincial show of the Royal Horticultural Society, wherever it may be, the comfort of the Judges and exhibitors will be more studied, and better arrangements made, by means of which amateur and professional gardeners may be able to meet together to discuss objects of common interest, and to become mutually acquainted. With these remarks I will conclude my notice of the Exposition de Brie-Comte-Robert.—C. P. PEACH.

THE BEAUTIFUL AND USEFUL INSECTS OF OUR GARDENS.—No. 10.

Two gardeners who were at first engaged in a lively and friendly conversation, came near to quarrelling merely through a verbal misunderstanding. The topic of insect enemies happened to come up, and one of the pair, a Scotchman, waxed eloquent upon the injuries some of his fruit had sustained from the "fleas." His English acquaintance was somewhat puzzled. He knew pretty well the leaping insect parasitic on man and animals, called scientifically *Pulex irritans*, and popularly the flea, and he had seen and heard of other fleas, such as the Turnip flea, attacking crops, but that there should be fleas upon fruit seemed rather extraordinary. And when the narrator went on to say that some of these "fleas" made a very loud humming, almost as loud as bees, the listener became indignant at what he deemed to be an attempt to play off a joke upon him. The mention of wings, however, threw a new light upon the subject, and the Englishman discovered that there were "fleas" and fleas; the latter, if more numerous in north than in south Britain, as spiteful tourists say, have no other qualities distinguishing them from their brethren. Historically, one might trace out some points of resemblance between flies and fleas,

though they belong to very different sections of the class of insects according to the older naturalists. More recent authors are a little inclined to assert that a flea is really a four-winged fly minus its wings, and having only the four scales remaining to show where the wings ought to be, and through lack of the powers of aerial flight, developing a capacity for leaping.

Not by any means can it be said that flies, speaking of them generally, are to be regarded by the horticulturist with disfavour. Some there are which occasion him a certain amount of annoyance or positive injury in their larval and imago conditions, yet others are of decided utility, and a large number simply in the position of neutrality. At this season of the year, glancing over the flower beds still gay with varied colours, we see many flies—not all of them, as we might hastily conjecture, intent upon honey, but with different objects in view, according to their habits. Hovering over the Asters, or at rest upon them, we may discern specimens of the *Helophili* or Drone-flies, so called from the indolence, or seeming indolence, of their lives. One who is not entirely an unbeliever in the doctrine of the transmigration of existences from one state to another, calls these flies melancholy-looking, with a sort of sadness about them as if they were doing penance in their fly condition for transgressions committed in some other shape; but this is all fancy, of course, and they no doubt have to the full all happiness befitting their size and make. A very common species is known as *Eristalis*, or *Helophilus tenax*, and receives its specific name from the great resolution with which it grasps any object from which it is unwilling to be removed. But make one of them start from the flower on which it is resting, and it dashes off with a sonorous hum, which, together with something rather bee-like in the insect's outline, leads some persons to suppose that it is a veritable bee. The economy of the larva of this Dipteron is worthy of regard, for there is reason to suppose that, though it is not especially the gardener's friend, by the habits of its life under the water it decomposes much, which, in a hygienic aspect, is decidedly unwholesome, if not dangerous, to mankind. These "rat-tailed maggots," as they are popularly called, form a moiety of the great host of Nature's scavengers. The excessive length of their tails is a notable peculiarity in their appearance, and, as the illustrious Reaumur observed, they have a telescopic action, so that the larva can lengthen them to reach the surface, if need be, and secure a supply of air; in the same manner, in fact, as the common larva of the gnat. Having several of these in a shallow vessel, Reaumur gradually increased the depth of the water, and found that their tails elongated until they were double the length they had at first; and if it were not for this peculiar property they possess, the larva would at times be likely to be suffocated in the soft and slimy compounds of mud and decaying animal and vegetable substances which supply them with food. As it is, probably some of them are destroyed by the sudden deepening of the water, should that occur, or its violent agitation. The breathing tube or tail is tufted, so as to exclude water while admitting air.

The aquatic life of *Eristalis tenax* is by far the largest part of its existence, and when a larva of this species has attained its full growth it quits the pond or pool and seeks a home in the "common mother of all," the earth. There, buried for a while in the pupal condition, it is motionless and foodless, coming forth ultimately in the summer or autumn again to feed upon ambrosia instead of putrescence. It had been suspected by entomologists for some years that flies of the genera *Eristalis*, *Syrphus*, *Volucella*, and others, eat not only honey, but also the pollen, and the researches of Dr. E. Müller have established this beyond a doubt. He observed an individual of *E. tenax* resting upon an *E. nothera*; when stretching its body forward it seized a fragment of pollen, and drawing it nearer to the mouth, removed by means of the fore legs the fine particles of thread by which this bit of pollen had been attached to the mass. Then after subjecting the pollen to a kind of mastication, performed by means of the valves of the proboscis, the fly placed it in the channel of the lower lip, and it was speedily swallowed and the process repeated. Going thus from flower to flower, and working on the greater part of the day, as Dr. Müller found they did, these flies accumulate in their interior regions a good quantity of pollen, for on making a section of one Dr. Müller discovered in the stomach a mass consisting of many thousands of pollen grains. Why these flies should devour so much pollen, and whether they digest it all after a time, or, like certain Roman epicures of

ancient notoriety, throw it up and commence again, is not thoroughly explicable; that the latter supposition has its probabilities will appear presently.

"But," some reader may exclaim, "being in this way engaged in eating pollen, and, to an extent, disfigurements of flowers by pulling the anthers to pieces, these flies are no friends to the gardener!" Yes, we have reasons for supposing that their indulgence in pollen, seeming to serve merely their own appetites, is of great utility to the cultivator and connoisseur, for *Eristalis tenax*, and other flies of the family Syrphidæ, transfer pollen from one plant to another to the benefit of the race. As Mr. Newman observes in the "Entomologist," "in accordance with a law which is revealed in every variety, race, or species, depauperation is always at work, and no gardener can possibly overlook the fact that if he attempt to produce continuously any particular species or variety from the seed of one plant, he will fail because of this tendency. The various beautiful *Asters* or *Michaelmas Daisies* are preserved pure because they are herbaceous; the various portions of an herbaceous plant constitute but one individual, whereas every seed originates a new and independent individual. If an *Eristalis* confines its attention to one plant of *Aster*, it only distributes the pollen on that plant, and its descendants will resemble the parent, not only in superficial appearance but also in inheriting the principle of depauperation. Nature endeavours to arrest this principle by causing the *Eristalis*, when loaded with the pollen of one plant, to fly off to another *Aster*, and distribute its treasure on this second plant, and the pollen that to the flower which produced it was simply a principle of maintenance, when transferred to another flower becomes a principle of renovation." I give this paragraph entire without professing to endorse all that is therein stated, since on some of the questions opened up by this and other assertions made by those who have written on the economy of the pollen-eating flies, differences of opinion exist among leading entomologists. The broad fact cannot be upset, that in some way the insects help on the fertilisation of flowers. The *modus operandi* may be variously explained. In the instance given by Dr. Müller the fly engaged upon pollen carefully cleaned the head and legs after each operation, which seems to militate against the supposition that by accident these flies carry the pollen about attached to them; and, on the other hand, if it be assumed that the insects do disgorge it, doubts may arise as to whether the pollen, after the mastication described, is able still to fertilise. As yet, German and French naturalists have paid more attention to this subject than we have.

Flies belonging to the genus *Volucella* are also discovered to be feeders upon pollen as well as honey. Simulating the aspect of humble-bees, though more slim in the body for the most part, the female insects contrive (without exciting suspicion) to enter the nests of bees, and the eggs they there deposit hatch in due time, developing voracious maggots, which seize and devour the larvæ whose proper home the nest is. If we consider, as some do, that humble-bees, and wild bees generally, are nuisances in a garden, then the *Volucelle* doubly deserve our thanks for the services they render us in the larval condition in addition to that we receive from the mature insect. No more than a passing mention can here be made of the numerous flies called Hawk-flies, of the genus *Syrphus*, brisk in their movements, almost fierce in their aspect, and frequently in hot weather most pertinacious in their attacks upon the human skin. Yet they are not insects to be disliked, since they are, in part at least, predaceous in habit, and others, like those already spoken of, help forward by their visits to flowers the fertilisation of many plants. The eyes in *Syrphi* are particularly large, and the abdomen is always banded; when on the wing these organs are vibrated with such rapidity that to the eye the insect looks as if suspended in the air without motion. Of the important services of the larvæ in reducing the number of aphides we have already had occasion to speak, and it is a curious as well as a pleasing sight to see one of these bee-like creatures glide in among a host of aphides and spear successfully, blind though he seems, victim after victim. It can't be said of the aphid as of the lamb by a certain poet, that it "licks the hand just raised to shed its blood," yet it does succumb to its fate with marvellous composure, and the friendly ant and the hostile *Syrphus* alike walk among the aphid hosts, and no alarm is felt, though recent facts, it should be noted, cast doubts upon the disinterestedness of the regard shown by ants to aphides, and it is very likely that these active workers feel no

scruples about slaughtering instead of merely milking aphides.—J. R. S. C.

WORK FOR THE WEEK.

KITCHEN GARDEN.

FRESH plantations of Cabbages and Lettuces should be frequently examined; any that droop without apparent cause should be examined at the roots, where probably a grub will be found, which, if not destroyed, will continue its ravages. Earth-up plantations of *Broccoli*, as they will now be growing rapidly. Continue to prick-out the young plants of *Cauliflowers* under hand-glasses and in frames; a few may be potted in small pots and placed in a frame, where they can have an abundance of air and light, and be protected from excessive wet. A few rows of *Celery*, required for immediate use, may be earthed-up to the full extent of the leaves; but the successional crop should only be earthed-up gradually until it is in demand, or on the approach of winter. It should at all times be thoroughly dry before earthing, or it will soon rot. Where there is any forcing house the *Cucumbers* in frames are scarcely worth the trouble and expense of keeping in a bearing state after this time. Plants in frames undoubtedly produce the finest fruit for show, but as they are only grown through the winter for use, they are cultivated at much less expense and with greater ease in a forcing house. A little manure water should occasionally be given to those in pots or boxes. Stop the laterals immediately the fruit shows itself at one joint, or one joint above it. Some prefer the latter mode, but if the leaf at the first joint be not injured, we have not been able to discover between one and the other in the swelling of the fruit. Keep the out-door beds of *Mushrooms* protected from heavy rains by a good covering of litter. Maintain a regular degree of heat in houses containing beds, and guard against aridity. Continue to take-up the crops as they reach maturity, sort them before they are housed and pitted, as it will save much trouble and waste. Slightly thin the late sowings of the Spanish sorts of *Radish*; if a succession of the common sorts is required, a sowing should be made in a frame. Thin the winter crop of *Spinach*, leaving the plants at 9 inches from each other. Keep it free from winds. Should there be any apprehension of frost, the unripe fruit of *Tomatoes* may be cut and laid in any of the forcing houses.

FRUIT GARDEN.

Gather and house fruit as it becomes fit with the utmost care. The finer sorts of Pears deserve as much care in gathering as Peaches, the former to our taste being infinitely superior to the latter; and it must be confessed by everyone that they are more valuable, as they supply the table for several months in succession without any extra expense.

FLOWER GARDEN.

All plants which will not survive the winter in the open air and which it is desirable to save, should now be taken to a place of safety. Plants which have been bedded-out during the summer, such as the scarlet, variegated, and other *Geraniums*, *Salvia patens*, *Calceolarias*, *Fuchsias*, &c., should be cut back, taken up, and potted. The whole of the soil may be shaken from the roots, and they should be put into small pots in light soil, and afterwards be placed in a pit or frame. These plants will be found far superior to young ones for bedding-out next season. Large-flowering plants of the *Salvia splendens*, if taken up and carefully potted, will greatly add to the beauty of the conservatory for the next two months. Many of the early kinds of *Tulips* and *Narcissus* are now beginning to grow, and, therefore, to keep them out of the ground any longer will injure them. As, however, it is impossible to plant them permanently until the autumn plants are removed from the beds, it will be found it will be a good plan to place them upon an inch or two of finely-sifted leaf mould and sand, and cover them several inches deep with old tan or leaf mould. In this situation they will make root, and may be removed to their proper situations with the soil adhering to their roots as soon as the beds are ready for their reception. The same observations apply to all kinds of bulbs or tuberous-rooted plants that are desired for early spring decoration—as for instance, *Anemones*, *Crocuses*, *Snow-drops*, *Hyacinths*, *Jonquils*, *Crown Imperials*, &c. Continue at every favourable opportunity to pot-off Carnation layers. Let the grass or leaves be dry, for when wet with either rain or dew, the soil which will sometimes get in the axils of the leaves (however carefully they may be handled), is difficult to be removed, and if not will prove detrimental to the plant during the winter. The layers must be put in a close frame for a few days till they have again struck root. Seedling *Tulips* when they are very small are best in the ground, and small offsets of choice sorts had also better be planted. Any offsets of *Auriculas* which may not be ready earlier in the season must now be removed, planting carefully round the side of a quart pot, water to settle the soil to the roots, and place in a situation free from drip or heavy rain. Continue to make the beds of *Pansies* for next year's blooming, and propagate by slips all that is desirable to increase. Seedling *Polyanthuses* may still be pricked-out to get established

before winter. Compost heaps should be turned, and all insects carefully picked. A small quantity of quicklime will prove beneficial to the decayed turf intended for Tulips.

GREENHOUSE AND CONSERVATORY.

In those places where there are a number of plant structures this is indeed a busy season in washing and scouring the various structures from top to bottom, routing out the decaying summer-flowering plants, and placing those plants that have hitherto been out of doors, which of course have had previous to this a perfect examination as respects draining, surfacing, staking, tying, and the encroachment of worms, insects, mildew, &c. We may expect that the arrangements of the plants, if at this season made systematically, will be attended with considerable interest; for, simple as this matter may appear at first sight to some people, the good harmony and well-doing of the plants depend much upon it in the coming season. Hardwooded plants should be placed particularly to enjoy a fair share of air and light. See that all luxuriant growth amongst these plants is duly stopped to maintain symmetry and a due balance of growth. Keep a sharp look-out amongst them, and see that neither mildew, green fly, nor other vermin or disease is allowed to injure them. On fine mornings such plants as *Ericas*, *Epa-crises*, *Pimeleas*, &c., should be well syringed, and give all possible ventilation both night and day while the weather continues favourable. In these structures many summer-flowering plants must now be cleared out to make room for early-flowering *Camellias*, scarlet and other *Geraniums*, *Hydrangeas*, *Cinerarias*, *Gesnera zebrina*, *Primula sinensis*, *Neapolitan* and *Russian Violets*, late-blooming *Stocks*, and *Mignonette*, and all these should be placed so as to harmonise with each other. See that the late-flowering *Camellias* have their last bud-thinning performed in due season.

PITS AND FRAMES.

These will now be brought into requisition rapidly, as many plants which were turned into the borders in the spring will now require to be taken up. Those plants which have root-hold should have abundance of air every mild day.—W. KEANE.

DOINGS OF THE LAST WEEK.

As we assumed last week, the weather still continues very fine. The wind, however, has been very changeable during the last few days, shifting from south to north-by-east in a few hours; generally it has been from the east and very drying. This has been exceedingly favourable for storing fruit and getting the *Potatoes* out of the ground. The disease is increasing very much, and as usual some sorts are not so much affected as others. Of the *Regent* class *Walker's Regent*, an excellent variety for general crop, seems to be least susceptible of disease, and the *White Den* is the worst affected. *Dalmahoy's* have suffered to a considerable extent; and *Early Shaws*, which in this neighbourhood used to be considered the best early *Potato* for the *London* market, are three parts diseased.

FRUIT AND KITCHEN GARDEN.

Owing to the continued wet in August and early in September weeds made much progress; it was not possible to destroy them with the hoe, and where this could not be done with advantage the ground was lightly dug over and the weeds buried. The ground is now very dry, and where weeds had grown much they were hoed-up, and will die on the surface. No weeds should be allowed to grow to a seeding state; if they have done so it is best to pull them out by hand and carry them off the ground.

This is now the season at which we find it difficult to keep up a supply of good vegetables. *Cauliflowers* will not grow in the summer months, and we annually sow *Peas* to come in at this time, and they never give us satisfaction. *Dwarf Kidney Beans* and *Scarlet Runners* can be obtained until the frost cuts them down, and the little *Coleworts* will do us good service during the next three months.

We cut the old canes away from the *Raspberry* stools, and tied the young ones up loosely to the sticks. The system of planting *Raspberries* in many places is to set them in beds or quarters 4 feet apart each way, and we have seen various methods of training adopted; the best is to place a stout stick, standing about 4 feet out of the ground, to each plant. Another way is to bend down two plants and tie the tops together, or even four plants may be bent down and tied to a stick in the centre; but neither of these methods is so good as planting about 2 feet apart, and fixing a stout wire in a horizontal position 3½ feet above the ground. The canes are tied to this at regular distances. We hoed the ground and removed all canes not required.

The *Strawberry* beds had also become foul with weeds in spite of hoeing. The runners were cut off and the ground hoed between the rows, removing with the hand any weeds that were too close to the plants. We do not like to hoe close to the neck of the plants; as with the system we adopt in planting them out, which is to place a spadeful or two of suitable loam around the roots, we find that this during the autumn becomes a mass of compacted fibres close to the very surface of the ground. It

would of course be bad management to cut into this several times during the season with a Dutch hoe.

The weather has been very suitable for ripening the best sorts of kitchen and dessert *Apples*, as well as the finer *Pears*, which are of better quality than we have yet had them. We continue to gather and store them in the fruit-room, exercising much care in handling them, and judgment as to the time of gathering. This last is of much importance, as if the fruit is gathered before it is quite ready it will shrivel, and if allowed to hang too long the flavour is not so good. The most certain plan is to cut a medium specimen through the middle, and if the pips are brown, the fruit may be gathered; if the pips are white, the fruit is not ready. Some varieties separate more readily from the tree than others; the *Old Golden Pippin* will hang to the tree after the fruit is quite yellow and the pips dark brown. The earliest gathered fruit was looked over, and all decaying specimens removed; one rotten *Apple* will taint three or four if it is not at once removed.

Several correspondents have written about their *Pears cracking*. This the fruit have done with us to a considerable extent; some varieties are free from it, but many sorts are bad. *Beurré de Rance* is the worst, there does not seem to be any sound fruit of this sort. *Beurré d'Amanlis*, *General Todtleben* (*Marie Louise* is quite free), and *Marie Louise d'Uccle* are much affected. We imagine that the soil and position have something to do with the evil, as some sorts which have not turned out well with us are in excellent order in Mr. Thompson's orchard at Ilford. In all probability sudden changes of temperature have a great influence, also soaking rains after continued drought. Exposure to the east wind likewise acts upon the fruit injuriously. We recommend that the finer sorts of *Pears* be planted where the east wind cannot act directly upon the fruit. Now is the best time to perform the operation of root-pruning or removal—that is, if the trees have to be removed from one part of the garden to another. If it is necessary to convey them from a distance, November is the most suitable month; but more can be done to induce fruitfulness by judicious summer pruning than by cutting the roots.

FRUIT AND FORCING HOUSES.

Where accommodation for *Pine Apples* is limited, it is sometimes necessary to grow in the same house succession plants and those throwing-up and ripening fruit. When this is the case, as it is here, it is necessary to study the interests of both, and late in autumn and during the winter a lower temperature is more suitable to *Pines* than most persons suppose. In our houses at Loxford Hall *Pines* have been wintered in a house, some of them swelling their fruit, and others would not throw-up until March or April, or later; and the temperature at night from now until the end of February did not average more than 55—frequently in cold weather it would fall to 50°. A moderately dry atmosphere was maintained in the house, and the plants were kept dry at the roots. Of course the fruit was longer in ripening, but the quality was good. In one house a large crop of *Muscad Grapes* is hanging, and this necessitates a drier atmosphere than we would have for the *Pines*, and a little ventilation at night.

The *winter Cucumber* plants lately put out are progressing favourably, and those in the other compartment which have been bearing fruit for nearly twelve months have been cut out; indeed some of them had died-off at the roots, we fancied from water running down the stem, as they were freely syringed to get rid of red spider on the leaves. The house lately planted will soon bear fruit, and we shall be able to obtain one when it is required, our demand not being large. The stock is kept true by cuttings, and this is certainly the best way to obtain a good stock true.

ORCHARD HOUSE.

All the late *Peaches* except *Salway* have been gathered and the trees repotted. *Lady* and *Lord Palmerston* have been the latest. There is much difference of opinion as to the quality of these. They cannot compare for a moment with the best of the midseason *Peaches*, but they are in use when such sorts as *Bellegarde*, *Grosse Mignonne*, *Barrington*, and the *Admirable* class are over. They have another disadvantage, and that is that they have to compete with some of our best *Pears*. With the *Peaches* we are sending in *Fondante d'Automne*, *Louise Bonne* of *Jersey*, *Madame Treyve*, and other fine varieties of *Pears* which are preferred by many; but on certain occasions the *Peaches* make up a dish and are valuable to us. We have also kept them on cotton wadding in the fruit-room for two weeks after being gathered. The house is now being kept close to thoroughly mature the wood, and also to cause the trees to establish themselves in the pots, as they will be removed out of doors in a week or so.

PLANT HOUSES AND CONSERVATORY.

Tree Carnations, which up to the present time have been standing out of doors, are now very valuable to us. We have placed a stick to those requiring it, and tied those in or showing flower to the sticks. Smaller plants in 60-sized pots have been repotted, and will be valuable to supply us with a succession

of flowers late in the spring. It will show the value of these plants when we state that we can cut flowers of Carnations any day in the year, or "all the year round." But, perhaps, this makes them too common, and, as a consequence, they are not so much thought of. It may also be noted here that the plants should not be overpotted if abundance of flowers and not large specimens be desired; 8½-inch pots are the largest size used, but nice flowering plants can be grown in 6-inch pots. Some of the varieties are also much more free-flowering in winter than others. Our favourite sorts are *Troserpine*, *Avalanche*, *Ascot Yellow*, *Prince of Orange*, *Gloire de Lyon*, and *Boule de Feu*. To follow these in the spring we grow a goodly number of *Turner's Bride*; it is a magnificent white flower, smooth-edged, sometimes delicately tinged with pink, and of good substance.

Zonal Pelargoniums, with their gay and brilliant colours, are also very showy now; they are specially grown to flower at this season, and serve well to keep up a display until the *Chrysanthemums* come in.

FLOWER GARDEN.

We have put in all our cuttings except *Calceolarias*, and the plants intended to be lifted and potted must not remain out much longer, as so much rain having fallen, early frosts must be looked for.—J. DOUGLAS.

TRADE CATALOGUES RECEIVED.

William Paul, Waltham Cross, London, N.—*Rose Catalogue*, 1873-74.

Ellwanger & Barry, Mount Hope Nurseries, Rochester, New York.—*Descriptive Catalogue of Ornamental Trees, Shrubs, Roses, &c.*

Butler, McCulloch, & Co., South Row, Covent Garden Market, London, W.C.—*Autumn Catalogue of Dutch and Cape Bulbs.*

William Hooper, 88, Oxford Street, London, W.—*Catalogue of Dutch Bulbs and other Flowering Roots.*

R. Dean, Ranelagh Road, Falmouth, London, W.—*Catalogue of Hyacinths and other Bulbs, Hardy Bedding Plants, &c.—Catalogue of Bedding Violas, Pansies, &c.*

B. J. Edwards, 222, Strand, London, W.C., and 27, Bishopsgate Within, E.C.—*Autumn Catalogue of Hyacinths, Dutch and Cape Flowering Bulbs, &c.*

TO CORRESPONDENTS.

* * * We request that no one will write privately to any of the correspondents of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed *solely to The Editors of the Journal of Horticulture, &c.*, 171, Fleet Street, London, E.C.

N.B.—Many questions must remain unanswered until next week.

BOOK FOR A YOUNG GARDENER (*Mrs. M.*)—Give him the "Cottage Gardener's Dictionary;" it includes every department.

GRAPE PURCHASERS (*H. S.*)—Write to Messrs. Webber & Co., Central Avenue, Covent Garden Market.

PEAT (*H. T.*)—The sample sent is not equal to the best usually employed for potting purposes, but mixed with an equal quantity of sharp sand it will answer.

PRIMULA JAPONICA (*C. M.*)—It is unusual for it to bloom in autumn as well as in spring; but like all other plants, it is liable to such an eccentricity, especially, as it probably the flowering in May was checked or injured by unfavourable weather.

PEACH BLOTCHED (*L. M. S.*)—An answer is on page 223 of our number published September 15th.

APHARELLIS (*T. Collington*).—It is a cross-brid of *A. fulgida*, a portrait of which is in the "Botanical Register," 226. The cross-brid is called *vittata* by gardeners.

DEPTH OF WATER FOR A WATER LILY IN WINTER (*Hobbs*).—The roots of a water lily will be quite safe in any pond having water a foot deep over the mud in which it is growing. It is very hardy. We had a quantity of the rhizomes of this plant lying on a damp place and covered with a little soil, but out of water during the greater part of last winter, and they have grown freely, producing both foliage and flowers this summer. Your flower-bed planting is considered more fully in a previous page.

POT-TUBS—*Mr. Gamett* says, "The advantages that my pot-tub has over the one you speak of is of a simpler construction (see p. 235), are first, it requires only one man to use it; and second, you can remove a large tree in a pot out of a crowded orchard house without disturbing any of the others."

PROPAGATING THE APPLE (*Inquirer*).—Some of the choice varieties of Apples have been grafted for centuries upon the Crab stock without the fruit being deteriorated. Cuttings of the shoots of some varieties, such as the *Colin*, *Burkhead*, and *Jonneting*, readily strike root, and we have made those of many other varieties similarly strike by merely taking care that at the bottom of the annual shoot employed there should be a portion of the old wood allowed to remain. Let the cuttings be 6 or 8 inches long; cut off the extreme point, and allow no more than two buds at the part above the soil to remain, cutting away all the buds covered by it. Let the soil be very light, press the soil about the cutting, 4 inches of which should be buried by the earth; water moderately, and cover with a hand-glass. If planted in a pot and plunged in a very gentle hotbed, the rooting takes place faster and

more certainly. Plant the cuttings in February, and do not move the hand-glass, except to give water, until the rooting is effected. Air may be admitted in July, and the glass finally removed in August, and the whole transplanted into the nursery rows during October. Trees raised from cuttings always are more hardy than those propagated in any other mode, and excellent specimens may be thus grown for forcing in pots.

LEAF (*L. adaeid*).—It seems like a leaf of White Beet, but we cannot be certain. If it is, the stalks may be cooked as Sea-kale, and the expansion of the leaf as Spinach.

VIOLA—PANSY (*H. H.*).—The Pansy is a species of the genus *Viola*. The Violet and Pansy belong to the same botanical genus.

GRAES CRACKED (*G. Hudson*).—If there is no trace of fungoid growth on the skin, it is caused by the fruit being exposed to sudden variations of temperature when in an early stage of development, or by being exposed to cold east winds. In our own garden we had fruit much cracked on the east side of the tree, and on the west side it was of excellent quality, and nearly free from cracks.

GRAPES SURVIVING BEFORE THEY ARE RIFE (*Rocklyn*).—If the stalks of the berries are dead, then your grapes are shanked; and unless we know something of the treatment the vines have received we cannot propose a remedy. If the berry-stalks, on the other hand, are sound, then in all probability the vines have not received sufficient water at the roots.

GRAPES NOT COLOURING (*Fourteen-years Subscriber*).—When the borders first showed signs of cracking, the Dutch hoe should have been run over them, or the surface lightly broken with a fork. A dressing of frame manure would prevent it. You should water more freely at the roots. In future give a good soaking of manure water as soon as the grapes begin to colour; this will be sufficient to finish them off.

PLANTING GORDON TREES AND ROOT-PRUNING (*Amateur*).—November is the best month to plant. It would be advantageous to root-prune the Nut trees. Do it in October or November.

VINERY FOR PROFIT—RENDERING PITS PROFITABLE (*C. S.*)—We presume from your letter that you do not intend to destroy the vines, but that you would also like to grow something else in the vineries. The grapes would pay best if you forced very early, so that they would be ripe in April or May; but in that case you could not grow anything advantageously under them, except that the house could be used to force any plants put in when the vines were started. If you do not force the vines, the house would be well adapted for wintering bedding plants, which might be transferred to frames in the spring. Messrs. Salter, of Hammersmith, made good use of such a vinery as yours to flower their *Chrysanthemums*. The half-span forcing house would be well adapted for growing winter Cucumbers; they could be turned to profitable account in your neighbourhood. Or, if you would rather grow flowers, train *Stephanotis floribunda* to the rafters, and grow *Gardenia florida* underneath. Then, as to the small pits, you can either use them to force flowers, or grow plants that do not require forcing. If the latter, *Cinerarias*, *Primulas*, *Cyclamens*, and herbaceous *Calceolarias* are profitable. In the Valley, *Spirea japonica*, Roman Hyacinths, Tulips, Hyacinths, *Dentzia gracilis*, and all such subjects, may be forced if early flowers of that sort are required.

PLANTS FOR WINDOW-BOXES IN WINTER (*Bono*).—Edge the boxes with *Arabis alpina variegata*, and fill-in with low plants of *Skimmia japonica*, which has clusters of red berries; or you may have an edging of *Aubrieta* green, and fill-in with *Eden herbacea carnea*. Small plants of *Andromeda floribunda*, *Golden* and *Silver variegated Box*, *Euonymus radicans variegatus*, *Juniperus tamariscifolia*, *Thuja aurea*, and *Vinca elegantissima*, are very pretty, and far more effective than flowering plants. Plants of low growth and suitable are *Saxifraga umbrosa* (*Lombard Pride*) and its variegated variety, *Scilla sibirica* (blue), *Adonis vernalis* (yellow), *Alyssum saxatile compactum* (yellow), *Arabis alpina* (white), *Bellis aeneo-foia* (red), *Cheiranthus Marshallii* (yellow), *Hepaticas* (double red, double blue, and single white), *Myosotis dissitiflora*, and *Primula* (double crimson, white, lilac, and purple), few subjects being prettier than the common *Primrose*. By all means have a few *Snowdrops*, *Crocuses*, and early Tulips, as the *Duc Van Thois*.

PRUNING LAUREL HEDGES (*E. S.*)—You may now cut off the rugged tops of the Laurel hedge, but we should leave as many leaves as you can at the base of the shoots, so as to give a cheerful appearance to the hedge in winter, deferring the main pruning until spring, and then cut-in to the required form, and go over the hedge again in September, cutting any stragg growths, so as to give a trim appearance.

HARDY ANNUALS FOR SPRING-FLOWERING (*Idem*).—*Candytuft*, purple, lilac, and white; *Asperula azurea setosa*, *Collinsia verna*, *Limnanthes Douglasii*, *Nonnophila insignis*, *Silene pendula ruberrima*.

FUCHSIAS INFESTED WITH INSECTS (*H. T.*)—On the leaves you sent were evidences of thrips, and one alive; their eggs are the spots to which you allude. To exterminate them, fumigation with tobacco is the best means; but as you cannot adopt it we should syringe the plants, especially the under sides of their leaves, making every part thoroughly wet, with a solution of soft soap, 2 ozs. to a gallon, adding to every gallon a pint of tobacco juice, which may be had of the druggists. The plants may be laid on their sides and turned over.

BLACK HAMBURGH GRAPES NOT COLOURING (*E. R.*)—The only means are to have the vines healthy, to be careful not to overcrop, to allow a goodly amount of foliage, and to keep it free from insects. With this you will hardly fail to have well-coloured grapes. Bad colouring mainly arises from too heavy cropping; indeed, our experience induces us to consider it the sole cause, if the treatment is otherwise good and the vines healthy. This year we allowed an extra-vigorous vine to carry eight more bunches than others in the same house, and whilst the grapes on the latter are black as jet, those of the one vine with eight more bunches are no more than red.

CHRISTMAS REPARCEN AND STRUTUM (*L. E.*)—We think that they are not sufficiently hardy to endure the winter if planted in a moderately dry sheltered bed in front of a greenhouse with a glass covering, sides and ends open, but they would probably succeed if the sides and ends were closed, and a protection of mats given in severe weather, admitting air in mild periods.

RESPAWNING MUSHROOM BED (*Burton Joyce*).—A bed made in a pigstye coming into bearing five beds ago, will continue to produce until November, or probably later if covered with some dry hay or straw, and the opening closed by a door. It will not do to respawn the bed, nor the old Cucumber bed, as a gentle warmth is necessary for the spread of the spawn. It is probable that both beds will yield Mushrooms for a considerable time, not

unlikely up to Christmas, all depending on keeping the bed from frost and wet.

REMOVING VINE LEAVES (*An Old Subscriber*).—It will not answer to remove "many" of the Vine leaves to admit the sun to the Grapes to ripen them. The removal of the leaves or exposure of the Grapes to the sun will not ripen them, and will be injurious to the Vine. The leaves ought to fall naturally; only the laterals should be removed. The want of colour is due to the heavy crop; doubtless, you will find the badly-coloured Grapes of fair flavour. We do not think they will colour any better, as we think they are ripe.

LILIUM ABRUTUM and LANCIFOLIUM AFTER FLOWERING (*Idem*).—The plants may be set out doors in a sheltered spot or cool part of the greenhouse until the stems turn yellow and the leaves fall, then cut them down and repot, removing all the soil that comes away freely from the roots, cutting off the stem with its roots just above the bulbs, and repot in a compost of equal parts sandy peat, fibrous loam, and leaf soil, with one-sixth of silver sand chopped-up rather small but not sifted. Drain the pots well, and pot so that the crown of the bulbs may be 3 inches below the rim, and only just cover the bulbs with soil. We invariably place a little silver sand about each bulb. Place in a cool house or a light airy position in the greenhouse, and keep the soil moist. When the shoots have grown above the rims of the pots fill the pots to the rim with soil, adding one part of well-rotted manure to the compost named for potting.

GLADIOLUS AFTER FLOWERING (*Idem*).—Take up the plants when the leaves turn yellow, place them in a cool airy place to dry, and when dried free them of the dead roots and tops, and keep in a cool and dry place, but safe from frost, until planting time.

SAVING VEGETABLE SEEDS (*P. S. E.*).—The saving of garden seeds, except of particular kinds, is not desirable, as the varieties, to be kept pure, require to be grown at some distance apart; for when two, three, or more kinds are saved for seed in a garden, the kinds get mixed by the agency of insects, and there is so great an advantage in sowing seeds raised from a distance as to more than counterbalance any seeming saving. In saving seeds in private gardens we do not find any gain, so much ground is taken up by the plants for seed, and more is saved of some kinds than would stock a county, and of others very little. Particulars of saving seed are given in the "Cottage Gardeners' Dictionary." We repeat, it is only desirable to raise seeds of particular kinds of vegetables, it being more safe, and in the end cheaper, to buy than to save them.

HAUTOIS STRAWBERRY CULTURE (*Inquirer*).—The Hautois Strawberry does not require different treatment from other kinds, but it is very important that the runners be taken from fruitful plants.

ROMAN HYACINTHS IN BORDERS—PLANTING HYACINTHS, TULIPS, AND CROCUSES OUT OF DOORS (*J. H. B.*).—The Hyacinths should remain covered with the ashes until they have made good roots and have begun to grow at top, but they should be removed from the ashes when the tops have grown an inch, which will be from four to six weeks. The Hyacinths should be planted so that the crown may be covered about 2 inches deep; and the Tulips and Crocuses covered $1\frac{1}{2}$ to 2 inches deep. They should be planted as early in October as the beds are cleared of the bedding plants. The beginning of November is, however, a good time. If the beds be well raised in the centre it answers to have them in the order you name; but if flat we should prefer them in separate beds—in fact, we should have all Tulips or all Hyacinths, with an edging of Crocuses to each bed.

PRUNING ROSES ON THEIR OWN ROOTS (*C. R.*).—The long shoots that have grown a yard or more we should not cut back if your aim be to cover the bed, but peg them down, taking care in doing so not to break them. We prefer, however, to grow them as dwarf bushes without pegging the shoots; and in this case we should cut back the long shoots about half their length, unless they are flowering, when, of course, you will leave them until the flowering is past and then shorten them, and mulch the bed with littery manure in December. We like them better not pegged, because we have more freedom in working, and can attend to the requirements of the plants in manuring, watering, and cleaning, and we have larger flowers and better trusses.

ASPARAGUS FORCING IN VINERY (*Norwich*).—Three-year-old good plants of Asparagus may be forced in a vinery not started until the 1st of March. They should not be taken up until you begin to force, or until the last week of February. Instead of placing soil on the floor, we should make up a bed of dung and leaves 15 or 18 inches high, so as to afford a gentle heat of 70 to 75°, cover the bed with about 6 inches of light rich soil, and put in the plants as closely together as practicable, placing some soil between the crowns and roots, and cover the crowns to the depth of 1½ to 2 inches. The bed will need to be watered so as to keep it moist, and in all watering use water of the same temperature as that of the bed. The distance from the glass is not material, only the shoots are liable to be drawn-up weak. We have had very good heads at as great a distance from the glass.

HYACINTHS IN GLASSES (*Scilla*).—The decay of the roots is probably due to the foulness of the water, which we should change entirely every ten or fourteen days, using rain or pond water warmed to the temperature of the room, and putting in a piece of charcoal every time.

WORMCASTS ON A LAWN (*C. L. W.*).—The best mode of getting rid of the wormcasts is to mix fresh lime with water at the rate of 1 lb. to three gallons, and place in a hogshead or other large tub. After stirring well up let it stand forty-eight hours, then pour off the liquid, and with it water the lawn, using a rose watering-pot, and giving a thorough soaking. This will bring the worms to the surface, when they may be swept up and cleared away. The lime water is best applied after rain, as the worms are then nearer the surface, the lawn being well rolled the day previous to the application of the lime water. For keeping a lawn in order where wormcasts abound, we find a light wooden roller preferable to an iron one. The wormcast adheres to the wood, from which it can be cleared by an iron hoop. Sweeping a lawn in wet weather so dirties the grass as to take away all its freshness.

PLANTS INFESTED WITH INSECTS (*Marie Louise*).—The leaves set to us are infested both with thrips and mealy bug. We should clean by sponging the leaves with a solution of soft soap, 3 ozs. to the gallon of water, adding to every gallon three gills of tobacco juice, and afterwards syringing with water at a temperature of 146°, the plants being placed on their sides and turned over so as to thoroughly wet them in every part. The plants must not be dipped in water at the temperature named, but have it syringed on. This will destroy the bug, but the hot water must be kept from the roots.

GLAZING A CONSERVATORY WITH FLUTED GLASS (*Idem*).—We have no doubt that fluted glass if well annealed will answer well for glazing con-

servatories, and to a great extent do away with the necessity for shading; but this and plate glass are often so badly annealed as to break and cause endless trouble in replacing, giving a good deal of dissatisfaction. We had some rough plate five-eighths of an inch thick, and it was brittle and cracked by frost more than ordinary 16-oz. The best glass we have used for conservatory and plant-house roofs is one-quarter-inch plate, ground on one side, placing the polished face outside and the ground surface inside. It enables us to dispense with shading. We have not had a single leaf scorched beneath it; but, then, some conservatories are so badly ventilated as to be little better than ovens under a hot sun, and many ask why the leaves of their plants are browned and spotted.

NAMES OF FRUITS (*Slough*).—The Apple is Borovitski. We do not know what Pear you refer to that tomitis are so fond of. Calcereous matter is a good application to fruit trees, and may be applied at any time in autumn and spring. (*Q. Q.*)—The Pear was completely smashed, as well it might be sent in a paper by post.

NAMES OF PLANTS (*T. Winkelmann*).—The answers are not identical, nor were the specimens. The flower from Ireland was single. (*E. M. W.*)—1, *Bunium flexuosum* (?); 2, *Petroselinum segetum* (?). Both specimens so imperfect that we cannot name with certainty. (*Julia Maria*).—One of your specimens is *Anemone japonica*, the other we cannot undertake to name from the specimen. (*A Lady*).—The variegated sprig is *Symphoricarpos racemosus*; that in flower is *Spiraea callosa*, *Tib.*; the other we cannot name. (*J. Parnell*).—*Verbena venosa*. (*Q. Judge*).—*Rivina levis*. (*Algiers*).—*Job's Tears* (*Cok* lachryma). (*Mary New*).—A species of *Panicum*. (*Juvenile*).—*Clerodendron splendens*, or an allied species. (*Veritas*).—1, The Spitting Cucumber (*Momordica Elaterina*); 2, A *Begonia* (variety). (*Mrs. Parry Jones*).—A *Habrothamnus*, probably *H. fasciculatus*. (*J. Dyer*).—*Euonymus europæus*, Spindle Tree.

POULTRY, BEE, AND PIGEON CHRONICLE.

A VISIT TO WORCESTER AND ITS SHOW.—No. 1.

In this article I will endeavour to describe simply and truthfully my first peep at the city of Worcester and at its poultry Show, leaving for a future paper particulars both of the place and its feathered exhibition. I had the advantage of never having been even in Worcestershire before; so that all being entirely new to me, my mind, like a blank sheet of paper, was clear and ready to receive any impression. I had indeed handled many a delicate piece of porcelain, and gazed upon it with admiration, and been told it was made at Worcester, and usually brought from that city by visitors. Then I bore in mind that it was on a September day that Cromwell conquered Charles II. near to Worcester; a battle which the conqueror cantingly or jestingly called—(the latter probably, for there was quaint humour in the man)—his "crowning mercy." But more I knew not, and with the cathedral I was even pictorially unacquainted.

Whatever disadvantages September has for a poultry and Pigeon show, for the latter are sure to be in moult, yet it is a glorious month to go to a show. The fib of Thomson's "gentle spring, ethereal mildness," everyone, save an enthusiastic school girl, knows to be a fib, while autumn's mildness and gentleness we all know and experience. If I could but choose I would say, "Let me have my threescore years and ten, every day of them a September day."

'Tis a long pull from Wilts to Worcester, and made longer by delay of trains. The autumn manœuvres have been for many weeks blamed for making our Great Western trains each an hour or so behind time, but surely they cannot bear the blame now. Of course one meets in the train the man who cuts his paper with his railway ticket; the lady over-anxious about her luggage—N.B., This is a pale-faced old maid. Then a mother with six children returning from the seaside, and who (fact this), takes me into her confidence at once on the subject of papa's absence, measles, and whooping cough. I was afraid she would want to confess to me on the spot, so I told her I had six children, which no confession-priest ought to have. But no one amused me half so much as a jolly Gloucestershire farmer who got into my carriage, and his only luggage was a huge root of mangold—such a root for the time of year! I looked at the farmer—I looked at the mangold—they were a capital couple, so smooth-skinned, so healthy-looking, so handsome. Glorious specimens of mankind are England's yeomen. The cream of the poor went in the last generation to fight under Wellington and Nelson, the pick of many a gentleman's family did the same, and both fell; but England's yeomen remained at home and their race is uninjured, for their best specimens lived and became fathers, so that the finest men in the land are the yeomen. However, here I am at Worcester station, evidently in the land of red brick. I look out for John Martin, formerly of Linton Park, now of Worcester, bend my way towards the town, and down a side street, see flags, and hear a fife-and-drum band. My instinct leads me right—it is the Corn Exchange. That fife-and-drum band arranged in front are the union boys, whose music brings a crowd and attracts attention to the Show. A good plan this, and one which will cost a committee only a trifle; and easily adopted too, for each town has a union workhouse, and each workhouse as a rule has its boy band. Many a time I have had a difficulty in finding where a poultry show was held, for placards do not appeal to the eye like flags, and a few notes of music are best of all.

I find the Corn Exchange, a good-sized skylight-roofed building. The poultry pens arranged around and across, and—also a good plan—a refreshment stall plain to view, and not hidden away in some adjoining room. This should always be, for a modern refreshment bar with its neat-dressed and pretty damsels is always a pleasing sight. And now for a first peep at the poultry, next week for criticism. Poultry about 250 pens, and of Pigeons about 70—not a large show, but a show of, what at a glance I perceive, choice birds. The arrangements seem good: a solid zinc back to each poultry pen, which not only prevents the tails being injured, but in addition shows off the birds to advantage.

The Dorkings are a fairly good lot; the Spanish very good, and the Cochins extremely good and numerous. The Dark Brahmas contained some grand birds. The Light Brahmas were strong and remarkable as a class; while the Game must, alas! be marked down as few and not good. Hamburgh breeders missed a chance in not sending their birds, for in the Silver-pencilled there were but two entries, in the Gold-spangled but one. Few but very nice, must be the verdict as to the pretty-plumaged Hamburgs; while there were, on the other hand, more Polands than of any class of Hamburgs. The French fowls showed well. Any other variety few and good. Game Bantams very strong, and good too; but Mr. *Enticisle* left everybody else to *whistle* for the prizes, he carrying off all. Among the Black Bantams there were many very good birds, but, alas! few Sebrights and none Silver. Among the Aylesbury Ducks were Mr. Fowler's, which is saying enough in their praise. The Rouens were nearly all noticed; and among the Blacks were the peerless ones from Wiltshire, those of Mr. Sainsbury, of Devizes. The Selling class was large, and the first prize was for the best cock and hen, but it was given to a Duck and drake. Rather funny this, though no doubt the Duck and drake were the best birds. Of the Pigeons I will speak next week.

Up comes friend Martin, and soon I am in the thick of a number of kindly committee-men, while the friendly Vice-Chairman makes himself known to me, and the Hon. Secretary shows me every attention. But I want my dinner, and am recommended to the Crown Hotel close by, a recommendation thoroughly deserved—a wide-extending, pleasant old hostelry. Here I leave off my account for a while, merely adding that the prize list, which, to the infinite credit of the managers of the Show, was out in good time on the first day, was given last week.—WILTSHIRE RECTOR.

BUCKWHEAT FOR FOWLS.

HAVING seen several inquiries and answers lately about this grain, I think it may be well again to state my experience of it directly in your columns. I am quite puzzled to tell why it is so constantly affirmed that it is not good food, and that the birds do not like it, for my experience is the direct contrary; and not only so, but I have during the last few years recommended it to many scores of persons, and in no one case have I found their experience different from my own. I always find that fowls prefer it to any grain they can have, and if a mixture be thrown down containing all grain, the buckwheat will always be picked up first, maize next, and then other corn. Fowls that have never had it will sometimes stare at it the first time, but they quickly begin to pick it up. I cannot see that it is at all stimulating or forcing diet, and the mere fact that it is the common poultry food in France, and even here for Pheasants, should be enough to dispel such an idea. It requires, however, to be given with common sense, not owing to its qualities, but simply on account of its colour. If it is thrown upon grass the fowls cannot thrive, for the simple reason that the buckwheat is so nearly the colour of the ground that it can hardly be found by the birds, and they are really starved. It has sometimes struck me that perhaps this may be the reason of our poultry editor's ill success with it. But if it be thrown on a bare place where it can be seen, there is no difficulty, and I have constantly given it to fowls which have never seen it before.

Buckwheat is also capital food for chickens. They will eat it at three weeks old, when other grain must be cracked for them, and they, too, will eat more of it than of any other grain except whole grits. Some years ago I fed on buckwheat toad ground up with husk and all for one season, and the chickens did well, and grew very large. I should have repeated the experiment but for the difficulty of getting the buckwheat ground. Of late, indeed, the grain itself has been very scarce and dear, owing, no doubt, to the late war; hence it is not at present so relatively cheap a food as formerly, but even now I think it a cheap as barley, being a heavier grain.—L. WRIGHT.

CRYSTAL PALACE POULTRY, PIGEON, AND RABBIT SHOW.—Great improvement appears here. The Judges' names are published, and, for the most part, the single-bird system is adopted. There

are fourth and even fifth prizes in some of the classes. All the prizes are liberal, and in addition there are sixty-two silver cups. The entries close on the 20th instant.

BANTAM COCK BROODY.

In reference to the Bantam cock I mentioned in my note to you (page 225), I would say in answer to the query, "Is he the father of the brood?" Undoubtedly so. I had the little hen four years ago, and the cock I bought two years ago—a cockerel, and I have had no other Bantam cock. I have a large Cochins cock, but the Bantams are the Black-breasted Game, and there is no doubt about the brood nor yet about the cock, for he is very attentive to his hen. I set her upon seven eggs—she hatched six.

I would add that he continued to sit until I prevented him by taking the nest away. I almost regret I did not give him some eggs. Since I prevented him from sitting he gets every night the hen and chickens into a nest box, and they all huddle-up as close as possible. The hen had quite left the chickens before, and had laid again. I have been to look this evening, and they are all in the nest closely huddled-up. He always roosted high before.—G. C.

COMMITTEES AND JUDGES OF POULTRY SHOWS.

I AM residing some distance from the turmoil of the "busy city," and not in a poultry-show district, nevertheless I take an interest in the question, and am not without the laurels of former days, now somewhat faded. I will try to take a common-sense view of it, and should your space allow, will visit your columns from time to time.

Two subjects seem to be on the boards at present—one, the publication of judges' names before the entries close; and the other, the continual scolding of committee-men. This latter backed by threatening letters.

As a rule, the committee-men of a poultry show work very hard, and when all is wound-up, they have to be losers of money. Most of them are real amateurs working for the love of the pursuit, and content to do so, with only one certainty in view—viz., that under no circumstances can they be gainers. I believe, with the exception of one or two shows which are speculations, this is true of nearly every show in the kingdom, and that the committee-men will bear me out. Two scoldings appear last week; one blames because the men who have to handle the birds are not adepts at it. Not one man in a hundred could do so, and that man is very seldom of those who will take employment for a day or two.

Next, if the judges' names are not published, the public is advised not to send their birds to the show. If I were a committee-man, this threat would not disturb my slumbers. Who would be the sufferer if the show did not take place? Certainly not the committee-men or honorary secretary. They would save time and money. The sufferer would be the exhibitor. His birds are useless, and still worse, valueless unless they can be shown; and instead of throwing difficulty in the way of the hard-worked and unpaid official, he should in most cases thank him for the trouble he takes, and make his labour as light as possible.

I believe shows are profitable only to the exhibitor, and that he cannot do without them.—X. W. Z.

MISREPRESENTATIONS AND JUDGES' NAMES.

REMOUR has erroneously stated that E. Hewitt, Esq., has declined to judge at any more shows for the present. I am enabled to contradict at once this statement, for he has promised to officiate at the Ipswich Show, October 14th.

In reference to publishing the names of judges, there is considerable difficulty in so doing. What committee would like to publish an array of names as judges, and at the last moment, perchance, not have sufficient entries for one? A great deal has been said about the judges knowing Mr. A's or Mr. B's birds; no doubt such is the case sometimes. Then, why not place every exhibitor's name upon his exhibits prior to the judges making their awards? For, if we have confidence in our judges, what signifies their knowing to whom the specimens belong?—W. B. JEFFRIES, Ipswich.

KILMARNOCK SHOW.—This has the merit of offering good prizes for poultry, Pigeons, and Canaries, but Rabbits had better have been omitted rather than have only two classes—"Any fancy variety" and "Common." No judge can do justice to exhibits in such a classification. We think that there is equity in requiring an extra shilling from exhibitors who wish to contend for the special prizes, but we agree with a correspondent in surprise that of those twenty-seven special prizes twenty-five are

"mantelpiece timepieces." We cannot publish letters we have on this. The Judges' names are published.

LONG SUTTON POULTRY SHOW.

THE past week of fine weather has proved an advantage to the Long Sutton Agricultural Society, that can only be understood by those who have seen their shows under a series of misfortunes through unfavourable weather. Last year from this cause there was a deficit of nearly £200. The entries at the Show held on the 24th and 25th of September were the best ever received by the Society, and the specimens were placed under an excellent wooden building erected for the purpose, and Turner's pens placed in single tiers showed them to advantage.

In Dorkings a Grey cock was first, and of the three birds that put in appearance he was certainly a grand bird, though only beating the Silver-Grey cockerel in the next class by size, the latter being as perfect in all other respects. The first-prize hen in the Dark Grey class was, without doubt, perfection in all points; the second being large, but not in the same bloom. A veteran Silver-Grey hen was first, and a good White second in the next class; but neither bird was in high condition. In Cochins cockerels the cup was awarded to a capital Buff, the second going to a good Lemon; and in the next class a White was first, and Partridge second and third. In Cochins hens also the cup went to the Buff, this pullet being well made up and an excellent colour; and in hens of any other colour a good Partridge stood first, and White second. Brahmas.—Light cocks were a good class, the winners being both large and well marked, although the first-prize cockerel was somewhat creamy; but these were thoroughly beaten by the Dark cockerel in the next class, which is more like a cock than anything else both in size and feathering, the second bird in the same class being beaten only in shape of back and tail. Light Brahma pullets were a most extraordinary class, not only in numbers but in quality—such a show, in fact, seldom or never having been seen at this time of year; and the cup for hens was carried off by this colour, although there were also some grand pullets in the Dark class. In the Hamburg classes the entries were but poor, which we believe has been the case at most of the shows this season. There was only one Gold-spangled cock, as also Silver-pencilled cock, yet the latter was so good as to win the cup for the Pencilled section; the Gold-pencils proving but poor, and a Silver-pencil pullet also securing the other cup. Spanish cocks had but three entries, and the best of these did not put in appearance till the following day, and the rest were but moderate birds, though the hens made up for the deficiency of the cocks in that respect. Polish were an extraordinary lot, but not in the best feather; the size and closeness of crests were uncommonly good. In French fowls both firsts were awarded to Crève-Cœur, as also the extra prize; in cocks the second and third going to La Flèche and Houdan, and in hens Crève-Cœur and Houdan. There were but fourteen entries in the two Game classes, and the cup awarded to a nice Duckwing cockerel in full feather, closely pressed, however, by a grand old Brown Red hen in the next class. In the Any other variety class the cup and first prizes were carried off by Black Hamburgs, the former going to a grand pullet; the second in cocks going to Malay, and in hens to Silky. Although the entries in Bantams were very good and there were some excellent birds, yet we do not consider that as classes they were nearly so good as in some previous years; the Blacks being particularly poor, though there was considerable progress in the Brown Red Game. The cup for Game was won by Black Reds, and in the next section by pure White Sebrights, although in the opinion of some the second-prize Golden were quite equal in quality.

There were some handsome Pheasants shown, the first being Swinhoe, second Gold, and third Silver. Ornamental birds were not equal to last year. The Rouen Ducks were very good, and the Aylesburys fair specimens, and there were some rarities in the Variety class, a grand pair of Yellowbills being first, Viduata Whistlers second, and Carolinas third. There were some capital Turkeys in both classes, as also Geese, though some of the latter were had in colour, but very large. Capital Toulouse won both first prizes. The sale classes are generally a great feature in this Show, and the present proved no exception, many cheap birds being shown. The cup for the greatest number of points for local exhibitors was won by T. M. Derry, Esq.

The Pigeon classes were well supported, and it will only be necessary to see the names of the exhibitors to get a guarantee of the excellence of the birds, the classes in which we were particularly struck being the Carriers, Trumpeters, Fantails, and Almond Tumblers, though we should not omit to mention the Parbs, the winning birds in all classes being small and good in all points. In the Selling class Parbs were first and Yellow Dragons second.

Rabbits were a fine lot, the Lop-ears measuring in an unprecedented manner, the first in bucks being a well-shown Sooty-

fawn, 23 by 5 inches, with a grand head and fine quality of ear; the second being also of that colour, not as high in condition and fur, but otherwise good, and 23 by 4½, the remainder being also good in measurement. The does, however, completely took the shine out of the bucks, the former being large and superior in colour and marking, many grand Rabbits having to be content with high commendations. The first was a Black-and-white, 23 by 4½, and the second of that colour 22 by 4½, the latter losing somewhat in marking also as compared with the former. The cup for Rabbits was awarded in this class. In bucks of any other variety a large well-shown Angora was first, and a Grey-and-white Dutch second; and in does, Himalayan was first and Angora second. With the exception of the first-prize buck there was nothing of striking merit in Silver-Greys. In the Selling class Lop-ears won both prizes.

In consequence of the unfortunate illness of both Mr. Hewitt and Mr. Massey, the Poultry were judged by Messrs. Hutton and Hedley, the Rabbits by Mr. Hutton. Mr. Esquilart judged the Pigeons.

DORKINGS.—Coloured.—Cock.—Extra, Rev. E. Partrum, Great Berkhamstead, 2, T. C. Burnell, 3, W. H. Robson. Any other variety.—Cock.—1, Wren and Page, Lowestoft, 2, T. Whiting, 3, A. Darby, Bridgworth. Coloured. Hen.—Extra, A. Darby, 2, H. Lingwood, Needham Market, 3, T. C. Burnell. Rev. E. Partrum; E. W. Southwood, Fakenham. Silver-Grey or White.—Hen.—1, Wren & Page, 2, O. E. Cresswell, Early Wood, Bagshot, 3, A. Darby. Wren & Page, 4, T. Whiting, 5, 2.

COCHINS.—Buff.—Cock.—Extra, Lady Gwydyr, Stoke Park, Ipswich, 2, C. Sedgwick, Keighley, 3, H. Lingwood, 4, W. G. Purdon, Driffield, 5, W. Mitchell. Any other variety.—Cock.—1, R. S. S. Woodgate, Pembury, Tunbridge Wells, 2, H. Beldon, Goutstock, Bingley, 3, C. Sedgwick, 4, W. G. Purdon. Buff.—Hen.—Extra, Lady Gwydyr, 2, C. Sedgwick, 3, J. Bloodworth, Cheltenham. 4, C. Bloodworth, 5, H. Lingwood, 6, A. Darby, 7, W. Mitchell. Any other variety.—Hen.—1, T. M. Derry, Godey, 2, R. S. S. Woodgate, 3, C. Sedgwick, 4, H. Beldon.

BRAHMAS.—Light.—Cock.—1, Lady Gwydyr, 2, H. Lingwood, 3, J. Bloodworth, 4, J. Long, 5, H. Draycot, Hummerston, Leicester. Dark.—Cock.—Extra, H. Lingwood, 2, J. H. Pickles, Brinkdale, Southport, 3, W. R. Garner. Light.—Hen.—1 and Extra, Lady Gwydyr, 2, H. Lingwood, 3, P. Haines, 4, M. Leno, Dumstable (2), W. Ford, 5, R. Fulton, London, 6, H. Beldon, 7, H. Draycot. Dark.—Hen.—1, H. Lingwood, 2, H. Marriott, 3, T. F. Ansell, 4, W. R. Garner, 5, T. F. Ansell, 6, E. Pritchard.

HAMBURGH.—Gold-spangled.—Cock.—1, J. Rollinson, Lindley, Oley. Gold-pencilled.—Cock.—1, A. Silver, 2, H. Beldon, 3, C. Bloodworth, 4, Silver-spangled.—Cock.—1, H. Beldon, 2, C. Parsons, 3, Silver-pencilled.—Cock.—Extra, H. Beldon, 2, W. A. Hyde, 3, H. Beldon, 4, J. Rollinson, 5, T. May, Wolverhampton, 6, T. Hakeman, 7, Gold-pencilled.—Hen.—1, H. Beldon, 2, W. K. Tickner, Ipswich, 3, W. Speakman, Nantwich, 4, Silver-spangled.—Hen.—1, H. Beldon, 2, J. Rollinson, 3, Silver-pencilled.—Hen.—Extra, H. Beldon.

SPANISH.—Cock.—1, H. Beldon, 2, W. Hodgson. Hen.—1 and 3, Mrs. Tomkin, 2, H. Beldon.

POLANDS.—Cock.—1 and 2, H. Beldon, 3, A. Darby. Hen.—Extra, H. Beldon, 2, A. Darby, 3, C. Bloodworth, 4, J. Nelson, 5, C. Bloodworth. FRENCH.—Cock.—1, E. B. Wood, Uttoxeter (Creve-Cœur), 2, Rev. N. J. Ridley, Newbury (La Flèche), 3, W. Dring, Faversham (Houdan), 4, G. W. Hibbert, Godley, Manchester. Hen.—Extra, R. E. Wood (Creve-Cœur), 2 and 3, W. Dring (Creve-Cœur and Houdan), 4, Mrs. Vallance, 5, G. W. Hibbert. Aylesbury.—Cock.—Extra, E. Bell, Broom-on-Trent, 2, H. E. Martin, Southport, Fakenham, 3, S. Matthew, Sturminster, 4, A. Canty, 5, H. E. Martin. Hen.—1, H. E. Martin, 2, S. Matthew, 3, A. Canty, 4, J. Nelson, 5, A. Canty, 6, W. Southwood.

ANY OTHER VARIETY.—Cock.—1, H. Beldon, 2, Rev. A. G. Brooke, Shrewsbury, 3, E. W. Southwood, 4, Extra, H. Beldon, 5, R. S. S. Woodgate, 6, Rev. A. G. Brooke, 7, W. Capon, 8, Rev. N. J. Ridley, Newbury; E. W. Southwood. BANTAMS.—Game.—Black-breasted Red.—1, J. Nelson, 3, J. Rollinson, 4, A. Silver. Extra.—1, E. Bell, Broom-on-Trent, 2, H. E. Martin, Southport, 3, Broasted Red.—1, J. Nelson, 2 and 3, W. Entwistle, 4, T. Barker, Burley. Any other colour.—1 and 2, W. F. Entwistle, 3, J. Mayo, 4, T. Barker. BANTAMS.—Black.—1, Mrs. Mayo, 2, E. H. Ashton, Mottram, 3, H. Beldon. Any other variety.—Extra, H. Yardley, 2, M. Leno, 3, H. B. Smith, Broughton, 4, M. Leno, 5, H. Beldon.

PHEASANTS.—2 and Extra, M. Leno, 3 and 4, Miss E. F. Clarke.

ORNAMENTAL BIRDS.—1, G. Howes, 2, O. E. Cresswell, 3, C. H. Jbb. GEESE.—Barn.—1, H. Beldon, 2, E. W. N. Easton, 3, S. H. Stott, Rotherham, 4, J. Nelson, 5, T. M. Derry, 6, H. Stott, 7, Aylesbury.—1, T. Sear, 2, T. F. Carver, Langthorpe, Boroughbridge, 3, W. H. Robson. Any other variety.—1 and 2, M. Leno, 3 and 4, H. B. Smith.

TURKEY.—Cock.—Extra, T. M. Derry, 2, Rev. N. J. Ridley, 3, M. Kew, Market Overton, Oakham, 4, Mrs. P. Harris. Hen.—1, M. Kew, 2, W. E. Etches, 3, T. M. Derry, 4, Mrs. P. Harris.

GEFSE.—Gander.—1, H. Beldon, 2, T. M. Derry, 3, S. H. Stott. 4, O. A. Young. Goose.—1, H. Beldon, 2, T. M. Derry, 3, S. H. Stott.

SELLING CLASS.—No. 1.—1, T. M. Derry (Cambridge Turkey), 2, E. Crawford, 3, Miss M. E. Campaign (Aylesbury Drake), 4, T. M. Derry (Gander) (2), 4, Cole (2); T. F. Carver, W. A. Barnell (Buff Cochins), 5, Hancock (Houdan); J. Ward (Brahma); T. Sear (Aylesbury Drake). No. 2.—Extra, E. Crawford, 2, T. M. Derry (Partridge Cochins), 3, Miss M. E. Campaign, 4, Cole; H. M. Harvey (Buff Cochins); F. Saal (Hamburgs).

PIGEONS.

CARRIERS.—Black.—Cock.—1, H. Yardley, Birmingham, 2, H. Fulton, London, 3, W. Massey, R. Fulton; R. H. Blackcock, 4, F. W. Metcalf, Cambridge. Hen.—1 and 2, H. Fulton.

CARRIERS.—Any other colour.—Cock.—1 and 2, R. Fulton (Dun), 3, A. Storrar (Dun), 4, Extra, and 2, R. Fulton (Dun), 5, W. Massey (Dun); W. Balmer (Dun); R. P. Spencer, Hereford.

CARRIERS.—Young.—1, W. Massey (Black), 2, W. Balmer (Dun), 3, W. Massey (2); H. B. Massey; R. Fulton (Black); A. Billecud.

TRUMPETERS.—Cock.—1, T. Rife, Durham, 2, A. Storrar, 3, R. Fulton; H. Pratt. Hen.—1 and 2, R. Fulton.

TRUMPETERS.—1 and 2, R. Fulton, 3, T. Rife.

FANTAILS.—Extra, P. Rife, 2, J. Walker, 3, J. E. Loversidge; R. Fulton; O. E. Cresswell, Early Wood, Hag-hol; J. Walker.

TUMBLERS.—Almond.—1 and 4, R. Fulton, 2, H. Yardley. Any other colour.—1, J. Ford, London, 2, W. Woodhouse (Beards or Balds), 3, Mrs. A. Woodhouse (Balds or Beards); H. Yardley.

DOWLS.—Extra, J. Gardner, Preston, 2, H. Yardley.

BARBS.—Cock.—1, J. Firth, Pexbury, 2, R. Fulton, 3, J. Firth; W. Massey, 4, W. P. Robinson, Newark. Hen.—1, R. Fulton, 2, J. Firth, 3, Young, 4 and 5, J. Firth, 6, T. H. Derry, Bolton; W. Massey; S. Warren; C. G. Cave, Spalding.

ANSWERS.—1, H. E. Wright, 2, J. Lister, Keighley.

JACOBIANS.—Extra, R. Fulton, 3, R. Helwell.

TROUBLES.—1, G. H. Gregory, 2, O. E. Cresswell, 3, R. Fulton.

DOUGLASS.—1, F. E. Wright, 2, Cheslure, 3, A. W. Wren, Lowestoft, 4, R. Donger, 5, J. V. Beck, 6, G. H. Gregory.

ANY OTHER VARIETY.—I. T. H. Dows (Red Magpie), 2, H. Yardley, *hc*, J. S. Price (Busts), K. E. Fulton.

SELLING CLASS.—1, H. B. Massey (Barbs), 2, W. A. Wren (Yellow Dragonst), *hc*, A. Southwell (Silver Mealy Owls); W. Nuttidge, Northampton (2), *c*, A. Silver (White Fantails); C. G. Cave (Barbs); J. Walker (White Dragonst); R. P. Spencer; E. Helliwell (Archangel).

RABBITS.

LOP.—Buck.—1, F. Banks, London. 2, J. Cranch, St. John's Wood. *hc*, F. J. Smith; J. Hume, York; C. Winward, *c*, Miss E. Alington. *Doc*—Extra, F. Banks. 2, J. Hume. *hc*, P. J. Smith; C. Knorr; A. C. Wiseman; J. H. Barraclough; R. Buffham; F. Banks; J. C. & H. Elwis.

ANY OTHER PURE BREED.—Buck.—1, C. Arthur, Mells-ham. 2, J. Boyle, jun., Blackburn. *hc*, P. J. Smith; G. P. & R. Hackett; T. Garner; W. Bowers; E. S. Smith; C. Winward; W. H. Tomlinson. *Doc*—1, F. J. Smith, East Dereham; E. S. Smith. 2, S. Ball, Bradford. *hc*, T. Garner; W. Bower; P. Badham; E. S. Smith.

HEAVIEST.—1, J. Bowman, York. 2, W. Hollday, Wakefield. *hc*, H. Briggs. SILVER-GREY.—1, S. Ball. 2, W. B. Eiches, Whitechurch. *hc*, E. Brummitt; E. S. Smith; J. Boyle, jun.

SELLING CLASS.—1, W. Beety, Long Sutton. 2, G. Goodwin, Long Sutton. *hc*, C. King; R. Buffham. *c*, E. Dring.

POLYGAMY IN PIGEONS.

THE second article of "R. W." on this subject treats somewhat over-gravely my petty-sessions anecdote, introduced by me as being humorous, for I like humour. Then, he thinks me "hypercritical" in asking the meaning he attaches to the words "I believe." I venture to think I am not. Thus, if I say to a man, "Are you sure of it?" and he says, "I believe so," his meaning is, "Well, to the best of my belief it is so, but I am not sure." Having been lately for several days together sifting evidence, or watching it being sifted, and finding so much apparently true breaking down on careful examination, I was the more on the look-out for any flaw in this matter of polygamy in Pigeons. "R. W." speaks now very carefully, and uses the words "presumptive evidence." I think it would be very interesting if "R. W." would exhibit at the next Crystal Palace Show his polygamous Pigeons, both the pairs and the young, with a descriptive card on the pen.—WILTSHIRE RECTOR.

HOME ATTACHMENT OF PIGEONS.—Of the wonderful power that Pigeons possess of finding their way to the cot where they were hatched and reared, a case occurred in Bradford (Yorks) recently. Mr. John Mills, of H. Richmond Road, who has a choice collection of Belgian race Pigeons, received a consignment of young birds and a pair of old ones from Belgium lately. After the Pigeons had been in Mr. Mills' loft a week or two the old male bird escaped, and the female also managed to follow her lord. It was supposed that the pair were lost, and Mr. Mills did not expect to hear of them again. A few days afterwards, however, to his great surprise, he received a letter from his friend in Belgium, whence the birds had been brought to Bradford, to say that both birds had returned to their Belgian home, and, as a proof of this, the Pigeons were returned to Mr. Mills at Bradford, and are now in his possession, along with a number of young Pigeons from the same strain. As Bradford and Belgium are separated by several hundred miles, and the sea has to be crossed, this long flight of the birds over an unknown tract of country is very remarkable.

CANARIES AT THE CRYSTAL PALACE SHOW.

In reply to Mr. Blakston's remarks in your last week's Journal respecting the character of the birds exhibited by Messrs. Bemrose & Orme at the last Crystal Palace Show, will you kindly permit me to vindicate the course taken by the Judges on that occasion?

I claimed that extraordinary coloured Ticked Buff Norwich, 216, and it proved to be utterly worthless, neither retaining nor perpetuating the colour in the slightest degree. I have it now sound in health, perfect in feather, moulted a green-tinted straw colour, and in the same cage one of Mr. Flexney's and Adams and Athersuch's; these have retained their colour in proper proportion. The price of the bird was 49s., and for the purpose claimed it was not worth as many pence. I am informed I am not the only person who purchased a specimen of this stamp exhibited by Messrs. Bemrose & Orme. May I ask, would exhibitors generally consider such birds eligible for competition?—R. J. TROAKE, 126, White Ladies' Road, Clifton, Bristol.

WEIGHT OF EGGS.—It has been ascertained, by careful experiment, that the average weight for a dozen of eggs is 22½ ozs. The largest eggs weigh 21 ozs. per dozen, and the smallest only 11½ oz.—*Cantabrigia Farmer*.

MISTAKE IN PIGEON PRIZES.—I wish to draw committees' attention to a mistake in the schedules they send out in the present day. They offer prizes for Almond Tumblers and Tumblers any other variety, of which we generally see three and sometimes four pens entered for competition. Then, of late the committees have a class for Babbles or Beards, and we see from

fourteen to eighteen pens entered, which make a splendid show, and answer much better for the funds.—NEARLY A BALD AND QUITE A BEARD.

THE BAR-FRAME HIVE.

It is well known that, in my opinion, this hive is not so good as some others of simpler construction for the accumulation of honey, and the convenience of bees. We can teach bees nothing, and common sense and experience go hand-in-hand to convince honest bee-keepers that complications of all kinds in hives are hindrances rather than helps to them. Bar-frame hives are, nevertheless, pretty extensively used by amateur apiarists. They are useful to those who are engaged in scientific research. My aim now is to ask if no improvement can be made in this kind of hive?

The most improved bar-frame I have ever seen is, I think, capable of further improvement. Let the reader think for a moment only of the difficulty and toil of reaching the bars inside the hive. The top of the hive has to be unscrewed by the use of a screwdriver—four long nails have to be withdrawn—the top or lid gently raised and put aside, then both hands of the bee-master are employed in lifting-out a bar of comb covered with bees. In doing this, or even in holding the comb, considerable risk is run of being stung, for the slightest shake of the hand or puff of breath may offend the bees and cause them to rise as a cloud, and dart at our faces with vicious intentions. Again, when a super is placed on a hive of this kind, how can the bars be got at? The lid or top is immovable now, and the hive must not be touched or meddled with till the super be removed.

Both theoretically and practically the bar-framers are markedly imperfect and unsatisfactory. These hives are solely for the convenience of the bee-masters, and, therefore, let me now suggest that an effort be made by some practical bee-keeper and hive-maker to produce a bar-frame hive to open at the back and not at the top. If the back part or quarter of the hive were hung on two brass hinges and closed with two thumb-screws, how much easier it would be to reach and handle the bars. Of course, this suggestion implies that the bars would be constructed to move backwards and forwards—in other words, to be easily withdrawn laterally or horizontally. A very moderate amount of mechanical contrivance will enable some hive-makers to accomplish this, and I think a little perseverance in the same direction may lead them to an achievement that will be highly satisfactory.

Is it not possible to invent a sheet of thin elastic material, call it a brush, and fix it between the opening back door and the bars, which would sweep all the bees off the bars back into the hive, as the bars are withdrawn? I think it is possible to do all this, and that this kind of hive will not approach perfection till some such improvement be introduced. A hive with the improvements herein suggested would do much to popularise bee-keeping amongst ladies, and probably bring some of them to the front as our instructors. The most timid person could then with finger and thumb easily open the door, take out and examine the brood and honeycombs, and replace them without risk or fear.

At another time I may discuss the merits of the bar-frame hive; in this letter I am seeking to improve it, and probably some readers with more inventive genius and mechanical contrivance may be able to suggest further improvements, and carry all into a hive that will command the admiration of the bee-loving community.—A. PETTIGREW, *Sale, Cheshire*.

HONEY HARVEST IN EAST LOTHIAN.

THE description of the honey harvest given by "B. & W.," Mr. Fox, and others, applies equally well to that of East Lothian, or the county of Haddington. The clover was a total failure here, and the weather so cold and dry during the early part of the season that they got no honey to store—barely sufficient to keep them breeding, and numbers never swarmed at all. They were sent to the heather the first week in August, and the heather at that time was in fine condition, and those having plenty of bees in their hives had every prospect of obtaining a lot of heather honey. But, alas! our hopes are all blasted: wet and cold weather have prevented the bees from getting out to gather the honey, so that out of about three hundred skeps in this locality, I do not expect there are a dozen finished supers, and those which were deficient in bees have made nothing; so that many will die unless liberally fed.

Out of twenty-one of my own lot two are dead, and they average a gain of nearly 8 lbs. each at the heather, but no supers are put into the body of the hive. They seem to have ceased breeding shortly after they were sent to the heather, and my average is made-up by one or two strong, very strong, skeps. One in a ten-bar Woolbury, in the spring, as soon as it was filled with bees, I moved into a box with fourteen bars. When

that had been filled, it was put into a box having twenty-three bars. The queen kept on filling all these bars with brood, and the hive never swarmed. It weighed 94 lbs. when it was sent to the heather, and 116 lbs. when it returned, having gained 22 lbs., but all was put into the bars and none into the supers. Had it been a favourable season it should have given me 30 to 40 lbs. of super honey. Another has gained 28 lbs.

Some of my neighbours whose stocks did not swarm have a few supers, but none well finished so far as I can learn. A ten-bar Woodbury we find large enough in most seasons for this locality, unless uniting, which is extensively practised here and with uniform success at all seasons of the year, except the winter.

Honey is now eagerly inquired after, and a higher price than last year is already offered for it.—ALEX. SHEARER, *Yester Garden, Haddington.*

OUR LETTER BOX.

NORTHERN COLUMBIAN SOCIETY (J. G. D.).—We cannot comply with your request.

SPANISH COCK'S FACE YELLOWISH (C. T.).—Discoloration of a Spanish cock's face may arise from many causes; among them are picking by the pullets, and discharge from the white face immediately round the eye. The only treatment for the first is to separate the bird from the pullets and to dress the spots with citron ointment. For the second you must carefully sponge and wipe out the discoloured spots, especially if there be any creases in it, and then dress it with powdered alum. Bathing with cold water is also a very good thing for it.

STONES FOR GRINDING OATS (L. J. E.).—We believe the stones are from Brittany. The first quality of stone is required, but the dressing is the more important part. However good the stone may be, if it be dressed in the ordinary way nothing is accomplished. We have no doubt you can get every information from Mr. Corcoran, sen., Mark Lane. It is his business, and he thoroughly understands it.

DORKINGS' FEET CORNED (H. F. H.).—When the wound or excrescence is round, the skin being destroyed in the middle of the circle, we have no hope of recovery. It is a rare thing to happen to a cockerel, but is not uncommon in an adult or old bird. It is generally caused by the great weight of the body. As a rule, it is very rare where fowls are kept on grass; it is very common where they have only gravel in their runs. As he is young we should turn him into food; he will never be a satisfactory stock bird. If you are determined to treat him, moisten the callosities with oil or warm water; remove as much of them as you can without causing bleeding; apply citron ointment, or, if more convenient, plain spermaceti to each foot; bind it in a rag so that no dirt shall come in contact with it, and allow the bird to run only on grass or on something equally soft and yielding. We do not promise a cure, but we know this will relieve it. We, however, repeat we should eat him.

GROUND OATS (A. A. F. K.).—They seem good, but we cannot bear testimony to them untried.

INDIAN CORN—FEEDING SPANISH CHICKENS (Rossini).—It is impossible to say how much corn seven young chickens should eat. If it is the only food they have they will soon begin to fall off. It is deficient in all the elements necessary for the growth of chickens. If it is not the only food, you should tell us what else they have. As a rule, Spanish chickens are hard to rear, and require not only constant feeding but great variety of food. They seldom lay till they are eight weeks old. Give them ground oats, dough, chopped egg, bread and cheese, and crumbed table scraps. Above all, feed them the last thing at night and first in the morning. No fowl makes a better return for care and painstaking than a Spanish chicken.

SPANISH FOWLS (A. T. W.).—The legs of Spanish should be blue, not black. It is very beneficial to shut-up these fowls in a darkened room for ten days before exhibition.

MRS. ARKWRIGHT'S DORKINGS.—Mrs. Arkwright informs us that the cockerel and pullet which won the first prize at Middleton, and which our report says were moderate and deficient, obtained three days afterwards the first prize at Crewe, and our report says the class was as good as any of this season. We do not see that the reports are contradictory; but if they were it would only be evidence that different reporters differ in judgment. We add for ourselves that Mrs. Arkwright's birds would need no defence, even if they are not always equally good.

AYLESBURY POULTRY SHOW.—The highly commended birds in the Variety class of Bantams were Capt. F. G. Calder's Japanese and Mr. Wilkinson's Gold-faced sibirgants. Those exhibited by Mr. Rogers were not noticed.

POULTRY AND PIGEON HOUSE.—Mr. Gamett says, "I have a poultry and Pigeon house pretty nearly of the same pattern you recommend in your Journal of the 18th ult., except that the nests themselves form the partition between the roosting and sitting houses. Each nest is 16 inches wide by 14 inches deep, and 14 inches high, and the back of the nest is formed of a loose board, which will slide. When a hen wants to sit the slide is taken from the back and put in the front of the nest, thereby removing the hen into the sitting house without touching her, which is a great advantage, as a hen always prefers to sit where she has been accustomed to lay."

WOOD PIGEONS (B. M. G.).—You can get them at Baily's, 113, Mount Street. They will do very well in such a space as you describe.

STOCK WEIGHING FOURTEEN POUNDS (Pomroy, Co. Tyrone).—Feed-up at once to the full weight of 20 or 25 lbs. Finish before November, and, if necessary, feed again in March or April.

MOULDY COMBS IN A HIVE (A. M. C.).—We should advise you to cut away any mouldy comb which may be found in your hive. It can only be productive of mischief. The vacancy caused by its removal will improve the ventilation of the hive in the winter, but we would cover it up with something warm, as we ourselves do in severe weather. You can easily remove the comb after a slight fumigation with rags or brown paper. Do it at once.

HIVES TO PREVENT SWARMING (F. E. Stocker).—There are many hives made which profess to prevent swarming, but none of them can be said absolutely to prevent it in any and every case. Bees will sometimes be perverse and have their own way. We have known them swarm out of a fair-sized hive, before it was filled with comb, without any assignable reason. In general,

however, bees will not swarm in seasons that are fairly rich in honey if you give them free access at the proper time to fair-sized supers.

OBTAINEE HONEY FOR SALE (F. E. Muller).—With your present intention to increase your stock of bees and sell honey next year, we think you would do well to buy two or three more stocks at once. The present time is favourable for making purchases, and is also the time to give weak stocks all the food they may require for the winter. Water and sugar boiled are preferable to beer and sugar.

WINTERING BEES (A Lady Bee-keeper, Monmouthshire).—Your outer case being rather larger than the Woodbury hive is not objectionable. In the event of a very severe frost, the cavity between the hive and case could be filled with rags or other warm materials; or as soon as feeding is completed a piece of old carpet or sackcloth might be flung round the hive, and over all the case. The lid may remain unscrewed down till spring. Contract the doors of hives to prevent mice going in during the winter.

SALVIA NEMORALIS (M. C.).—We believe the plant mentioned is better known as *Salvia sylvestris*. We cannot say where you can obtain seeds of it. All the common *Salvias* and *Neptunas* afford favourite pasturage for bees. The journal is not published in England; it is an American publication.

PUMPKINS (T. M.).—Whether large or small, their flesh may be mixed with apples for pies or puddings, or hoiled and mashed as turnips.

METEOROLOGICAL OBSERVATIONS,

CAMDEN SQUARE, LONDON.

Lat. 51° 32' 40" N.; Long. 0° 8' 0" W.; Altitude 111 feet.

DATE.	9 A.M.				IN THE DAY.				RAIN.		
	1873.	Barom. at sea level.	Hygrometer.		Direction of Wind.	Temp. of Soil at 1 ft.	Shade Temperature.			Radiation Temperature.	
			Dry.	Wet.			Max.	Min.		In sun.	On grass.
Sept.	Inches.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	In.	
We. 21	30.269	54.3	51.6	N.E.	54.6	66.0	41.4	111.7	87.9	—	
Th. 25	30.277	57.0	53.9	W.	55.5	69.0	52.5	104.8	48.1	—	
Fri. 26	30.296	49.3	48.7	N.W.	55.4	69.2	43.8	102.5	38.8	—	
Sat. 27	30.073	51.0	50.8	N.	54.3	72.0	41.6	100.7	35.7	—	
Sun. 28	29.956	54.7	53.3	S.W.	54.7	68.7	44.0	107.5	49.8	—	
Mo. 29	30.25	48.8	46.4	N.	54.8	62.0	41.5	99.7	36.5	—	
Tu. 30	30.131	55.9	54.4	N.E.	54.2	64.9	42.8	87.4	36.7	—	
Means	30.174	53.0	50.9		54.8	67.4	43.9	102.0	42.2	—	

REMARKS.

- 21th.—A very fine day; rather less so in the evening.
 - 25th.—Rather lazy, but fine afterwards, and splendid sunset.
 - 26th.—Again hazy in the morning; rather better towards noon, the sun striving to get through the haze, but unable to do so; thicker again in the evening.
 - 27th.—A most enjoyable day throughout, with bright sun and a pleasant temperature.
 - 28th.—Fine, but rather hazy all day; cloudy about 4 P.M., and again at night.
 - 29th.—Morning rather dull, but soon cleared off, and we had another lovely day.
 - 30th.—Dull and hazy in the morning; finer about noon, but soon again dull; very dark about 4 P.M., looking very likely for rain, but not any fell.
- A still higher barometer than last week (but it is now falling); the temperature about 3° lower, though there has not been any rain. As a whole the week has been most enjoyable.—G. J. SIMONS.

COVENT GARDEN MARKET—OCTOBER 1.

We have experienced a somewhat slow trade during the week, and prices are receding, good first-quality articles being the only ones that maintain former rates. A large quantity of Grapes of ordinary quality are now coming from the Continent and Channel Islands, at prices ranging from 6s. to 1s. per lb.

FRUIT.

	s.	d.	a. d.		s.	d.	a. d.
Apples.....	1	0	1	6	Mulberries.....	1	0
Apricots.....	0	0	0	0	Nectarines.....	0	0
Cherries.....	0	0	0	0	Oranges.....	1	0
Chestnuts.....	0	0	0	0	Peaches.....	4	0
Currants.....	1	0	0	0	Pears, kitchen.....	1	0
Black.....	0	0	0	0	dessert.....	2	0
Figs.....	0	6	2	0	Pine Apples.....	1	0
Filberts.....	1	0	1	6	Plums.....	1	0
Cobs.....	1	6	0	0	Quinces.....	1	0
Gooseberries.....	1	0	0	0	Raspberries.....	1	0
Grapes, household.....	1	0	5	0	Strawberries.....	1	0
Lemons.....	1	0	10	0	Walnuts.....	1	0
Melons.....	2	0	2	0	ditto.....	1	0

VEGETABLES.

	s.	d.	a. d.		s.	d.	a. d.
Artichokes.....	0	8	0	6	Mushrooms.....	1	0
Asparagus.....	1	0	0	0	Mustard & Cress, punnet	0	2
French.....	0	0	0	0	Onions.....	3	0
Beans, Kidney.....	1	0	0	0	pickling.....	0	6
Beet, Red.....	0	1	0	0	Parsley per doz. bunches	0	4
Broccoli.....	0	9	1	6	Parsnips.....	0	9
Cabbage.....	1	0	1	6	Peas.....	0	8
Carrots.....	1	0	1	0	Potatoes.....	3	0
Capsicums.....	0	6	0	0	Kidney.....	0	0
Cauliflower.....	0	3	0	0	Round.....	0	0
Celery.....	1	6	2	0	Radishes, doz. bunches	1	0
Coleworts, doz. bunches	2	6	4	0	Rhubarb.....	0	0
Cucumbers.....	3	0	3	0	Salsify.....	1	0
pickling.....	0	0	0	0	Savoy.....	0	0
Endive.....	2	0	0	0	Scorzoneria.....	1	0
Fennel.....	0	6	0	0	Sea-kale.....	0	0
Garlic.....	1	0	6	0	Shallots.....	1	0
Herb.....	0	6	0	0	Spinach.....	2	0
Horseradish.....	3	0	4	0	Tomatoes.....	1	0
Leeks.....	0	3	0	0	Turnips.....	1	0
Lettuce.....	1	0	1	6	Vegetable Marrows.....	0	2

WEEKLY CALENDAR.

Day of Month	Day of Week	OCTOBER 9—15, 1873.	Average Temperature near London.			Rain in 48 years.	Sun Rises		Sun Sets.		Moon Rises.		Moon Sets.		Moon's Age.	Clock after Sun.	Day of Year.				
			Day.	Night.	Mean.		Days.	m.	h.	m.	h.	m.	h.	m.				h.			
9	TH		60.7	42.4	51.5	24	16	af	6	18	af	5	51	6	32	10	18	12	46	282	
10	F	Oxford Michaelmas Term begins.	61.6	43.3	52.4	24	18	6	16	5	25	7	51	11	19	13	2	19	13	2	283
11	S	OLD MICHAELMAS DAY.	61.7	42.4	52.1	22	19	6	14	5	10	8	after	20	13	17	284	20	13	17	284
12	SUN	1st SUNDAY AFTER TRINITY.	59.2	41.4	50.3	23	21	6	12	5	6	9	5	2	13	32	285	21	13	32	285
13	M		60.7	41.8	51.2	22	23	6	10	5	11	10	48	2	13	45	286	22	14	0	287
14	Tu		59.9	40.5	50.2	20	25	6	8	5	23	11	20	3	23	14	0	23	14	0	287
15	W	Royal Jersey Horticultural Show.	59.0	40.5	49.8	21	26	6	5	5	morning	42	24	14	13	288	24	14	13	288	

From observations taken near London during forty-three years, the average day temperature of the week is 60.4°; and its night temperature 41.8°. The greatest heat was 89°, on the 14th, 1861; and the lowest cold 24°, on the 15th, 1860. The greatest fall of rain was 1.04 inch.

WINTER FLOWER GARDENING.—No. 1.



OUR flower beds will soon be freed from their summer and autumn occupants. The beds and borders will be prepared for the reception of the plants and bulbs that are to render them gay during the spring months. From now to spring for a time the flower garden is a blank! Beds planted with bulbs, others filled with plants that are to gladden the eye and heart of man when Nature calls them into bloom and fragrance. What

feelings do beds of bulbs or plants stir up within us for full four months of the dullest period of the year! Is it not that we see in those bare mounds of soil (which I never look upon without being reminded of molehills in a pasture), or those beds of green plants, a prospective of brilliant colours, arranged with a view to contrast and harmony? They may be sorry-looking in November, December, January, and February, but they will amply repay us for our patience and forbearance by the brilliant array of colour they afford in spring,

"When early Primroses appear,
And vales are deck'd with Daffodils."

Verily, then, not before March, frequently not until April, can we look for the display we expect of spring gardening. The array after that none can dispute. The splendour of the bulb-rooted flowers, and of the plants if not so bright and dazzling as that afforded by the beds or borders' summer occupants, is, nevertheless, nearly, if not quite, as interesting and satisfactory. But what of the beds and borders from October until then, and what of the flowers, as Shakespere puts it,

"Which come before the swallow dares, and take
The winds of March with beauty?"

What of the Christmas Rose, Hepatica, Winter Aconite, and Snowdrop? Are they not all interesting and beautiful, and who does not grow them? Certainly everyone cherishes these gems of the winter and early spring months. They flower too early to be classed with the spring-flowering plants, being past their best by or before the Hyacinth, Tulip, Narcissus, Myosotis, Alyssum, &c., are all aglow with their scarlet, white, blue, and gold; and it is this which prompts my directing attention to winter flower gardening.

It is all very well to be told "spring gardening means flowers, weather permitting, from Christmas up to June;" but what flowers have we before April? None, or but few that will afford anything like a brilliant array—none that will warrant our arranging them in a flower garden with a view to forming a contrasting or harmonious whole. Spring gardening with the plants usually employed often is early summer gardening, the plants not attaining the height of their beauty until May, through the lateness of the spring; so that after we have put up with a very tawdry display of flowers anything but attractive and as for contrasting or harmonious arrangement it is beyond the question, we find we are no better off as to flowers in March than we were in November

when the beds were planted. It amounts to our having flower beds, but no flowers from October to March. Bare or green beds may give hope of good things to come, which seem to attain their meridian of splendour just when the time arrives for planting their successors. Flowers are delightful at any time, and, except in a late spring, the state of things alluded to does not interfere with the summer display; but the fact remains that before March, and often not then, the beds of spring flowers might as well want their occupants as possess them; therefore, up to that time, we would arrange to have the beds filled with objects of interest and beauty from the beds being cleared in autumn until they can be arranged in more brilliant colours.

Spring gardening, as I have seen it and can comprehend it, means no flowers worthy of the name on the wintry side of March; interest and beauty to the beds in winter we may not be able to impart with flowers; but are there no other subjects of beauty—no forms that can gladden man but flowers? Some cannot see beauty in any other form but that of the flower, and ignore every other form of beauty. The beauty of the shrub and colouring of many variegated and coloured-foliaged plants is altogether ignored. Bare surfaces, self-coloured matter can be tolerated for four or five months only; in due course the blaze of bloom can be had. Well, be it so; tastes differ, and so do the subjects I shall enlist in behalf of making the beds and borders of our gardens interesting and beautiful at the dullest period of the year. Foliage has been so improved of late years as to be almost, if not quite, as effective in colour as flowering plants, and in foliage we have an endurance of wind and rain to which flowers can lay no claim.

I shall be told that in spring gardening ornamental-foliaged plants are employed, so that beauty is had in the beds from the removal of the plants affording the summer display. All this we knew, and yet we can also see that until the plants with which the foliage is associated come into flower there is no effect—no contrast of colour, no harmony. The "whole" is destroyed when the plants are removed in autumn, it is not restored until spring. Many long years ago this state of things was foreseen by the founder of the modern system of flower gardening, Donald Beaton, who also advocated the ornamentation of the beds, after the removal of the summer and autumn plants, with shrubs. He, the great instrument of planting tender and other plants with decided hues of colour in masses, saw the condition the beds would be left in during the autumn and winter, and his fertile mind was not long in suggesting the means by which they might for a time at least be made presentable. The filling of the beds with branches of evergreens was as novel as effective. It was an improvement on the bare soil, which at the present day is not altogether wanting; but the branch and spray lost its beauty ere the time for putting out the summer plants had returned. They were withered and browned, and it was seen the beds looked better without them, and the beds were blank in the spring—the time of hardy flowers.

To remedy the lack of colour in our gardens a very old mode of arrangement was revived—coloured gravels and other materials to afford a contrasting and harmonious whole. This took with some; dead colouring materials were better than no colour at all, and especially as live colours were not to be had. The colours, however, were, like everything artificial, found to fade (and their hues were never very brilliant), and harmonised so badly with the live bright hues of the occupants of the parts set apart for plants as to be so dull in winter and so dead in summer as to interest no more than the colouring of a carpet. Beyond the tracery there was nothing in the polychrome or parti-coloured beds to attract or interest; no one could mistake the artificial-coloured materials for the bright live hues of foliage or flowers. No wonder that this revival of an old art found no advocates and but few adopters, having its date when flowers suitable for massing were rare, and revived when they were so plentiful and appropriate.

The rage for brilliant masses of bloom has of late years been on the decline; dazzling displays of flowers have been toned down—subdued by foliage, and the interest for those subjects that contribute to the enjoyment of gardens at all seasons has become more marked and decided. The appreciation of the herbaceous and alpine plant appears returning; our gardens will soon be of the mixed order of which that great author Loudon once said of a garden of this kind, "It is a perfect gem of botanical and floral beauty in the foreground, heightened in effect by interesting gleams of distant scenery, seen between and over fine shrubs and trees." It is by the blending of shrubs and plants with effective foliage along with those that gladden us with the brighter hues of their flowers, that we can enliven our gardens in winter, make them objects of beauty and interest in and for all times.—G. ABBEY.

AUTUMNAL ROSES.

In reading the Rose-growers' catalogues one would think that autumn-blooming Roses are plentiful as Blackberries; but things, even in the Rose world, are not always what they seem.

It is not the first time I have found occasion to remark that many of the so-called Hybrid Perpetual Roses are anything but perpetual as regards their propensity of flowering continually; the most perpetual thing about them is the regular and rapid succession of new varieties at 25 francs a-piece. "Grand," "bien fait," "extra" are also terms in which they are perpetually described. But to my comprehension many of them are only summer Roses, Hybrid China or Hybrid Damask, with little of the China in the former and not much of the "bifere" in the latter; the large, full, and finely-shaped Roses required for exhibition in June and July inclining raisers to select where the Gallica and Damask blood preponderates.

Let anyone walk in his garden of, say, two hundred varieties of Hybrid Perpetuals any day after August, and count how many sorts thenceforward to November give him a perpetual supply of flowers. Yet Roses in autumn are not only desirable but valuable. We love our summer Roses, and rise at unseemly hours to look at them; nay, more, we risk sunstroke and lots of ills in looking after them through a broiling summer's day. But beautiful as they are, we want Roses in autumn when Geraniums and bedding plants generally begin to fade. We love to catch their crimson and purple tints in the cool evening twilight, and to see them peering through the morning mists covered with dewdrops which sparkle in the sunlight.

Well, though not so plentiful as one might at first sight assume, they are to be had for the seeking, only they must be sought from this particular point of view. We must not ignore the Tea-scented because the flowers are loose; nor the China and Bourbon because they are small, for these are the most perpetual-flowering of all Roses. Only tempt them to grow, and they are sure to flower.

A border of them planted in the spring of 1872 is now (October 1) crowded with lovely flowers, white, yellow, and rose of various shades; in some all three of these colours so exquisitely blended that it would be difficult to do them justice by any mere verbal description.

But there are Hybrid Perpetuals worthy of their name, and in order to refresh my memory and to be accurate in my account of them, I have been walking among thousands of Roses, note-book in hand, and will now place before my readers the fruits of this experiment.

White.—Louise Darzens, Boule de Neige, Baronne de Maynard, Madame Alfred de Rougemont, Madame Bellenden Ker,

Madame Gustave Bonnet. *Tea-scented* of various shades.—Duchess of Sutherland, Baronne de Prost, Jules Margottin, Abel Grand, Elizabeth Vigneron, Madame Derreux Donville, Catherine Guillot, La France, Princess Beatrice, Louise Odier, Yonnais, Madame George Schwartz, Mlle. Eugénie Verdier, Madame de Stella, Général Castellane, Madame Kival, Madame Alice Durcau. *Red* of various shades.—Général Jacqueminot, Mlle. Annie Wood, Madame Creyton, Madame Victor Verdier, Marie Baumann, Baron Haussmann, Alfred Colomb, Auguste Rigotard, President Thiers. *Crimson and Violet shaded*.—Antoine Ducher, Pierre Notting, Lord Macaulay, Fisher Holmes, Dupuy-Jamin, Madame Jacquier, Ferdinand de Lesseps. Add these names of Hybrid Perpetuals to any or all of the Tea-scented, Bourbon, and Chinese, do not let them seed, and a plentiful supply of Roses may be viewed on tree or gathered for house decoration until the flowers of the garden out of doors succumb to the winter's frost.—WILLIAM PAUL, *Waltham Cross, Herts.*

THE RIBSTON PIPPIN.

MR. DOUGLAS, in his remarks on varieties of fruits and their stocks, has struck a chord which it would be well to follow up, and if it lead to the Ribston Pippin tree being insured without canker, it will be a standard tune in all gardens and nurseries. Trees of this fine old and indispensable variety are generally found in a decrepit state; old ones, as a rule, having a terribly shattered and emaciated appearance, and young ones looking prematurely old. On soils light and heavy, wet and dry, or medium, there is the ubiquitous canker. I have seen it alike on the lime, clay, and sand formation, and about the only soil on which I have not seen it on the Crab stock is a sound mectuous loam, trenched well and drained well. Mr. Douglas's experience leads him to the conclusion that on the Crab stock it commences to canker at two years, while on the Paradise stock it is free from canker. The point is thus reduced to a very simple proposition. We have returns of fruit generally, of Roses and Potatoes. Cannot we have the opinion of the nation on this old national Apple? It is worth a special notice by all growers; and if all who have it good or bad would say under what conditions it is so, having especial reference to the stock on which it is worked, more valuable and really reliable information would be adduced than has yet become public property.

I am of opinion that there is a good deal of truth in Mr. Douglas's observation, and I should like to see it treated as thoroughly as it can be. If the aggregate opinion of gardeners and nurserymen, and Ribston-growers generally, should substantially confirm the idea that the variety is in a great measure safe when worked on the Paradise stock, it will add another valuable contribution to the many gone before and given to the world through the columns of the Journal, and in any case the information will be great.

The Ribston Pippin Apple cannot be dispensed with, and if a principle can be laid down as a line of action to improve the general stock, a great point will be gained on an important matter. Here, on a rather light soil, on a substratum of limestone and marl, old and young trees on the Crab are in a bad state by canker; but a tree on the Paradise is as bright, smooth, and clean as a Willow. What do others say?—J. WRIGHT.

LETTUCES.

THAT a strong feeling exists in this country as to the unwholesomeness of uncooked vegetables no one can doubt. The holy horror with which many regard the salad-bowl when it is handed round in winter or early spring, as if it contained some Hecate's potion, is a proof of this feeling; and yet it is assuredly false. Doubtless a stomach ill at ease, and which cannot perform satisfactorily its ordinary functions, ought not to be asked to make the attempt; but they who are blessed with ordinary health may well regard a good plain salad either of Lettuce or Endive as a valuable and wholesome addition to their daily bill of fare. But in saying this I do not mean all salads. I do not mean that mass of flabby green soddened by a solution of vinegar and mustard and cream, in which it has lain, perhaps, for a couple of hours before dinner time, but the crisp and dainty dish of well-grown Lettuce or blanched Endive, and simply dressed with oil, vinegar, and salt. Sidney Smith's recipe for a salad has been highly praised, but it is a villainous concoction; and the ordinary French recipe of one spoonful of French vinegar, four of oil, and a little salt is far preferable;

but as Mrs. Randall's advice (a myth, I believe), was first to catch your hare, so the first necessity for making a good salad is to get your Lettuce, and it was for this purpose, and not to expatiate on the making of a salad, that I commenced this paper. The various catalogues that I have now before me contain each some thirty or forty varieties, and the perplexing thing is that few (comparatively speaking) varieties appear in the different lists. Tomkins' Superb, Dehance, and Excellent appear in one list; Jenkins' Superb, Dehance, and Excellent in another; and so on through many a catalogue. It is the same on the other side of the water. The most distinguished of the Paris seedsmen has sixty varieties in his catalogue, and very few of these are known to English growers—under the name, at least, in which they appear there.

Now, in my flittings to and fro this summer I have had an especial eye to Lettuces, have visited one or two places where they were extensively grown, and present here a few notes on them. I do not mean to say that I shall be able to clear up difficulties or explain synonyms, but I can at least say what I have seen to be good. I find, as a rule, in visiting large gardens, that each person has some peculiar strain of Lettuce which is considered preferable to all others; and it would not be difficult, from what I have seen, to make up a list, not of fifty or sixty, but of five hundred or six hundred different kinds. Oftentimes, when different kinds are grown together, impregnation takes place; some better-looking plant makes its appearance, this is seeded and a new strain is gained, and Wilkin's Gem becomes a recognised variety. It does not travel out of the neighbourhood, does not run against other varieties, and so is considered distinct. So long as it remains in the neighbourhood it is all well and good; but it sometimes finds its way into some catalogue, and so the evil of many varieties is increased. In this there is no dishonesty, all is done in good faith, but it is none the less perplexing to purchasers.

In the estimation of all real salad-eaters the Cos Lettuces hold the foremost place; there is a crispness and flavour about them which we in vain look for amongst the Cabbage varieties. But then my experience goes to this, that we must be mainly dependant on the latter for our winter supply. There are Lettuces which are said to be Hardy Cos, and with a protector one may grow them, but they are not so satisfactory; and in winter and spring, even in the Paris market, you will find twenty Cabbage for one Cos; but in the summer what magnificent heads, and hearts too, one sees! And so let us first take the Cos varieties, the *Romain* of the French.

Dinwock's Victoria Cos.—A somewhat new variety of the Paris White tribe, and probably a selected strain of it.

Holme Park (Sutton).—There are two other varieties in the list, apparently the same as this—Lee's Nonpareil and Squire Wiltshire. It is an excellent summer Lettuce.

Self-Folding.—A green Cos, of excellent flavour and large size.

Paris White.—The *Blonde merveilleuse* of the French nurserymen, and taking different synonyms in English catalogues. It is one of the finest Cos Lettuces in cultivation when a true stock is had.

Incomparable Green (Dunne).—A hardy, crisp, and excellent Lettuce.

Monstrous Large Cos.—A very large Brown Cos; crisp and good.

Kingholm Cos.—Evidently a selected strain of the Paris White.

Superb White (Sutton).—Another of the same class of Lettuce and very excellent, not particularly green the Paris Cos.

Duckett's Popcorn.—A blue, brown, Bath Cos Lettuce.

Nanchuan Park.—A valuable variety, being not only a hardy Lettuce, but one also that may be used all through the summer. Crisp and sweet in flavour.

Alexander.—A fine strain of Paris White.

Hardy White (Hicks).—Another of the Paris White Cos tribe.

Sunarrow.—Fine, crisp, and hardy, and closing in its heart well. First-class certificate from Royal Horticultural Society.

CABBAGE LETTUCE (LATTER OF THE FRENCH).

The Tomb (Wheeler).—An excellent variety; solid white heart, and good at all seasons.

All the Year Round (Egden White Dutch; Lee's Immense).—Compact, hardy, and turns in well. It deserves its name, as it is good at all seasons.

Sutton's Commercial Nutt.—A very early variety; dark foliage, it is very hardy, excellent, and compact.

Blonde de Berlin.—A very pretty Lettuce; pale green leaves with yellow edges.

No Plus Ultra.—Dark leaves. A good hardy Lettuce.

Sutton's Gem.—Folds in well; brownish in colour, and a capital variety for winter work.

Blonde d'Été or *Rogale*.—An excellent summer Cabbage Lettuce.

FANCY VARIETIES.

Oak-leaved Cos (à feuille de chêne of the French catalogues).—A very pretty-foliaged Lettuce.

Asparagus Cos.—Long pointed leaves.

Crimson Cos.—Leaves and heart of a bright crimson, curious when mixed in salad. Of good flavour.

New Crimson.—Wrinkled foliage tipped with brown.

Small Dark Red.—A Cabbage Lettuce; very good for cutting-up in salads with the green varieties.

These fancy varieties will be grown by those who are fond of curiosities in such matters, but the more valuable kinds for use have been included in the other lists. I dare say there are a great many others of value and importance, but I have only mentioned such as I have seen. One great point is to get sorts that will not soon run to seed. In the summer this is difficult, but the varieties of the Commodore Nutt, Tom Thumb, and All-the-Year-Round type, are those which are slowest in running away, and although most prefer the Cos Lettuce, yet these are so admirable in their staying qualities that they ought to be extensively grown.—D., Deal.

GLADIOLI FOR DINNER-TABLE DECORATION.

Having given much satisfaction lately in dinner-table decoration with one of our most beautiful of autumn flowers, the Gladiolus, I am desirous of drawing attention to its merits for this purpose. I am not aware of its having been referred to for such decoration in any of the reports of the prize stands at the various shows, nor did I ever see it so employed except by myself this year, when I carried off the first prize at our local show. Where is there a class of plants with such a variety of beautiful shades of colour, so rich, yet without gaudiness? With a dozen good distinct varieties (and they can be had for less than as many shillings), we have sufficient to furnish a set of stands for some week—that is, if the plants are growing well; and I see no insurmountable difficulty in anyone doing so if he go the proper way to work.

Have good healthy bulbs, and plant them in 18 inches or 2 feet of sound maiden soil, such as can be gathered from the highways, with plenty of grit in it, or any fresh soil taken from the fields. It should be laid up for a year before using it. I will say no more as regards culture; only do not think because the spikes are not wanted to be shown in a first-prize twelve at the exhibition table, but are only to be employed for home use, that it is unnecessary to pay extra attention to preparing a good bed to grow them in. It is almost astonishing what a number of flowers in a soil such as I have recommended one good bulb will produce; not one sickly, with half a dozen tiny blooms, but three or four good spikes many feet high, and nearly as many laterals on each in succession. It will at once be seen that they will well repay any extra trouble.

In employing Gladioli for table decoration I find much time saved, for they last so long when placed in wet sand. They give no trouble for from four to six days afterwards, and then many of them will be almost as fresh as when first put in.

Do you not mix some other things with them? Yes: herein is one of the greatest secrets in dressing a stand of Gladioli for the dinner table. I will just state my way of doing it, and should any of your readers try it I hope they may excite as much admiration as my spiks have done.

I use wet sand in the stands whatever their size. We will just take one, say, of three tiers—viz., two of a bowl shape, with a trumpet-shaped top. That of course will, if of glass, be filled with water. We will take the top first, and place in it two rather slight medium-sized spikes of a rich colour—shades of scarlet preferable; put them back to back, and give them one neat tie at the top. If they are too long displace a few of the under blooms; these will come in for the lower dishes. By no means touch the unopened buds, as they will all expand in time, and by stripping the faded off they can be replaced again and again, adding fresh water until all are open. Place with them four or five spikes of the Oat Grass, and two or three spikes of that grand, ever-serviceable *Hotia japonica*; finish-off with a couple of fronds of Maiden-hair Fern and a bit or two of *Sedum Sieboldii*, or anything that will hang grace-

fully over. There may be two or three single *Gladiolus* blooms round the edge if thought proper. The middle dish should be edged with Maiden-hair, with half a dozen small pieces of a red and white *Fuchsia*, such as *Conspicua*, alternately with light sorts, such as *Lustre* and *Guiding Star*; let them dangle carelessly over the edge amongst the Ferns. I should have stated that the sand ought to be covered with a little moss, or, better still, *Selaginella denticulata*, with its roots embedded in sand. Thus put in it keeps much longer than would otherwise be the case, and if it can be made to stand up amongst the flowers so much the better.

For three, or at most four shades of *Gladioli*, single blooms, strip them off the spikes as they are growing; we can then come again for more in a day or two, and continue doing so for a length of time. Place them in the dish so that they will barely touch each other. Now plant amongst and to veil over a few of them, a few small sprays of Maidenhair Fern, and then place in the most careless manner a few bits of white and blue *Lobelia*, or the small white and mauve *Violas*. Let them stand well from the *Gladioli* with just three or four tiny pieces of wild Grasses, and we may proceed to fill the bottom dish. I find, as most other people do, that nothing is better than the common Male Fern to dress round the outsides with. Have the sand a little higher in this than in the middle dish, and cover it as for that. Place the *Gladioli* as in the middle dish, only let scarlet shades predominate rather than white and rose shades. Now for a spray or two of Maiden-hair, or, if preferable, a few leaves of *Polemonium coeruleum variegatum*, and then four nice sprays of *Hoteia japonica* standing well out from the centre. Let them be clear of the *Gladioli* as well. A few bits of very light, small, feathery Grasses and a spray or two of blue *Lobelia* may be added. I think with these easy airy-looking sprays over the scarlet *Gladioli*, put in with taste and with scrupulous care not to overcrowd, but give every flower sufficient room to show itself off to the best advantage, there will be a stand fit to place before a prince.

The *Gladioli* will be oftener used for dinner-table decoration than hitherto, being a plant within the reach of every person. I have not given a list of a dozen or two of good sorts, as all are now so good that if one only send for good mixed sorts there will be little disappointment.—J. TAYLOR, *Maesgwynne, S. Wales.*

WHICH VARIETY OF STRAWBERRY IS BEST FOR FORCING?

To ask, Which kind is best to plant in a garden, or which kind for general purposes? is quite a different question, and might call forth as many answers as the varieties of Strawberries grown in this country; for, it is well known that both soil and climate have to be considered in out-door cultivation, not only of Strawberries, but many other kinds of plants besides. A sort that bears prodigious crops at one place will stubbornly refuse to bear at another place, though treated by the same gardener; hence the difference of opinion, and the advantage of having sorts enough to test and choose from. By pot culture under glass I think that most kinds of Strawberries may be successfully grown at the majority of places. An early warm locality or county is of course much more favourable for getting early runners and the plants earlier matured than a late cold place.

I force here many pots of Strawberries, and for some time have been testing some of the popular sorts—viz., *Vicomtesse Héricart de Thury*, President, Keens' Seedling, Myatt's Prolific, and Sir Harry. I have other kinds not equal in merit to any of these for forcing. These five just named are, in my opinion, excellent for early work. Sir Harry is named last on the list, because, under the same treatment as the rest, it comes in last, say about eight or ten days later than the others. I give it a bad mark for loitering so long behind the rest; and, with coals at 20s. or 25s. per ton, all will admit that the variety deserves it. Notwithstanding, I consider Sir Harry is incomparably the best Strawberry known for pot culture. Its many good qualities raise it high above the other varieties:—1st, Sir Harry bears forcing well; will stand more artificial heat without injury than any sort I have ever grown. 2nd, The fruit is large and handsome. 3rd, Flavour excellent. 4th, Colour first rate. 5th, Very solid; a highly important quality this for those who grow for market. The fruit of Sir Harry is heavier for its size than that of any of the other varieties named. 6th, It is social: does not seek or need much elbow room; will bear well in pots as closely placed together as they

will stand. It has but few leaves, and these are on long stalks. Keens' Seedling, President, and *Vicomtesse Héricart de Thury* are more leafy in character, and require twice as much room or space as Sir Harry and Myatt's Prolific. 7th and lastly, Sir Harry is a continuous bearer. If well grown it never tires of bearing, or sending up truss after truss of flowers, and seldom fails to yield fruit of considerable size. "If you can speak so highly of Sir Harry, have you nothing to say in favour of Sir Charles or Sir Joseph?" I am sorry not to have a good word to say for Sir Charles Napier. I have three hundred good plants of Sir Joseph Paxton in 7-inch pots, and if these do well I shall be happy to recommend it.

In another letter I may treat on the growing and forcing of Strawberries in pots.—A. PETTIGREW, *Priority Vineyard, Sale.*

COPINGS FOR WALLS.—No. 2.

In my former paper I have hinted that for walls 10 or 12 feet high the projecting portion of the coping may be extended with advantage an extra inch or two on each side, and I still think so, because the greater the distance the water has to fall, the more likely is it to come in contact with the wall if the coping is a narrow one. I admit that if a stone coping is used, the expense will be increased by the extra projection on each side; but if this should be an objection, there is a substantial way

of getting over it by having a coping such as is represented in *fig. 5*. This shows an 18-inch wall with a coping of stone of the same width. The stone has a flat top and is 5 inches thick in the centre, gradually reduced to about 2 inches on each side. The projection is formed of bricks and slate before putting on the stonework. The bricks are laid so that the ends project 3 inches, thus forming an excellent foundation for the slates, which are placed on the top of the bricks and project another 3 inches. The slates are firmly embedded in Portland cement, and there are two layers of them—that is, where the joints meet in the under row another narrow slate is embedded in cement over it, which preserves the joint and prevents the possibility of the wet entering it. After this the stone coping is put on and all joints made secure by cement. When building in the bricks give them a slight incline outwards, so that when the slate is put on there will be the necessary fall to carry off the water quickly.

Figs. 6 and 7 show another form of coping which I saw in use at several different places years ago; it is not submitted as the neatest and most substantial sort of coping, but it is

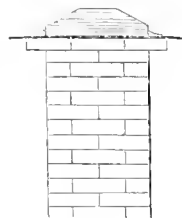


Fig. 5.

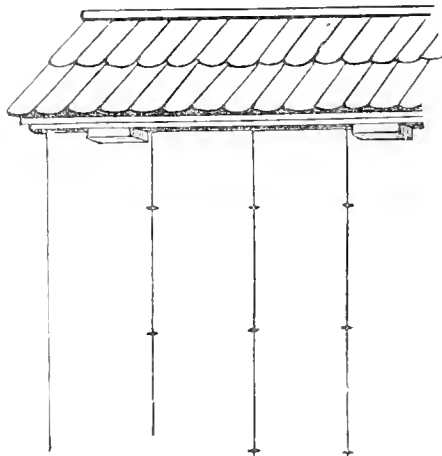


Fig. 6.

one that will commend itself to those who have not the opportunity of procuring stone or similar materials without incurring a considerably greater expenditure. It is suitable for a wall 10 or 12 feet high, and is intended to serve the double purpose of protecting the wall from wet and the trees from spring frosts. The coping, of which a section is shown in

fig. 7, projects nearly or quite 12 inches, and is supported by brackets of wood built into the wall; upon these is laid a rafter running parallel with the wall, and the whole is covered in with neatly-made tiles. The small half-circular ridge placed on the top of the roof is made of the same material as the tile, and in lengths of a foot or more. It is laid on with cement, and the joints made firm with the same material. A portion of the lower side of each tile is hollowed-out before burning in order to make it fit on the ridge.

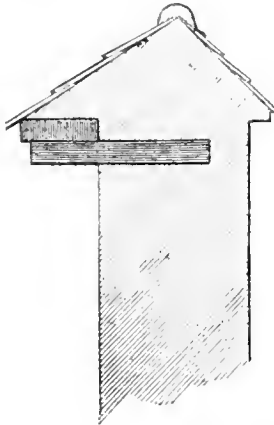


Fig. 7.

At the time I saw the above coping in use I was assured that it answered remarkably well in that part of the country, which was in one of the eastern counties; and although it is not the sort of coping that would be likely to suit the more tasteful ideas of the present day, yet the fact of its being a permanent coping of about the same width as recommended for temporary copings and found to answer so well, suggests the question, Whether, if the temporary copings now in use were made into permanent, they would do the harm to the trees generally ascribed to them? I am inclined to the belief that they would be more beneficial than the reverse for such fruits as Peaches and Nectarines, Cherries and Plums. The former two always exhibit a tenderness in our climate which causes more anxiety than is experienced with any other description of fruit trees, and I am greatly in favour of a more constant protection for such trees.

While upon the subject of temporary copings it may be as well to call attention to a moveable coping bracket spoken of and recommended by Mr. Abbey. Fig. 8 is an illustration of



Fig. 8.

it. I have not seen it in use, therefore with his permission will give his own description of it. He says a good method is to fix to the face of the wall pieces of iron $1\frac{1}{2}$ inch by half an inch, and 13 inches in length, with a square hole at the top $1\frac{1}{2}$ inch by three-quarters of an inch, and another of half an inch, 9 inches from the top hole, with two holes for bolts to drive into the wall. The plate will on the face have the appearance of A, fig. 8. The plate should be let into the under side of the coping up to the top of the upper square hole, and before driving in the bolts a space an inch longer and the same size in other respects as the upper hole must be cut out of the face of the wall $1\frac{1}{2}$ inch deep, opposite to where the plate is to be fixed. The distance apart ought not to exceed 6 feet.

Wrought iron is the most suitable material, and the plates should be well secured by the bolts. These plates are to remain permanently fixed in the wall. The brackets are of cast iron, and though they are not different in pattern from those for shelves, instead of screw-holes they have at the top a lug $1\frac{1}{2}$ inch long one way and $1\frac{1}{2}$ inch the other, and a stud at the bottom which fits the lower square hole in the plate. The use of the lugs will be seen on reference to B. To fix them, all we have to do is to put the top lug through the top hole in the plate and let it drop; it will hang by the lug, and cannot by any possibility fall out, and the bottom lug drops into the lower square hole in the plate. The coping boards are then put on and will fit exactly beneath the coping, and having an incline outwards, the water will drop clear of the trees. A screw will keep the boards from being dislodged, a hole being at the end of the bracket that is within an inch of the end. I for one thank Mr. Abbey for bringing this very excellent bracket under our notice, for I am not the only one who has an objection to the ugly appearance of the permanent brackets when the boards are taken down, and this bracket does away with all that; besides, its cheapness and efficiency, as well as ingenious design, are further recommendation.—THOMAS RECORD.

FIRST-CLASS-CERTIFICATED VEGETABLES.

FIRST-CLASS certificates have been awarded this year by the Fruit and Vegetable Committee to the following vegetables proved in the Royal Horticultural Society's Garden, Chiswick.

PEAS.—Laxton's Gem (Laxton), dwarf, early, wrinkled, green Marrow. Dagmar (Laxton), early, dwarf, wrinkled, white Marrow. The Shah (Laxton), early, wrinkled, white Marrow. Marvel (Laxton), large-podded; second early white wrinkled Marrow. The Baron (Laxton), very large-podded early green Marrow.

BEANS, KIDNEY.—Carter's White Advancer (Carter), dwarf, prolific, early white. Cutbush's Giant Dwarf, very large pods, strong-growing; second early. Osburne's New Early Forcing, fine, dwarf, early prolific. Dwarf Butter Bean (Carter), large fleshy pods of a pale yellow. Mont d'Or Butter Bean (Carter), tall runner; large, fleshy, pale yellow pods.

TOMATO.—Hathaway's Excelsior (Vick & Son), large, smooth, round, early prolific.

POTATOES.—Alice Fenn (Fenn), early white kidney. Early White Kidney (Fenn), large, early, white kidney. Little Gem (Fenn), early white kidney. Bresee's Climax (Bresee), large, round, second-early white. Fenn's Early Market (Fenn), large, white, early, round prolific. Extra Early Vermont (Bliss and Sons), early rose-coloured kidney; great cropper. Vermont Beauty (Bliss & Sons), large, smooth, flat red; second early, very beautiful. American Pale Rose, large, flat, rose-coloured kidney; second early. Enormous cropper.

N.B.—The late Potatoes have not yet been judged by the Committee.

POTATOES TUBERLESS.

I SEND a box containing the remains of a Potato, also another with a number of small wireworms in it. The remains of the Potato were alone, no Potato having grown (or, if so, it had disappeared) for a yard at least in the row. With the other one, having the wireworms in it, there were above twenty fine tubers at the root, not a decayed one, and not a wireworm.

The haulms had the disease, and I had them carefully pulled off a month ago, and am now digging the tubers up. On one root turned up there were forty-four, and I saw afterwards one. From 3 yards in a row there was not a Potato nor a remnant of one.

I purchased foreign Belgian Kidneys, which I found so rich and good that I was induced to plant 2 cwt. They were planted in soot and lime on the 12th of February, the land not otherwise manured. The year prior the ground was well treated, and Peas, &c., grown upon it. I planted full-sized sets. The haulms being badly affected, pulling them off prevented the evil going down to the tuber, I think, as out of a very average crop there is only here and there one decayed or rather affected. I can account for so many yards proving without a single Potato only by supposing the wireworm has eaten them.—H. S. S.

Two tubers were enclosed in the same box; one tuber totally decayed had on it a few of the "wireworms" (so called by our correspondent), but which were the Snake Millipede (Julus complanatus). They may occasion decay, but they certainly feed on decayed vegetable substances. The other tuber, par-

tially decayed, had a crowd of the Millipedes in it. We do not think they caused the tuberless result. Have any of our other correspondents observed such an absence of tubers?—Eds.]

ROSE ELECTION.

In consequence of an application from one of your correspondents I have taken counsel with two or three rosarians whose opinions are of weight, and it seems quite unnecessary to hold an election of all the Roses annually. In this opinion I heartily coincide. It has, however, been suggested that an election of the best Roses introduced in 1870, 1871, and 1872 would be useful. The question I would put to all who have grown any of these Roses is this, Name the best twelve Roses of 1870, 1871, and 1872, and underline the best six. To readers of our Journal who have grown any of these Roses, and will answer this question, I shall be obliged.—JOSEPH HINTON, *Warminster*.

EFFECTS OF ELECTRICITY ON PLANTS.

Does electricity act on plants in the same manner as heat, and does it kill them like a toxic agent? or is it a disorganising agent, which compromises life by destroying the organs necessary to its maintenance? This question we propose to examine.

The effects of electricity on plants have been little studied. In general, observation has been limited to the effects of electricity of high tension from a battery or a thunder-cloud, in which circumstances the plant has always been killed, and the lesions in various organs left no doubt that death was the result of laceration of tissue.

We have studied the influence of electricity of weak tension from Bunsen couples. It could be gradually increased, and was measured by a galvanometer placed in circuit. The plant chiefly experimented upon was Balsam, *Balsamina impatiens*, chosen partly because easily procured, partly as being very sensitive to external agents. Its stem is impregnated with juices, which afford a ready passage to electricity, and its delicate-tinted flowers indicate by their changes of colour the influence of the current traversing them.

In our first experiments we employed the current from a single Bunsen couple; inserting the points of the rheophores in the extremity of the stem, at an interval of two centimètres. After half an hour's passage of the current there was no sensible effect; but the plant, then left to itself, ere long gave signs of enfeeblement, and the part above the point where the current entered, quite dried up.

The effect was much more rapid, and extended over a greater length of stem, when we used two couples, and placed the point of the rheophore by which the current entered at the lower part of the stem. The plant soon indicated disorder by the drooping of its leaves all along the stem, and, left to itself, soon withered.

In these experiments the plant was killed through the decomposition produced by electricity in the tissues. Of this we convinced ourselves as follows:—A branch of Balsam experimented with bore leaves of a delicate rose colour, and we ascertained that this tint was changed to blue under the influence of an alkali such as potash or ammonia. To test whether the current would produce a similar change, we fixed the rheophores in a part which was thick with flowers. The flowers near the negative pole took a very perceptible blue tint, proving that the alkaline substances were accumulated at this point, and these substances could only arise from the decomposition of the tissues by the passage of electricity (sufficiently explaining the change in the other case).

We were interested to know if flowers of another colour would also be changed by the current. With this view we chose a Balsam with violet flowers, and subjected it to the action of the pile. Those in the neighbourhood of the negative pole did not change in tint, but those at the positive took a very perceptible red colour, produced, doubtless, by the transference of some organic acid to this point. These experiments induce the belief that the varied colours observed in flowers of the same species arise from the presence of some acid or basic substance generated in the tissue of the flowers, and capable of altering their hue.

But the most interesting result, for us, in these experiments is, that heat and electricity do not cause death in plants by the same action. Heat acts like a poison, paralysing and destroying the irritability of the cellular and fibrous tissue of plants,

while electricity disorganises their tissues, and thus prevents them from fulfilling their functions.

We further examined the effects of induction currents. The effects of these on man and animals have of late years been extensively studied, and medical science has found in them a valuable agent, especially for cases of paralysis of the nervous system.

Our first experiments were made on a plant, the movements of which present some analogy to the spontaneous movements of animals—viz., the Sensitive-plant, *Mimosa pudica*. The effects strikingly resembled those on animals. An electric action, slight and short, suffices to close the leaflets of the plant, and to depress the petioles all along the stem; but after some time the leaves resume their first position, and do not appear to have suffered. If the commotion is powerful and continued for some time, the plant does not thus recover, but dies, its tissue not appearing, however, to have undergone any change.

These results were confirmed by those obtained from more common plants. We selected a vigorous and well-developed Balsam, the stem of which bore leaves, flowers, and fruit.

We examined first the effect on the leaves, connecting the base of the petiole with one of the wires of a Rhumkorff coil, and the summit of the leaf with the other. The current was from a single Bunsen couple, and the coil, though small, could give pretty severe shocks and bright sparks.

With these conditions we observed after a few minutes that the leaf lost its rigidity, the petiole inclining towards the stem, and the leaf looking like one which suffered from lack of moisture. Left to itself it resumed its usual appearance; the action of the current had only weakened the tonicity of the tissues, but had not caused death.

We experimented similarly on another leaf, but during a longer time (about a quarter of an hour). It did not afterwards recover, but dried up—a proof that the duration of the commotion has an influence on the effect produced.

Next we made the current act on a fully-developed flower. The effect on the tissues was more speedy and obvious than in the preceding case. The peduncle bent towards the stem, and the corolla changed in colour—evident proof of a profound alteration in the tissues; for the flower, at first of a lively red, assumed a blue colour under the current. This experiment was repeated in a great number of flowers, and always with like results.

We also made the induction current act on the entire stem of the Balsam, connecting one of the wires to the lower part, and the other to the extremity. The current left throughout the stem traces of its passage. At first the plant did not appear to have undergone any change; but after some time we observed that the extremity, formed of tender and pulpy matter, became inclined, as if affected in its organisation. The flowers changed colour, and the fruits, which had not yet reached maturity, were burst, projecting to a distance the seeds they held. The Balsam stem, thus acted upon for a quarter of an hour, was, in reality killed, and in a few days completely withered up. It appeared as if struck by lightning.

Birds also were killed by the induction current.

The current which thus acts with such energy on the soft and pulpy parts of plants exerts less sensible influence on their ligneous parts. We repeated the foregoing experiments on a leaf of Rose Bay, *Nerium Oleander*, and it was not perceptibly affected; whereas, on operating with a branch which bore several flowers, we observed these within, and on the following day they had the aspect of having been scorched by the sun.

We repeated the same experiment on a stem of Basil covered with leaves and flowers. The stem and the leaves resisted, but the flowers felt the effects of the electricity, for ere long they fell off. The same results were obtained with a flowering stem of Lavender, and with a branch of Fuchsia.

From these experiments it appears sufficiently established that the induction current produces the effect of a disorganising agent on the organs of plants only when, by reason of the softness of their tissues, and the large quantity of water impregnating them, it is propagated with ease in their interior; and that it has no appreciable action on solid and resistant tissues. Still, if several couples were employed instead of one, or if the coil were more powerful, or the action prolonged considerably, there is little doubt that the most solid parts of plants would be disorganised by the current.

Next as to fruits and seeds. We selected an Apple on a branch which bore several nearly ripe. The extremities of the conducting wires being applied to it, the current was allowed

to act several minutes. No external phenomenon was produced, and after the wires were withdrawn the Apple remained adherent to the stem. After some days it fell off, while the other Apples remained, and seemed to have a less advanced ripeness than the detached one. Thus the current appears to have hastened the maturity of the fruit; but it also altered its tissue, for the Apple soon gave signs of decomposition, and after some days was completely decayed. Similar experiments were made on Pears and Peaches, and with like results.

We next made the current act on seeds which had been rendered conductive by immersion some time in water. The seeds were Pea, French Bean, and corn. After having electrified them, we sowed them in pots filled with good garden earth, and for comparison we put in the same earth, and under the same conditions of heat and humidity, seeds which had not been electrified.

The electrified Peas were placed in a chamber the constant temperature of which was 20° C. They commenced to germinate in about three days, while those which had not been electrified gave no appearance of germination for six days. The former showed a much more rapid growth, but they were overtaken by the others, which ere long attained the same size.

The corn presented nothing remarkable. The electrified seeds germinated somewhat more rapidly than the others, but we did not observe a great difference in the manner of the growth of the stem.

It appears from the experiments that the action of electricity affects substances enveloping the embryo rather than the embryo itself. Disaggregating the tissue which contains nutritive matter, it hastens germination, but it does not seem to produce any change in the manner in which the seed is developed.

En résumé.—The induction current acts in an energetic manner on plants, and produces effects analogous to those observed in animals. Thus in the latter, the electric current determines contractions which, intensified to a certain degree, may bring on death through disorganisation of tissue. Similarly in plants electricity enfeebles the vitality of tissues, and even destroys them completely, through action too energetic or too long continued.—*Abstract of a paper in the Moniteur Scientifique Qu'neville, by M. Blondan.—English Mechanic.*)

APRICOT SHEDS.

I AM more than ever convinced that the culture of what are generally called well fruits under the glass roof of an open shed, such as I described in the Journal last year, will become general. The one built by Mr. Foster has now been tested four years, and his trees have borne three very heavy and one fair crop of Apricots in the time. I went to look at it the other day, and saw a Nectarine with about 130 fine fruit upon it, which were finer than any wall fruit I have seen in the neighbourhood this season. A Rivers's Prolific Plum tree yielded 35 lbs. of Plums, though many of the fruit had been previously gathered and eaten as they ripened, and all the trees were most satisfactory. These trees are never watered or syringed, and, in fact, are no trouble, except now and then when the shoots are tied to the wires, or the fruit requires thinning or gathering. I do not say they might not benefit by an occasional cleaning of the foliage with the syringe, for I think they would; I only know they never get it.—J. R. PEARSON, *Chilwell.*

GRAPES IN A WASHHOUSE.

THE notes entitled "Evening Musings for Plain People," recommending Vine-culture, were exceedingly attractive, as well as instructive, and ought to be much appreciated by all amateurs.

In confirmation of what your correspondent affirms, there is in the village of Rusholme, near Manchester, a crop of Black Hamburg Grapes produced in a wash-house, apparently a most unlikely place, and cultivated by an amateur who follows a very different business from horticulture.

The wash-house is placed with its end against the dwelling, covering the kitchen window, and is about 12 feet square, the walls 6 feet high all round, on which is placed a span-roof of glass, with three brick compartments for three Vines, a door opening into a yard on one side, another to the kitchen, which is mostly open—at least it is always so when I have called. Some ladies to whom I mentioned the fact seemed to have little faith in the matter until I took them to see, and their astonish-

ment was great to find four washerwomen scrubbing away, and over their heads 373 bunches of useful Grapes enveloped in steam and no decay amongst them. Perhaps I ought to state that the place is partially heated from a small boiler at the back of the kitchen fireplace with a flow and return of 2-inch gas-piping. There is also a miscellaneous collection of plants in the wash-house.—J. WRIGHT, *Rusholme.*

TAKING-UP POTATOES EARLY.

IN your last number you say in your note to the communication on the Potato disease, that the real safeguard is to dig-up the tubers in August; but here, in Lincolnshire, our Potatoes are not ripe till September and October, and I have some Red-skinned Flourballs that are nothing like fit even now. What are we to do? I wish you would advise us in your answers to your correspondents next week. Are we to take them up before they are fit, or wait and take our chance of disease?

You will be glad to learn that there is little or no disease, at all events in this parish; parishioners and parson mutually congratulating each other when we meet.—H. M., *Louth, Lincolnshire.*

The resource is to plant varieties that ripen earlier. Ripening is accelerated by planting on the ridge system. Your late-ripening sorts we recommend to be taken up immediately you find the skin of the tubers cannot be removed by rubbing them gently with the finger.

FLOWERS FOR OUR BORDERS.—No. 18.

BERBERIS DARWINII.—DARWIN'S BARBERRY.

Few gardens are now without an example of the evergreen species of Berberis; and the general characteristics of this valuable tribe of plants are, therefore, pretty well known. Less robust in its growth than some others of this genus, and with foliage inferior in size to the pinnated leaves of the Mahonias, the Berberis Darwinii yet possesses in its elegant pendant racemes of flowers, an attraction peculiar to itself, and which fully justified the high praise bestowed upon it, on its first introduction, in the principal horticultural publications of the day.

The Berberies are very widely diffused throughout the temperate regions of the globe. Those more commonly seen in cultivation are of North American origin; several valuable species are natives of Asiatic climes; whilst the Berberis Darwinii comes to us from bleak Patagonia, whose shores are now invested with so melancholy an interest from the painful death of Captain Gardiner and his fellow missionaries. It appears to be also indigenous to the Chilean territory, including the island of Chiloe. On its native mountains it is often found growing near the summer limit of snow, and is therefore likely to prove quite as hardy as the North American species, which are known to bear our winters admirably. B. Darwinii is distinguished from nearly all the other species by the ferruginous pubescence of the young shoots. The leaves, although small, are so thickly disposed upon the branches that these are quite concealed.

The beauty of the plant is much enhanced by the purplish tint of the peduncles, which contrasts admirably with the rich orange yellow of the flowers and deep glossy green of the foliage. Like the other species it delights in a free loamy soil, and may be readily increased by cuttings, division, or seed. It has in fact been recently propagated to so great an extent as to become available for planting as game cover, for which it is said to be well adapted, as are several other species, winged game being fond of their subacid fruit.

The genus Berberis is now usually divided into two sections—viz., the true Berberies with simple foliage, and the Ash Berberies, formerly known as Mahonias, and still classed as such in many trade catalogues.

The section with simple leaves, of which the Berberis Darwinii is an example, are remarkable for the strong pungent spines found at the base of the fascicles of leaves. These are entirely wanting in the Mahonias, or those Berberies furnished with pinnated foliage; a circumstance quite in accordance with the views entertained by most botanists with regard to the origin of these somewhat formidable organs.

The Berberis aquifolia should be in every garden, and it thrives in any moderately good soil, especially if a little shaded. The species repens, umbellata, empetrifolia, and fascicularis, are all attainable for a very reasonable sum, and

are excellent plants for the shrubbery, and will flourish even under the drip of trees.

At least forty distinct species of *Berberis* are now in cultivation in England; one of them, *Berberis japonica*, was discovered by Mr. Fortune on his second visit to China. This magnificent evergreen grows 8 feet high, and has pinnated leaves nearly 15 inches long, the terminal leaflet being, in one specimen, quite 5 inches in length. Mr. Fortune first met with this species in the neighbourhood of Hwuy-chow-foo, about 150 miles north of Shanghai, and afterwards near Sunglo, whilst engaged in collecting Tea plants and seeds for the East India Company. It appears that a specimen of the plant was seen by Mr. Fortune on his journey to the Bohea Tea mountains; but, being too large to transport to Shanghai, he was obliged to content himself with carrying off a leaf, with the hope of meeting with smaller examples of the plant in his subsequent travels. On this gentleman's return from the Bohea Tea Mountains, it chanced that he rested a day or two at the house of the parents of his servant, Wang. Having frequently desired Wang to endeavour to procure him some young plants of the *Berberis* without effect—for the natives of the

refused to do even this; but, through Wang's influence, they were at last induced to consent, and led the way down to a small cottage garden, completely covered with weeds. There the beautiful shrub was growing apparently neglected, and left to bloom unseen. It seemed very valuable in the uncle's estimation, and he would not sell it, although I tried hard to induce him to do so. It might be that he really valued its medicinal properties, but, as it must be common enough in that part of the country, he could easily have replaced it; it is not unlikely, therefore, that he supposed I should offer some very large sum to induce him to part with it.

"On the following day another relation of Wang's came to me in a secret manner, and informed me that he was acquainted with another place where the same plant was to be had, and that for a consideration he would go and fetch it. I engaged him at once, merely telling him that he must bring young plants with good roots, otherwise they would be entirely useless to me. This he faithfully promised to do, and kept his word. In the course of the day he returned with three good plants, which he sold me, and which I afterwards took back to Shanghai. These are now safely in England."—(J. Thompson's *English Flower Garden*, Revised by the Author.)



Berberis Darwinii.

Celestial Empire can rarely be persuaded to trouble themselves in any matter in which their pecuniary interests are not concerned—he one morning called three or four of the family about him, and showing them the leaf which he had brought with him, promised a dollar to any one who would bring him a small plant of the same shrub. "One of them went out immediately, and, to my surprise and pleasure, returned in less than five minutes with a fresh leaf of the plant in question. 'That will do,' said I; 'that is just the thing I want: bring me a young plant with good roots and I will give you the promised reward.' They now held a consultation among themselves in an under tone, and at last said that the plant in question had some peculiar medical virtues, and that the lucky possessor would not part with it. 'Sell me this one,' said I; 'and you will be able to buy a dozen others with the money.' 'No,' said they, 'the plant belongs to our uncle; he is rich enough, but he requires a little of the plant now and then when he is unwell, and therefore he will not part with it.' This was very provoking; but the Chinese were firm, and there was nothing for it but to go, as sailors say 'upon another tack.' 'Well, at all events,' said I, 'let me see the plant: don't be afraid; I shall not touch it.' For some time they

VARIETY IN GARDEN BEDS.

DURING the past season I have had a few beds which so successfully broken through the usual monotony of a bedded-out garden that I venture to mention them to you.

1. A bed of *Lilium auratum*, with *Heliotrope* between. This has been magnificent, with a succession of blooms for more than three months past; as many as eight or ten blooms on several of the Lilies.

2. A bed of common Sweet Williams, replaced by *Lilium lanceifolium* sunk in pots.

3. A bed of *Lobelia cardinalis*, edged with blue *Lobelia*. This has been most successful, both *Lobelias* having flowered abundantly from anemths.

5. A bed of *Anemone japonica alba*, surrounded with *Statice latifolia*, and edged with *Gazania*. This is an autumn bed, and is in perfection at present.

These have been my real successes this year. Next year I hope to be equally fortunate with a bed of *Clematis Jackmanni*, another of *Agapanthus umbellatus*, edged with *Gazania* (*Geraniums* I find grow too tall and hide the foliage of the *Agapanthus*), and other combinations.

I am surprised to see how little imagination gardeners seem to have, and how the same beds of a few varieties of flowers appear year after year. Perhaps some of your correspondents will suggest other beds, especially of herbaceous plants.—H. A. B., *Ashfield, Liverpool*.

NOTES UPON FERNS.—No. 5.

It has been a source of deep regret to me that circumstances have entirely prevented me continuing this, or, indeed, any other subject connected with horticulture, for some months. I now, however, seek the earliest opportunity of resuming my brief remarks upon this popular order. In doing so it occurs to me that enough has been said in my former articles of an introductory character to enable my readers, if they desire, to take up the subject, and to prosecute it to whatever extent time and opportunity will allow. I purpose, however, leaving the scientific portion of the subject, and step down to the practical matter-of-fact business of cultivation. In doing this I shall quote the most handsome kinds in each genus, together with the general treatment required, indicating at the same time which are best suited for stove, greenhouse, or hardy fernery, for pot plants or basket plants. Our readers and amateur Fern-growers, however, must not imagine they have nothing to do but read these jottings to become experts in the management of Ferns; for although I shall endeavour to make everything as plain as possible, the hints here thrown out must be followed up by intelligent practice.

The first family which I shall deal with is the genus *Adiantum*, the members of which are popularly known as Maiden-hair Ferns, a name derived from the slender shining black stems which support the pinnules, and which form such pleasing contrasts with the various shades of green of the different species. *Adiantum* is distinguished as a genus by a tufted or creeping habit of growth, by the pinnae and pinnules being articulated with the petiole, by its excentric costa, by the veins being simple, radiating, and forked, with the apices

free. In addition to the above characters the sori is marginal, globose, reniform, or oblong; the indusium is formed by the margin of the frond becoming changed in texture, reflexed, and thus covering the sori. From a cultural point of view this is a very distinct and natural group, and all the species are well deserving the attention of plant-growers; for from among the kinds now introduced in a living state to this country, some may be found to suit the requirements of all, whether it be for stove, greenhouse, or open-air fernery, either for pot or basket cultivation; whilst the fronds when cut form exquisite dressings for a lady's hair, and also in the formation of bouquets. For this purpose select the mature fronds, otherwise some disappointment will accrue by their shrivelling soon after being cut. Some of my fair readers may say, "This writing is very well, and may be of great service to those enjoying the luxury of a stove or greenhouse, but we have no such structures, yet appreciate the grace and beauty of Ferns quite as keenly as those more fortunately situated." But believe me, I have not forgotten that many a rich collection of these beautiful plants is to be found in towns and cities, and I hope to see them far more plentiful. Indeed, Ferns appear to me peculiarly suited for window plants in situations where, through want of sun, flowering plants will not succeed.

The first thing to insist upon in the culture of Adiantums is perfect drainage; for although they delight in an abundant supply of water, if it is allowed to lie in the soil and become stagnant death is sure to be the result. The soil which the majority of these plants thrive best in is good fibrous peat, a little light loam, and some sharp sand. When potting the more delicate kinds, however, I usually dispense with the loam. In preparing baskets for Ferns, the inside next the wire should have a thick lining of living sphagnum moss, which serves to hold the moisture, and at the same time prevents the soil running through when the plants are watered. Baskets which are constructed of other material will not, of course, require lining in this way; but it is of great benefit to any Ferns in baskets to have a portion of sphagnum moss mixed with the soil.

To enable young beginners (for whose benefit these lines are penned), to select such kinds as suit their peculiar tastes, I have here enumerated some three dozen kinds, all of which have some distinctive feature of their own to recommend them; and for their guidance I have put them into groups, showing at a glance the positions they may be placed in without danger.

GROUP 1.—Species Suitable for Stove Cultivation:—

Farleyense	macrophyllum	trapeziforme
concinnum	Wilsianum	carthagenum
tenerum	parvianum	purulentum

GROUP 2.—Species Suitable for the Greenhouse:—

sulphureum	reniforme	concinnum
glaucocephalum	chilense	subrum
fulvum	concinnum latum	Chiesbreghtii

GROUP 3.—Species Suitable for Wardian-case Culture:—

excisum multifidum	rubellum	decorum
concinnum	subulatum	concinnum latum
Capillus-Veneris	Vitchii	

GROUP 4.—Species Suitable for Hanging Baskets:—

assiduum	capitatum	colpodium
Peeli	annulatum (obsciduum)	labellulatum

GROUP 5.—Species Suitable for the Decoration of Apartments without the protection of a Wardian Case:—

formosum	affine	concinnum
Cunninghamii	hippokratium	fulvum

GROUP 6. Hardy Species Suitable for Open-air Fernery:—

platina	concinnum
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—EXPERTO CALIDE.

PROPOSED GREAT INTERNATIONAL FRUIT SHOW AT BELFAST NEXT YEAR.

ENERGETIC action is being taken with a view to holding a Great International Fruit, Flower, and Plant Show next year at Belfast, on occasion of the visit of the British Association to the busy metropolis of Ulster. We are further informed that not only has the project been warmly taken up and approved of by the horticultural element in the immediate locality, but that cordial and substantial support has been promised by several leading members of the trade, as also by many of the foremost horticulturists both in England and Scotland. There is little room to doubt but that Irish horticulturists outside the northern province will enter warmly into the project

and do their part in making it a success. It is expected that the subscription fund will be very considerable, and that the expectation alluded to is not unreasonable may be inferred from the fact that already subscriptions, &c., amounting nearly to £200 have been promised. Professor Yonge, of Belfast, is at present staying in Dublin, and from the interest he takes in the matter, and his energetic action where work is to be done, we apprehend he won't leave without feeling the pulse of the metropolitan horticulturists, and securing their sympathy and support. Belfast has many advantages for the purpose, and is very favourably located in respect of exhibitors coming from England and Scotland; and doubtless, therefore, the horticulture of both will be largely represented on Irish soil next autumn.

In fact, the leading horticulturists of the sister counties have entered so warmly and in such a good spirit into the matter that, as we are informed, the ultimate resolve come to by the horticultural meeting recently held at Edinburgh was, that the proposed Exhibition at Belfast be adopted as the International Show of 1874.

We are not aware where it is proposed to hold the Show, but presume it will be the Botanic Gardens. If so, we would venture to throw out a hint that other and more secure accommodation be provided for the display of fruit than that afforded by the frail roof which usually covers the show-ground. Plants do not look the worse of a slight sprinkling, should rain come down; but a washing by no means improves the bloom or blush of Grapes or Peaches. Though, too, the tastefully-arranged show-ground is well adapted for a gardenesque display of exhibition plants, it is not so for a show of either cut flowers or fruit. Large marquees for the purpose, pitched on the beautiful velvet sward, would be both effective and picturesque. Measures should also be taken to relieve the fruit-tables of a monotony such as formed one of the drawbacks of the great Show held last month at Manchester.

The session of the British Association for 1874 will open, we believe, on or about August 19th; consequently the proposed Show will take place some day between that and its close on August 26th. It will be well, both as regards metropolitan and local fixtures for next year's autumn shows, that this should be borne in mind, so as to leave exhibitors, and others who would care to be present, free for the great gathering at Belfast.—(*Irish Farmers' Gazette*.)

NASH COURT.

THE SEAT OF J. P. LADE, ESQ.

THE traveller to Dover by the London, Chatham, and Dover Railway, will notice on emerging from a rather long tunnel which he enters after leaving Chatham, that the country is somewhat flat, especially to the left of the line, but by the luxuriance of the crops he will perceive at a glance that the land is good and well managed, at the same time the absence of trees in many places gives it a somewhat naked appearance in winter. The extensive district known as the Isle of Sheppey, as well as a considerable tract adjoining the banks of salt water which constitute the island so called, is only a few feet above high-water mark, and the elevations very unimportant until the chalky or gravelly hills which bound the railway on the right are gained. But this tract of land has long been remarkable for its fertility and for good cultivation, and its produce whether of Wheat, of which there are large breadths, or of Potatoes, which are also extensively grown. Hops are less cultivated, but like the grain and Potatoes, are generally of the best quality. I must not omit to notice the fruit, which in some seasons has an especial claim on our notice, for at Sittingbourne, an improving little town on the route, we are told the Cherry was first cultivated in England, and there are large plantations of that fruit now in the neighbourhood; and there, too, the antiquarian will find many objects of interest. Though those who delight in rugged and varied scenery may not find this tract in accordance with their tastes, the lover of good farming will do so, and even the former will by-and-by, as the train proceeds further eastward, find the country more diversified by hill and dale, with no lack of timber to give it a clothed appearance. This is more especially the case as one approaches Faversham, where I contemplate making a halt; and further on there is plenty of variety in surface before reaching the ancient city of Canterbury.

Nash Court is two or three miles from Faversham station,

where I was met by Mr. McCrow, the intelligent gardener, and through the liberality of his employer I was conveyed to my destination in one of his carriages, passing on the way through part of the ancient town of Faversham, and along the old Dover highway. If this has lost some of its importance as a thoroughfare for both passengers and goods to the Continent, it has not been impaired in quality as a good road; now the telegraphic wires to the continent of Europe traverse this road, and their number equals those we are accustomed to see at the London termini of long lines of railway. But our carriage rattles along, and ascending a slight eminence above the place where we have been travelling, we arrive at the entrance gates to the grounds of Nash Court, and a short drive through an avenue of remarkably fine Sweet Chestnut trees brings us to the mansion, of which the accompanying representation is engraved from a photograph by Mr. Ashby, photographer, Faversham.

Nash Court in our earliest records is stated to have belonged to the Priory of Christchurch, Canterbury. Of that Priory it was held by the family of Garwinton, from whom it passed by marriage to the Hauts and Isaacs, the last-named family being the tenants at the time of the Priory's dissolution

by Henry VIII., who granted it in fee to the head of the Lincoln family, from whom it passed to the Norwood, Cleybrooke, and Turner families, from the last of which it came to Thomas Hawkins, Esq., by whom the present mansion was rebuilt, about a century ago. Since the death of the last Thomas Hawkins, who died in the year 1800, the possessors were his four daughters, whose representatives sold it to the present owner, John Pryce Lade, Esq., who restored it a few years since.

The mansion is one of those commodious brick structures of which so many were erected in the latter part of the seventeenth century, but unlike some that were built at that time, this appears to have been constructed in the most substantial manner; the walls, the timber, and even the roof, alike seem to almost bid defiance to time. The style is more Grecian than Tudor, and either owing to the good quality of the bricks, or the fact of their being recently cleaned, or it may be the clear dry atmosphere, or the whole combined, certainly the building has a remarkably fresh appearance, more so than many that have not been built half a dozen years. The situation is slightly elevated, but the house is sheltered with some fine old trees on one side, in addition to the interesting



NASH COURT.

avenue already alluded to. The carriage front is to the east, while the most spacious one is to the south, and the north has also a good front looking out on a nice piece of lawn and shrubbery. On the west side are the offices, which are well shut-off from the carriage drive by a thriving belt of choice shrubs and Pinuses that have been planted by the present proprietor, who, I may remark, has not had possession of the place for many years, his ancestral home for some generations being a mansion equally important, and not a great way off. Mr. Lade has done much to improve it in many ways, additions having been made to the residence and stables, and the gardens entirely new made or remodelled, the whole showing good taste in design and good workmanship.

The park, to which great additions have been made, descends gently from the east side of the mansion for some distance, where there are ponds of water, the ground also descending beyond the park into one of those easy and agreeable-looking valleys which, without impeding the action of the husbandman, are eminently useful in every other sense: it rises again on

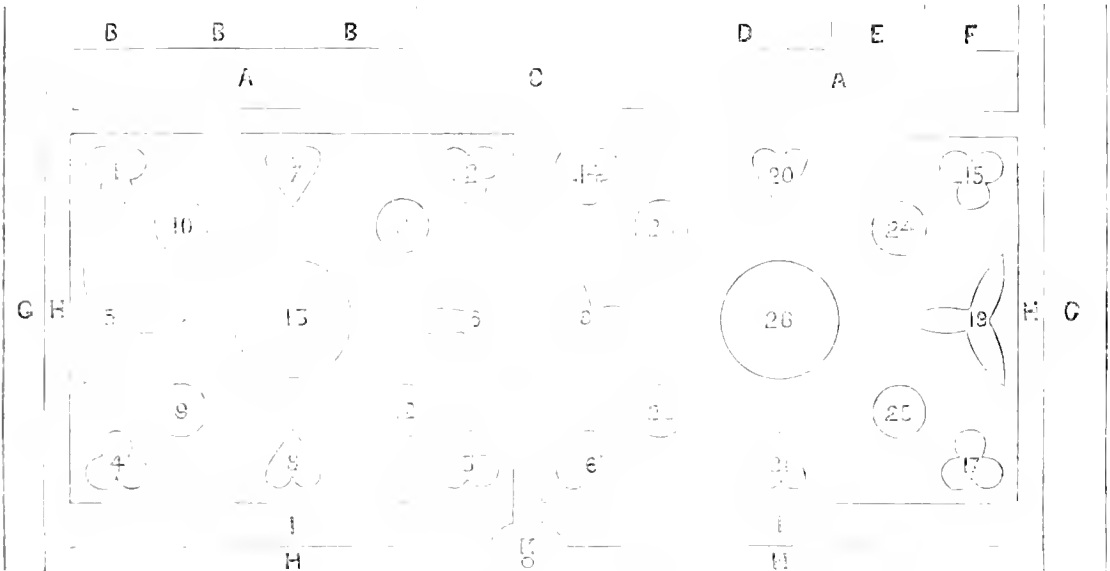
the opposite side to a much greater elevation than that on which Nash Court stands. The crown of the ridge and part of its sides are clothed with timber, forming, in fact, the "Blean Woods," which in times past have been notable for things done in them, not the least memorable being the fatal affray between a fanatical being styling himself Sir William Courtenay and a host of additional titles, who with a multitude of deluded followers assembled here some forty years ago, and refusing to disperse at the request of some military sent against them, the officer in command, anxious to avoid bloodshed, advanced in front of his men, and, expostulating with the crowd, was shot dead by their ringleader; the issue being a volley from the soldiers killing the self-styled invincible leader and a number of others. Such an event is not likely to be soon forgotten by a population not much given to emigration, and is fortunately not likely to find a parallel in England at the present day. Certainly the advance of education will prevent the superstitious part of it being repeated. The Blean Woods had also a bad name before that time. Smuggling, and perhaps

something worse, rendered it not advisable for the traveller to venture through them alone. But more peaceful times have come round, and the great natural wood is being intersected with good roads, with here and there dwellings above the class of those occupied by the ordinary cottager; while from Nash Court are seen two if not more churches, whose spires rise amongst the trees of this once-notorious forest—Hernhill and Dunkirk—and the mansion of Lord Soudes is also close at hand.

Northward of Nash Court the ground is more tame but excellent in quality; but to the south and also south-west it is like the east side, well-timbered and well-cultivated, orchards and Hop gardens alternating with arable land, while green fields and woods and coppice give ample diversity, the space between the mansion and the highway being partly dressed and partly half-dressed pleasure ground. Near the house there is an excellent croquet lawn margined with high trees, while

the noble avenue of Chestnuts is growing on ground having a more park-like character. One of the trees which Mr. McCrow kindly measured was upwards of 18 feet in circumference at 3 feet from the ground; others were 16, 15, and 11 feet in circumference at the same distance up, all being very healthy, and promising to live for many generations. In the park I noticed a Walnut tree, of which the spread of branches was upwards of 90 feet in diameter. The soil was mostly inclined to be gravelly; but it would appear that the term so often given to a soil of this kind, "hungry gravel," could not well be applied to it, for most trees and shrubs, except some Rhododendrons on the north side of the mansion, were in the best possible health; notably so were some Pinuses and shrubs that concealed the offices and stables.

Having described the general features of the place, we now come to the garden, which, taken in its entirety as representing the rosery and flower and kitchen gardens, is placed at



FLOWER GARDEN AT NASH COURT.

A, A, Ribbon Borders.
B, B, B, Plant Houses.

C, Conservatory.
D, Orchid House.
E, E, Mixed Borders.

F, Early Vinery.
G, G, Vinery.
H, Vase.

I, I, Grass.
J, J, J, Walls.

1. Purple King and Foxhunter Verbenas.
2. Ivy-leaved Pelargonium, L.E. white.
3. Silver-variegated Pelargonium, Flower of Spring.
4. Sweet-scented white Verbena (seedling).
5. Mixed Phlox Drummondii.
6. Two parts of bed next walk Verbena Defiance; one part, white, Ageratum, ring of Lady Cullum Geranium, edged with variegated Alyssum.
7. Yellow Calceolaria, Maid of Kent.
8. Glory of Waltham Geranium, edged with variegated Alyssum.
9. St. Fiacre Geranium, edged with Golden Pyrethrum.
10. St. Grand Geranium, edged with Gazania splendens.
11. Double Pelargonium, Madame Lenoire, edged with Gazania splendens. The above four circular beds have a standard Rose in the centre of each.
12. Double Pelargonium, Madame Lenoire, edged with Gazania splendens.

13. Centre, standard Rose, choeur of Perilla nanlinensis, mass of Stella Geranium, edged with Mrs. Pollock.
14. Lady Cullum Geranium.
15. Same as No. 4.
16. Beauty of Calderdale Geranium.
17. Scarlet Verbena, Foxhunter.
18. Same as No. 6.
19. Same as No. 5.
- 20, 21. Same as Nos. 7, 8.
22. Same as No. 11.
23. Amy Hogg Geranium, edged the same as Nos. 11, 12.
24. Pink Christine Geranium.
25. Same as No. 9.
26. Same as No. 13.

north and north-west sides of the mansion; but immediately adjoining the latter is a considerable breadth of turf, with walks leading through it to the other portions of the ground; and a large space, bounded by the wall of the kitchen garden, has been planted with Rhododendrons in judicious groups or clumps, but the soil does not seem to suit them, as their progress has hardly been satisfactory. Some Magnolias planted against the garden wall referred to were promising better. A Rose garden occupying a parallelogram a little to the west of the mansion was divided by turf walks into eight diamond-shaped beds and four triangular ones at the corners. This was planted entirely with standard and half-standard Roses of the best kinds. The wall separating this from the next compartment was also covered with climbers, and a good breadth of turf forming what, in fact, might have been another diamond-shaped figure, was left open. I was told the Roses had done well; certainly their appearance justified such an assertion, and I am informed new varieties are added occasionally.

Adjoining the Rose garden is the flower garden, also a

parallelogram of upwards of 200 feet long by more than half that in width, the glass structures forming the northern boundary to it; but I will first describe the flower garden, or rather annex Mr. McCrow's plan of it, which, as will be seen, consists of a number of beds of a simple yet agreeable pattern cut out on grass, and which at the time of my visit (the early part of August) were well filled and in excellent order.

I will now proceed to the forcing houses, of which there are seven in one range. The central house, larger and wider than the others, is the conservatory. It has a ridge-and-furrow roof, and presents a neat appearance; the other houses are lean-to's, and, commencing at the west end, they occupy the following position: First, a Peach house; second, a Pine stove; third, a house for hardwooded greenhouse plants, c, the conservatory, which faces the central walk through the flower garden; d, Orchid house; e, early vinery; and f, the late vinery.

Taking the contents of these houses in detail, I may say that the Peaches had all been gathered some time before my visit, but the trees looked all that could be desired, and I

understood there had been a good crop. In the Pine pit the varieties grown were mostly Queens and Smooth-leaved Cayennes, of which there were some good specimens ripening fruit, and as Mr. McCrow occasionally exhibits them at the Royal Horticultural Society's shows, little need be said in their praise, as generally only good fruit finds its way there, or it may be fruit at a difficult season, which is equally meritorious. Some other varieties were also grown, but the two named were the favourites. The house for hardwooded plants, of which, however, at the time of my visit, most of the usual occupants were out of doors, was not left empty, but the most ornamental subjects were in the conservatory. There I noticed some good specimen stove plants and Ferns, as well as the usual permanent plants. Amongst the latter were *Rhopala coreovadensis*, several *Acacias*, *Camellias*, and other plants; while amongst Ferns were good specimens of *Dicksonia antarctica*, *Alsophila australis*, *Cyathea medullaris*, and others. Good *Latanias* and *Alocasias* also occupied appropriate sites. A plant appearing to belong to the latter genus, but of which I understood Mr. McCrow had not ascertained the name, was very fine; having noble foliage with purple leafstalks and midribs. It had also the advantage of being a fast grower and not so sensible to injury from sunshine as many allied plants. A good specimen of *Cycas revoluta* was also deserving of notice. *Eucharis amazonica* showed well, but had not quite come into flower, and there were, besides, abundance of the usual summer-flowering plants, which seem indispensable to a conservatory at this season, as *Balsams*, *Celosias*, *Gomphrenas*, *Scarlet Geraniums*, and the like, as well as *Coleuses* and other fine-foliaged plants.

The Orchid house was also interesting, containing good plants of *Phalenopsis*, *Aerides*, and *Vandas*, as well as *Dendrobium Lycastes*, *Oncidiums*, &c. But an Orchid house seems to have less attractions than any other in summer; the abundance of out-door floral beauty, which can be looked at and admired without discomfort, would seem to be more attractive than the ungenial moisture of the Orchid house, excepting to the ardent lover of such plants. I will therefore pass on to the vineries which constitute the two houses E and F; and without taking their contents in the order of early and late, I will merely note the kinds of Grape that struck me as being good. First there was Muscat of Alexandria, on two rods of which I counted twenty-four bunches all good and fine. A black Muscat was also good. Not so, however, was Muscat Hamburg, which, with the same treatment as the others received, was only indifferent and unsatisfactory; but Lady Downe's was very good. Scarcely less so was Alicante and Madresfield Court, and even the Golden Champion, which has failed in so many places, was tolerably good here, though not by any means so large in the bunch as Child of Hale and another white Grape resembling the Tokay. Of course that indispensable Grape, the Black Hamburg, was well represented, and there was also a promising rod or two with good bunches on them of Royal Vineyard. There was, then, no lack of variety in Grapes, and with one or two slight exceptions all were doing well. I ought also to remark that underneath the Vines, in one if not in both the vineries, *Camellias* were perfecting their buds, and I understood were shortly to be placed out of doors for the autumn.

Having already occupied so much space, I must hurry over the kitchen garden which occupies a site to the north of the range of glass described, and which contained the usual breadth of vegetables wanted by a family. Some hardy common fruits have a suitable home in a slip at the west side; amongst them I noticed a good variety of Black Currant, and in another place I was pleased to see against the walls some promising Peach trees, one of which had fruit fast approaching ripeness, and as this fruit is far from plentiful this season, I was glad to see it in such good force out of doors. In other parts of the ground there were plenty of Apples, but Plums and Pears were scarce, as, in fact, they are everywhere. Small fruits had, however, been plentiful, and most vegetable crops good. Cleanliness and order were everywhere noticeable, reflecting great credit on the proprietor of this fine place, who, at an advanced period in life, takes so much interest in gardening, and who is ably seconded by his worthy gardener. Apart from what has been done in and about the garden, Mr. Wade is also fond of farming, and an excellent piece of Hops, to say nothing of corn and other crops, attests the fact that the well-being of vegetation of all kinds is attended to. Care is taken in various parts of the estate to rear forest trees, a matter which I much fear a future generation will blame the

present one for neglecting, but this is duly looked to at Nash Court.—J. RONSON.

NOTES AND GLEANINGS.

At the Crystal Palace annual harvest festival, which commences on Monday next, Messrs. Sutton & Sons have erected for the fourth year a HARVEST TROPHY, which is 100 feet in length, representing the agricultural and horticultural productions of England.

— The Commissioners of Her Majesty's Works and Public Buildings intend to distribute this autumn among the working classes and the poor inhabitants of London the surplus bedding-out plants in Battersea, Hyde, Regent's, and Victoria Parks, and in the Royal Gardens, Kew, and the Pleasure Gardens, Hampton Court. If the clergy, school committees, and others interested will make application to the superintendent of the parks nearest to their respective parishes, or to the Director of the Royal Gardens, Kew, or the Superintendent of Hampton Court Gardens in the cases of persons residing in those neighbourhoods, they will receive early intimation of the number of plants that can be allotted to each applicant, and of the time and manner of their distribution.

— The Council of THE SOCIETY FOR THE PROMOTION OF SCIENTIFIC INDUSTRY, looking to the enormous waste there is in the consumption of coal, whilst its cost is every day increasing, have resolved that an exhibition shall be held in Manchester of 1st, Appliances which may be adapted to existing furnaces, &c., whereby an actual saving is effected in the consumption of fuel; 2nd, Appliances which may be adapted to existing furnaces, &c., whereby waste heat is utilised; 3rd, New steam-generators and furnaces, boilers, and engines specially adapted for the saving of fuel and appliances.

WORK FOR THE WEEK.

KITCHEN GARDEN.

TAKE every favourable opportunity of clearing the ground from weeds. In the best-kept gardens they are troublesome at this season, when the ground is usually too wet for hoeing and raking; but these are more especially so when they are allowed to seed during the summer, and the past one has been favourable for ripening seed. Dig all vacant ground when in a workable state. When the tops of *Asparagus* are decayed cut them off close to the ground, the beds should then be made clean and afterwards covered 3 inches deep with rotten dung or leaves. The alleys should remain as they are and not be dug out, as many of the roots are thereby injured, and it is of no practical good. Where *Broccoli* is growing very strong it is advisable to dig it up and place it in trenches in a nearly horizontal position, covering the roots and stems up to the leaves; this has the effect of checking luxuriant growth, and of protecting the hearts of the plants in severe weather. The main spring crops of *Cabbage* should be planted-out as early as possible. Those which were planted in August for *Coleworts* should be earthed-up. This month may be said to be the commencement of the professed *Cucumber-growing* year. The seed-bed should now be made with well-worked dung over a layer of faggots, the frame should then be put on, and when the heat is up the dung inside the frame should be forked-up every alternate morning for a week or ten days, at the end of which time it will be ready to receive the seed, if the dung was properly worked previously to making it into a bed. Continue to blanch *Endive* as wanted for use. A large quantity should never be tied-up for use at one time, as it will be more likely to rot. The first sowing in pots of *Dwarf Kidney Beans* should be earthed-up as they require it; if they are placed over a flue in a forcing house the pots should stand in saucers when the fires are kept going, or otherwise the soil at the bottoms of the pots will become very dry. Continue to plant the *Cabbage* variety of *Lettuce* in frames for winter. Some of the *Cos* varieties for spring use should also be planted in a sheltered border as soon as they are of a sufficient size. Gather *Sau-kale* seed when ripe, and as soon as the leaves begin to decay clear them away. It is necessary to do this as soon as possible where it is required for early forcing. Thin the late sowing of *Turnips*, but it is not necessary to leave them at so great a distance apart as the spring and early-summer sowings.

FRUIT GARDEN.

Strawberry plantations should now be top-dressed; where they have been allowed to grow thick and the leaves are decaying they may be cut off, not too closely, previous to laying on the dressing. Gooseberry and Currant bushes may now be planted, as may also most fruit trees. From the ensuing week Morello Cherries, *Impératrice* and *Coe's Golden Drop* Plums should be protected from wet where they are still hanging upon the trees.

Prepare for planting all kinds of fruit trees by getting the ground in good order for the different kinds. On cold stiff soils it is advisable to plant on billocks 1 foot or 18 inches higher than the surrounding surface. The trees will not grow so fast in consequence, and will require more attention in summer in the way of mulching, but they will form short-jointed, well-ripened fruitful wood, which is the best preventive of canker, gum, &c., and will save the labour of resorting much to root-pruning.

FLOWER GARDEN.

Cuttings should be carefully looked over to see that nothing is omitted, and that a sufficient quantity of everything is in a promising state for making nice plants before winter. It should be borne in mind that plants which are at all difficult to winter, rooted after this season, may be considerably thinned before spring, and also that they will not be sufficiently strong to furnish many cuttings for spring propagation, consequently a larger quantity than would have been necessary had the cuttings been put in a month ago should be provided. But if there is a reserve stock of strong plants in pots, which is a safe practice where there is a large quantity of bedding stock required, and proper convenience for growing them and propagating in spring, these will furnish a large quantity of cuttings next March, which will form equally good plants by turning-out time. In the case of *Heliotropes*, *Ageratums*, and dwarf *Lobelias*, it is useless wintering young stock, as these grow so freely in heat, and are so easily propagated from soft cuttings, that a few good-sized old plants which require but little room or attention in winter, will furnish a large quantity of plants by bedding-out time. Attend to the potting of cuttings sufficiently rooted, and give every after-attention to these in order to have them well established. Persevere with leaf-sweeping and other routine work.

GREENHOUSE AND CONSERVATORY.

Hyacinths and other Dutch bulbs, if not already purchased, should be procured and potted without delay. Orange trees meant for forcing in winter for the decoration of the conservatory should also be attended to. These and *Daphnes* are invaluable for winter blooming, and should be largely grown for this purpose. Also see to having plenty of *Salvia splendens*, which is useful for mixing among *Chrysanthemums*. It is a good plan to place the largest plants of *Salvias* in a shady situation out of doors for a few weeks in the autumn. Plants so treated will be found to bloom more strongly and last longer in beauty than others run-up in a warm house. Look carefully after the watering of large specimens of hardwooded plants in pots, especially *Heaths*, which are soon injured by being either over or under watered. Examine the specimens often and carefully, and where they are found to be dry water thoroughly so as to moisten the whole ball; also look sharply after mildew on softwooded *Heaths*, and dust the plants with sulphur directly the enemy is perceived. Get *Azaleas* tied into form as soon as can be done, in order to give them a neat appearance. Also attend to the staking and training of other plants as leisure time can be found. Look carefully after red spider on *Chorozemas*, or anything else found to be liable to that pest, and see that it is eradicated before the plants get disfigured. Red spider is easily destroyed by laying the affected plant on its side and well washing the under side of the leaves with the engine, applying the water with as much force as the foliage will bear. Repot strong-growing *Pelargoniums*; plants that are fairly established after repotting can hardly be kept too cool. Also keep *Cinerarias* as cool and moist as is consistent with safety, and attend to repotting such as require it. *Primulas* must also be carefully attended to in order to encourage them to make rapid growth, particularly double varieties. Keep *Tree Violets* clear of their great enemy, red spider, by a liberal use of the syringe, and give them plenty of manure water, which will assist in keeping them in vigorous health.

BITS AND FRAMES.

Bulbs, such as *Ixia*, *Sparaxis*, *Gladiolus*, &c., should now be potted; water them very sparingly until they begin to grow. *Hyacinths* and *Narcissus* of sorts should also be potted for blooming early. Plants that are to be forced early—such as *Rhododendrons*, *Roses*, *Azaleas*, and *Lilacs*, should now be taken in. Continue to pot bulbs; take up the tender *Lobelias* that have been placed in the open garden, divide and pot them. Open frames that contain half hardy plants daily.—W. KEANE.

DOINGS OF THE LAST WEEK.

The long-continued fine dry weather has been most favourable to all out-of-door operations; for the last seven days the wind has been from the south-west with a high temperature. On the 2nd of October it was 43 min., 67 max.; 3rd, 53, 43; 4th, 51, 74; 5th, 50, 62. And with this high temperature, although there has been no rain and the ground perfectly dry, the Potato disease has spread with amazing rapidity. About a week ago there were only a few bad ones, perhaps a hundred-

weight in every ton dug up. Now there are three tons of diseased tubers to one of sound. It seems from this that comparatively warm through dry weather is favourable to the spread of the disease after the plant is affected. Let us hope that the disease has not spread so rapidly in other parts of the country, as by all accounts the quality is good and the crop over the average.

KITCHEN GARDEN.

Have been digging and trenching all spare ground. These operations ought not to be delayed, as the sooner the ground is turned-up to the influence of the atmosphere the better, and especially is this the case if the soil is medium or heavy; but it should not be delayed on light soils, which generally grow weeds abundantly if the ground is long unoccupied. And just a word in reference to trenching the ground. There are one or two mistakes made in doing this. Very often the space to be trenched has been trod upon during wet weather, or has been made hard from some other cause. A trench is taken out at one end, and the trench following is marked-off with a line, the top spit is thrown into the bottom in hard cakes or lumps. This we have frequently seen done. The proper way to proceed with such a piece of ground would be to dig or fork the surface over first, and to let it lie in that state until the surface becomes ameliorated by the atmosphere acting upon it, when the ground could be trenched with advantage. Another mistake which is sometimes made, and it is one which cannot always be avoided, and that is to go trenching when the ground is too wet for any other out-of-doors operation. We have been sent to trench when the water stood in puddles on the ground beneath our feet, and when the surface has been frozen so hard that a mattock which was used to cut-out the trenches, rung on the frozen ground as if it had struck the solid rock, and the top spit had to be thrown into the bottom of the trench in solid lumps. In both instances there can be no doubt the labour was wasted, and the men's time would have been better occupied under cover doing work which would probably have to be done in a more busy season—such as making pegs, sticks, &c., or repairing and making appliances for shade and shelter. This is the best time to relay Box edgings or make new ones. Nearly all garden ground is suitable for Box, and after all there is no neater edging either for flower or kitchen garden, but it must be kept neat; if not relayed it ought to be cut every year. When edgings have been down more than six years, there are generally spaces where the plants have died-out. When this is the case it is always desirable to lift the whole and relay it again. Vacant spaces in the edgings arise from other causes besides unsuitable soils. One frequent cause is allowing the crops to grow over the top of the edging, and if this is not seen to in time considerable damage is done. When ground has to be made-up for a new edging the soil must be rammed-in quite firmly, else it will sink unequally during wet weather.

Nearly all the Apples and Pears have been stored in the fruit-room, where it has been necessary to look carefully for decaying fruit, and to remove them at once to prevent them from spoiling the others. Such Apples as *Sturmer Pippin* on the Crab stock, and the old *Nonpareil*, are not quite ready to pick. On the *Paradise* stock they are quite ready, and are gathered. Pears *Winter Nelis*, *Joséphine de Malines*, and other late sorts, are yet out, but if the weather is favourable they will be gathered before this appears in print.

FRUIT AND FORCING HOUSES.

A few weeks ago it was stated that *Grapes* would probably not keep well with us, and our prediction is being too truly verified. The weather late in August and early in September was wet with a heavy atmosphere, which predisposed the berries to decay, and where decay has set in warm weather hastens it. There are some sorts which are worthless almost in such a season as this. *Royal Vineyard* and *Trenttham Black* are very unsatisfactory. *Royal Vineyard* is a good white Grape, and has generally given satisfaction, and we have had it very good up till Christmas. Much may be done even in bad seasons by careful attention to firing and ventilation, and after the fruit is ripe no plants should be allowed to be in the house, as even a very little moisture in the atmosphere is detrimental to the fruit. We want *Grapes* that will keep well after they are ripe. It is all very well to have large handsome bunches and large berries with flavour combined; these are necessary, but not more essential than good keeping qualities. Nearly all the new *Grapes* of recent introduction have at least got the name of being bad keepers. Wherever decaying berries are observed they are removed at once. The houses which are forced early have had the outside borders dug over, and a dressing of rich compost mixed-in with surface soil.

PLANT HOUSES AND CONSERVATORY.

In all departments cleanliness is necessary, but in the stove especially so. The glass frequently becomes dirty on the interior surface with a greenish substance. This may go unnoticed during the summer months, but when the light of day begins to decline, and midwinter is approaching, the glass must

be cleaned. We have also re-arranged the plants, taking care that they are not too much crowded. Flower is not plentiful at this time of the year, but the *Calanthe vestita* in variety and the beautiful *C. Veitchii* will soon be in flower, and a few chance blooms of *Gardenia florida* and *Stephanotis floribunda* are very acceptable. Nor must we omit to mention the *Eucharis amazonica*, which freely throws up its clusters of snow-white flowers at all seasons alike. We have also in flower one of the most beautiful of recent introductions, *Dendrobium chrysotis*. It is one of the most free-growing of the species, and succeeds admirably in an ordinary stove, either suspended in a basket from the roof or grown in a pot on the stage underneath. Both the specimens are flowering on very strong young growths, though they have not been imported twelve months. The flowers are exceedingly beautiful; there is, of course, a difference in size and refinement, but we have not yet seen a bad one. The flowers on our weakest plant (the other has not yet opened) are $4\frac{1}{2}$ inches across, beautiful clear yellow; the lower petal is finely divided round the margin, so much so that it resembles a fringe of yellow moss, and at the base there are two crimson purple blotches. This fine *Dendrobium* ought and will become quite as common as *D. nobile*. The *Bouvardias jasminiflora* and *Vreelandii* have been grown on shelves near the glass in the Cucumber house during the summer months, and are now rewarding us for our care with numerous trusses of pure white flowers; these are very useful for filling small vases, for button-hole and all sorts of bouquets.

Chrysanthemums have been receiving much attention—tying and training specimens. The usual method is to bend the shoots down until the plant assumes a dwarf compact habit of growth, but this system of training is frequently carried to excess, the aim of the cultivator being to have dwarf specimens at all hazards, so that the plants have a contorted appearance. Some persons object to this method of training altogether as being unnatural, but when it is well done the plants are very pretty. In all cases the flowers should stand well above a mass of healthy deep green foliage. The plants grown for cut blooms have also required attention. It is now time to remove all side shoots, also deformed and superfluous flower buds.

FLOWER GARDEN.

Potted-off the Carnations and Picotees; we were later in layering them this year, else they are usually potted two weeks before this. Our soil is not at all adapted for growing them, but we get excellent flowers by obtaining suitable loam, and placing three plants in a 10-inch pot. The pots are placed out of doors in an open place, and the plants require but little attention. The *Rhododendron* beds have been for the last six weeks very gay with *Liliums*. *L. auratum* was in first, followed by the varieties of *L. speciosum*, and they had a truly fine effect. If any readers of this paper have open spaces in their *Rhododendron* beds, plant them with any spare roots of the different *Liliums*. Mowing the lawn weekly keeps it in excellent trim, and the fine weather has been favourable to the flowering of all bedding plants.—**J. DOUGLAS.**

TRADE CATALOGUE RECEIVED.

Harrison & Sons, Leicester.—*Catalogue of Dutch and other Flowering Bulbs.*

TO CORRESPONDENTS.

* * We request that no one will write privately to any of the correspondents of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to *The Editors of the Journal of Horticulture, &c.*, 171, Fleet Street, London, E.C.

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

N.B.—Many questions must remain unanswered until next week.

HINTS ABOUT FLOWER SHOWS (*Syrupus*).—The Rev. Abner Brown, Pytchley, Northamptonshire, published a little pamphlet on their management. We believe it is out of print. We published an epitome of it in this Journal.

GRAPES MOTTLED (*T. F. G.*).—Not having seen a specimen we cannot speak positively, but probably your Grapes are suffering from the Oidium Tuckeri.

COVERING ARCHWORK OVER A WALK (*M. H. M.*).—You are quite right in suggesting *Loasas* and *Clematises* to train over the ironwork; and as you say Lime trees are planted on one side for the purpose, we would advise their being taken away by degrees, as climbers that may be planted on both sides grow up to cover the arch. In addition to *Roses* we would recommend other climbers as well, as *Jacquinum revolutum*, *J. molliflorum*, and the ordinary white species *Wistaria sinensis*, and *Thapsa Laburnum*, Virginian

Creeper, *Aristolochia siphon*, *Bignonia radians*, *Ceanothus dentatus*, *Try* of two or three kinds, and *Honeysuckles*, including the Evergreen and Golden-rod Japan one. Even the common *Hop* is very pretty at times. The fine foliage of some of the *Cistuses* might be introduced, as also *Pyreantha* and the rich-flowered *Cydonia japonica*. The genus *Clematis* affords an endless variety, but the continuous-flowering kinds ought to be selected, as *C. rubella*, Prince of Wales, Jackmanii, Standishii, lanuginosa, and several others, including some of the doubles, as *Sophia*, *canadensis*, &c. Amongst *Roses* we would have two or three rambling *Ayrshire*; they quickly cover a large space, and can be cut away when better ones grow up. *Teliosy* *perpetua* and *Princess Maria* amongst evergreen, Yellow and White *Banksian*, and as many *Novosette* as you like. *Fellenberg*, *Solfaterre*, *Celine Forestier*, *Lamarque*, and *Marshall Niel* may be mentioned as good; while some *Bourbons*, as *Souvenir de Malmaison*, *Prince Albert*, and *Madame Desprez* may be introduced; also *Gloire de Dijon* and *Regulus* as Teas. Some of the vigorous-growing Hybrid *Perpetuals*, especially those related to the *Bourbon* or *China* section, may be planted, as *Louise Margottin*, *Louise Olier*, and *Moule de Perfection*. As you say your arch is 108 feet long, we would have 150 plants or more on each side, say one half *Roses* and the alternate plants other climbers of the kinds mentioned. Take care to plant the most robust growers on the side the Lime trees occupy, and cut the latter away as the others advance.

WATERRESS CULTURE (*R. G.*).—You must obtain plants and propagate by dividing them. The trenches in which they are grown are so prepared that nearly a depth of 3 or 4 inches of water can be kept up. These trenches are 3 yards broad, and whenever one is to be planted the bottom is made quite firm and slightly sloping, so that the water which flows in at one end may run out at the other. If the bottom of the trench is not sufficiently moist, a small body of water is allowed to enter to soften it. The *Cresses* are then divided into small cuttings, with roots attached to them, and these are placed at the distance of 3 or 4 inches from each other. At the end of five or six days a slight dressing of well-decomposed cow dung is spread over all the plants, and this is pressed down by means of a heavy board, to which a long handle is obliquely fixed. The water is then raised to the depth of 2 or 3 inches, and never higher. Each trench is thus replanted annually, and furnishes twelve crops during the season. In the summer the *Cresses* are gathered every fifteen or twenty days, but less frequently during winter; care is taken that at each gathering at least a third part of the bed is left untouched, so that neither the roots may be exhausted nor the succeeding gathering delayed. After every cutting a little decayed cow dung, in the proportion of two large barrowfuls to each trench, is spread over the baked plants, and this is beaten down by means of the rammer above mentioned. After the *Waterresses* have been thus treated for a twelvemonth the manure forms a tolerably thick layer at the bottom of the trench, and tends to raise its level. To restore it to its original level all the refuse should be thrown out upon the borders which separate the trenches from each other. These borders may be planted with *Artichokes*, *Cabbages*, or *Cauliflowers*.

PAMPAS GRASS (*Chick*).—You may gather the flower-heads any time after the stems cease to be green.

NECTARINES NOT RIPENING (*E. E.*).—We do not think that insufficient water is the cause. What variety of Nectarine have you? Is it the *Red Roman*? This is a clingstone, a fine-looking fruit, and the flesh is always tough, and generally in cold districts uneatable.

SUPERIOR APPLES (*J. E.*).—For Dessert: Devonshire Quarrenden, Early Harvest, Cox's Orange Pippin, Kibston Pippin, Blenheim Orange or Pippin, Sturmer Pippin. For Kitchen: Kentish Codlin, Cellini, Cox's Pomona, Hawthornden, Wellington, Stirling Castle. If you want an Apple remarkable for its handsome appearance, substitute Emperor Alexander for Hawthornden.

FUCHSIA AND GERANIUM PRUNING (*R. D. W.*).—The question is too vague; the pruning varies with the season and object. For five postage stamps we can send you free by post "Florists' Flowers," which will tell you all about them.

SITE FOR GREENHOUSE (*J. Jones*).—Your site in the back yard would answer tolerably well for a greenhouse, but we do not think it would answer for Vines, as the house would be deprived of the sun too long each day to ripen Grapes, though they would ripen perfectly were you to assist them with gentle fire heat in cold weather in spring and autumn. It would have been much better to have had the house in a position where it would be fully exposed to the sun.

PLANTING CROCUSES IN LAWN (*Ralph*).—You may make holes about 3 inches deep in the lawn, and drop into each a little fine soil; then put in the Crocuses, and fill up the hole with fine soil. Place the corns root-side downwards.

PRIMULA JAPONICA WITH SHORT FLOWER-STEMS (*F. J. T.*).—The cause is probably due to the plants having been kept for the past six months in a cool greenhouse. They would have done much better out of doors, and not had any protection. They have been kept growing, and are weak, mildly started into flower. Keep in a cold frame, and they will perform better in spring.

WINTERING ECHEVERIAS AND MESSEMBRYANTHEMUMS (*Idem*).—Take them up now and pot them in light, open, sandy loam, and keep rather dry over the winter in a dry and airy part of the greenhouse. The *Echeverias* are best propagated from seed, and the *Messembryanthemums* from cuttings in sand over sandy loam. Propagation is best practised in August, or it may be done now; the only difficulty is to keep from damp. In your case we should defer the operation until spring.

CELERY HARD (*H.*).—It is caused by being grown slowly, and by the dry weather we have had lately. The plants have not been duly supplied with manure in the trenches, and in a liquid state, and they should have had copious waterings. Celery, however, is of very indifferent quality this season.

GOOD-HEARTED LETTUCE (*H.*).—For summer, the best Lettices are the *Neapolitan* Cabbage and *Paris White Cos*. All the Year Round has a close firm head, and is good in spring, summer, and autumn.

PROTECTING PLANTS IN GREENHOUSE (*S. Hoyland*).—We do not know of any means by which you can keep frost from a greenhouse without a heating apparatus. You might do much towards it by having frisk-domo fixed to a rafter, let the blind down and roll up as required. This would keep off much frost, but would not be sufficient in severe weather. Your house being small, we advise you to have a gas-heating boiler, especially as you live in a town. It would be as cheap as any other mode of heating, far more cleanly, and better suited to your case.

ANTS IN GREENHOUSE (*L. A.*).—The only plan we can think of is to mix arsenic and honey together, forming a sort of paste, and place it in saucers, inverting over each another saucer with three pieces of wood between. The lower saucer should be placed in a pot with its edge level with the soil,

or pieces of wood must be laid so as to reach the edge of the saucer. Care must be used with this mixture, as it will poison whatever partakes of it.

SOIL FOR POTTING BEDDING PLANTS (E. L.).—The soil of which you sent a sample is too heavy, and not sufficiently decomposed for potting; but it may be improved by adding sand freely, and chopping up fine, and by mixing with the leaf-soil. Merely turning up it would be too rough and open. All composts for potting should be kept under cover for several days before they are required for use. Keep it under cover in winter. It is not good to use wet soil for potting.

DIVIDING VIOLAS AND PANSIES (Idem).—Plants of these, if taken up now, divided, and planted, each division having good roots, will flower as early and nearly as well as those from cuttings only just struck. The Moss on your lawn is a *Selaginella*, which will probably increase if left alone. We know of no mode of encouraging it to spread.

SEEDLING APPLE (Doubtful).—It is a good early pudding Apple, but not better than many others already grown.

BOILER FOR HEATING RANGE OF HOUSES (Protector).—Probably the most economical is that of the No. 1 Calculator; but we should advise you to write to the different makers that advertise in our columns, asking for estimate.

PLANE TREE TIMBER (E. C.).—The wood of the Plane tree is used for the same purposes as that of the Sycamore, which is for turnery and cabinet work. The Turks use timber of the Oriental Plane for ship-building.

PLANE OR SYCAMORE (Savage).—The Oriental and western Planes are quite distinct from the Sycamore. The former belong to the genus *Platanus*, and the latter to *Acer*. The trees which you see in London with "little hobs" hanging some distance from the branch are the Plane, and the "little hobs" are the flowers in spring, and the fruit in autumn. It depends much on the soil whether the Elm or Sycamore grows faster, and there are so many varieties of Elm varying in growth that it is difficult to know to which of them you refer.

DECAYED APPLES AND PEARS (E. Watts).—Their extreme state of decay and mouldiness we cannot account for, not knowing anything about the trees, their culture, and their locality. We presume the soil is very wet, the situation very damp, and the trees very crowded.

NAMES OF FRUITS (H. S.).—Longville's Kernel. (W. W.).—Alfriston. (J. Woodif).—1, Graystein; 2, Red Summer Calville; 3, Winter Majetin; the Pear is *Beurre Clairgean*. (W. G.).—No. 1, Dumelow's Seedling; 2, Duck's Bill; 3, Hoary Morning; 5, *Beurre Diel*. (H. Morgan).—Franklin's Golden Pippin. (K. Z.).—You have not numbered the Pears. The largest is *Beurre de Rance*, and the smallest *Winter Nelis*, the other two were quite rotten. (William Thompson).—The two Pears are certainly distinct, and neither of them is a cross-bred. No. 1 is true *Souvenir du Congrès*, but the other, which is worthless, we do not recognise. (A. B. G.).—Northern Greening. (B. C. Gully).—*Imboscé d'Orléans*. (L. J. B.).—1, Federal Pearmain; 2, Bradrick's Nonpareil; 4, Fearn's Pippin; 5, Golden Winter Pearmain; 6, *Heinette des Carmes*. (D. B.).—5, Lewis's Incomparable; 6, Barcelona Pearmain; 9, Yorkshire Greening; 11, *Mère de Menage*; 20, Paraisie Pippin. (W. D. Payne).—*Pear*: *Marie Louise*. *Apples*: No. 5, *Beauty of Kent*; 80, *Golden Noble*; 74, *Probably Small's Admirable*; 150, *Christus Pippin*. (*Box from Winchester, mark 4 "Coker Nut Combs"*).—1, Round Winter Nonpareil; 2, Hall Door; 5, Cellar; 6, *Loucomb's Seedling*; 8, *Small Beurre Clairgean*. (Hogg & Wood).—No. 1, *Small Dumelow's Seedling*; 2, *Kerry Pippin*. (R. A.).—*Pears*: No. 1, *Marie Louise*; 2, *Beurre Diel*; 4, *Black Worcester*. (*Spero*).—1, Quite rotten; 2, *Lady's Finger*; 4, *Autumn Colmar*; 5, *Marie Louise*; 6, *Rotten*; 7, *Beurre de Wetteren*; 8, *Hawthornden*. (W. Miller).—*Pear*: *Brown Beurre*; 3, *Scarlet Nonpareil*; 4, *Cellini*; 11, *Dumelow's Seedling*; 21, *Mère de M-nage*. (J. B.).—1, *Blenheim Pippin*; 2, *Hawthornden*; 3, *Cobham*; 5, *Cornish Aromatic*; 9, *Golden Winter Pearmain*; 8, *Aromatic Russet*. *Pears*: 17, *Swan's Egg*; 21, *Flemish Beauty*; 2 and 18, *Rotten*. (S. P.).—6, *Wyken Pippin*; 4, *Northern Greening*; 13, *Dolaware*; 3, *Blenheim Pippin*; 7, *Hawthornden*; 10, *Keswick Codlin*. (E. S. J.).—*Pears*: 1, *Jersey Gratiotti*; 2, *Belle Julie*; 3, *Dunmore*; 4, *Not known*. *Apples*: 1, *Fearn's Pippin*; 2, *Bysonwood*; 3, *Sturmer Pippin*; 6, *Bedfordshire Foundling*. (A. H. Jones).—*Pears*: No. 1, *Belle-sime d'Hiver*; 2, *Beurre Diel*; 3, *Figne de Naples*; 4, *Passé Colmar*; 5, *Foedle*; 6, *Old Colmar*. The seedling Apple is not equal to many already in cultivation. (*Yveson*).—1, *Blenheim Pippin*; 3, *Franklin's Golden Pippin*; 5, *King of the Pippins*; 9, *Yorkshire Greening*; 17, *Dumelow's Seedling*; 14, *Winter Greening*. (E. S. J.).—No. 2, *Russet Pearmain*; 18, *Golden Knob*; 1, *Colonel Vaucluse's*; 11, *Winter Strawberry*; 9, *Cellini*; 10, *Winter Greening*. (E. S. J.).—1, *Autumn Pearmain*; 2, *Royal Pearmain*; 3, *L. Neville's Kernel*; 4, *Early Nonpareil*. (G. Dison).—1, *Winter Hawthornden*; 2, *Selwood's Reinette*; 3, *Blenheim Pippin*; 4, *Dumelow's Seedling*. (*Memo*).—1, *Ked Astrachan*; 2, *Kerry Pippin*; 3, *Royal Russet*; 4, *Brabant Bellefleur*; 5, *Cockle Pippin*.

NAMES OF PLANTS (H. M.).—The leaf you send is, we think, *Polygonum esculentum variegatum*, one of the prettiest ornaments of the flower garden, but it seems to thrive better in Scotland and the north of England than near London. In its normal state it is occasionally found wild, but rarely. Its English name is *Jack's Ladder*. (G. B.).—We cannot identify it without seeing the flowers as well as leaves.

POULTRY, BEE, AND PIGEON CHRONICLE.

STANDARD CHARACTERISTICS.

I HAVE been interested by seeing how the question of publishing judges' names has drawn out many opinions as to the need of a fixed standard for judging. One says, "All judges ought to have one standard of excellence, and award the prizes accordingly;" another asks for "the same standard to be used by judges in all parts of the country, we should then know what to do;" another still craves for "all judges to award by one recognised standard;" and another affirms point blank that "judging at poultry shows will never give anything like general satisfaction until there is a recognised standard of excellence," also adding that armed with such, amateurs would soon be sufficiently skilled to deal with experts, and that any intelligent fancier after a year or two's experience might give satisfaction

as a judge, while points would be kept from shifting too. All these opinions are very natural, and have indeed some basis of truth; but it seems to me that they embody also a very considerable amount of misconception, on which account I should like to give the subject a few words.

My impression is that I have myself given the subject of a standard for judging by, greater and more sustained attention than any other single individual has yet done. For several years past I have, as time and opportunity offered, compared the decisions of our best judges and attempted to tabulate them, adopting long ago the superior American system of 100 points as a gross total of excellence. My object was not to make a table or set of tables which should show what judging ought to be, but to see if any figures would show with a fair amount of accuracy what it really was, as carried out by our best accepted authorities. My plan was somewhat as follows: Having a rough table of points supposed to represent with some attempt at correctness their proper value, I examined how far the judging of a good class at any show appeared to square with it. Probably some one prize pen at least was in evident contradiction to it. Whereupon I had to consider whether, according to my best and un-biassed judgment, such award was an evident error; or if not, what elements needed introducing, or increasing, or decreasing in the table, to bring the award in. When thus brought in, it had to be considered whether or not the scale as now modified still represented the other correct awards, and so far as memory would serve from such memoranda as I had made, other awards previously noted and collated. It was very slow work, and for a long while nothing seemed to be gained, but by degrees I began to see daylight ahead, and I am bound to say that the impression I ultimately formed was not one of surprise at the amount of inconsistency and error, for some amount of these there undoubtedly is; but of astonishment at the vast majority of really consistent judgment if the grounds were only fully understood.

This, then, is the first misconception I would mention. There are errors and inconsistencies in judging, but the amount of them has been very greatly exaggerated. It is said there is "general" dissatisfaction with judging. I do not share that opinion, but on the contrary believe that at least some half-dozen gentlemen I could name, while no doubt some are better liked than others, yet all have on the whole the "general" respect and confidence of exhibitors at large. People talk very "large" about refusing to exhibit unless the present system is changed; but they don't really do it, or, if they do, others take their places; and I feel at times somewhat amused at so many saying the fancy and shows "must come to an end" unless things mend, while all the time the pot keeps on boiling more and more furiously.

But secondly, I do not agree for one moment that there is any real doubt, to any serious extent, as to the ideal of a perfect bird. My meaning, if not my words, have been twisted from the original, when I am spoken of as speaking of judging being "diametrically opposite." Taking two of the judges who differ most, say upon the point of leg-feather and vulture hook, it would not be found, if each chalked out his ideal of a Cocker in this respect, that they differed to any serious extent. The difference between them chiefly lies in this—that one dreads a fault or departure from this ideal in one direction more than the other, while his brother judge rather dreads the opposite fault. One would rather see an almost bare leg than vulture hook, while the other would rather see the vulture hook than the bare leg. And after watching this particular question of leg-feather with peculiar attention for the last five years, I will state my decided conviction that both classes of opinion are necessary in order to preserve the perfect medium. If one judge's opinion became general, we should soon get all nearly bare legs, the opposite fault not being even tolerated, and *vice versa*. We did see this very thing a year or two back. And still further, should the balance of opinions in such a point become destroyed, the very same fault may be judged differently by the same judge; for it is manifest that if bare poles were the general rule, it would be a judge's duty to discourage it, and rather give prizes to birds perceptibly hooked than to such, in order to discourage the evil tendency; while later, if bare legs seemed all gone out and vulture hooks were setting in, he would, if a thoughtful man, judge on precisely opposite principles. This consideration alone will explain many so-called "inconsistent" awards; and such "changes of fashion" are often charged on the judges when the breeders really caused them, and the much-abused judges are simply doing their best to stem the popular error of the day.

But thirdly, after long and careful study of the matter I do not see the possibility of any "fixed" standards at all. It assumes *finality* in poultry-breeding, and in forbidding change would forbid all improvement too. If an amateur considers that by a slight and almost imperceptible alteration a breed would be improved, he has a right to try the experiment, and should his bird when shown commend itself to the best judgment available at the period, who is to forbid him winning his prize? And if general feeling goes strongly in favour of birds a

little different to what they were five years ago, on what ground are we to forbid it doing so? And yet again, so far as opinions differ, they certainly exist, and while they do exist, how are the holders of them to agree? I have an opinion as to how a fowl ought to be bred, and another man has another, what right have I to make him "agree" with me, or what right has he? If two out of three agree with me, at present, on a rough average birds of my type will get the majority of the prizes, but not all, while the minority will get some, and thus prevent my notion being carried to excess, as it might be if it were unopposed. I do not see, until all amateurs can agree as to the comparative merits of two given prize pens, how it is either possible or even desirable for even those two pens to be always judged in precisely the same order. Such an opinion may seem rank heresy, but thoughtful minds will see its truth.

Lastly, I would very briefly put the matter in a point of view which seems to have been altogether overlooked, but which is in my mind the most important of all. Finite faculties cannot fashion "a fixed ideal." No such thing as regards human conception of it can possibly exist. Take what is, perhaps, the nearest approach we have ever attained to—the ideal of beauty as regards the human form. As regards the main features of this ideal, the Greek have, perhaps, solved the problem for us, and produced the highest forms of ideal beauty the world has ever seen. As regards these main features, no artist has any real doubt as to the direction and general form, at least, of the perfection which he seeks; and yet look at the face of, say, Baily's Eve at the Fountain, and then at that of a bust of Ariadne. What a difference! and yet how is it to be decided which is the most perfect face? or how, in spite of the understood ideal, how shall it be decided who, in a large company, is the most beautiful woman? To state such a question is to see its difficulties; but this variety of beauty runs through all nature, and is its deepest and most mysterious charm. We make all our castings in one mould, but God does not; and as rightly and reasonably might a fond mother wish for all her boys and all her girls to be exactly alike, as we too wish for a "fixed" standard for fowls. Let us once get it, and the undefined charm of breeding them would be gone. The art of man would attain it, or so near to it, that there would be nothing more to do, and that endless variety of comparative imperfection, each unit of which adds a beauty of its own, which helps to inspire and adorn the whole—all this priceless gain would be lost for the dead uniformity of a set of iron castings, one of which we gladly treasure for the stamp of beauty which it bears, but a hundred of which round the room would be simply intolerable.—L. WIGGENT.

A VISIT TO WORCESTER AND ITS SHOW.—No. 2.

On the second day of the Show was the annual hop fair, and "the faithful city"—I judge that to be its designation, for "*Floreat semper fidelis civitas*" is the inscription over the door of its Guildhall—was full to overflowing with agriculturists of the three varieties, the gentleman farmer, the farmer proper, and the humbler yeoman; while hop-factors mingled with the crowd. The Show had been wisely fixed, in order to catch the attendants at the fair. N.B.—Take a hint in this, Committee of Devezes Show. To avoid a crowd (I hope there was one after I left) I am at the Show early, and after carefully noticing, I must say that the arrangements seemed excellent, and the birds were well looked after. A few food-pans for the Pigeons with heavily-wattled eyes—I mean the Carriers and Barbs—would have been well, as these birds cannot see to pick their food from the bare floor.

I now stand before the poultry. Class I, *Dorkings*, any variety, cockerel and pullet of 1873. The first prize and cup went to Mr. J. Martin for a well-matched pair of the old Linton Park strain, rose-combed. The Rev. E. Bartrum secured both second and third prizes. The pullets in both pens were too rosy on the wing, but they were good birds. The *Spanish* were good, as is proved by the fact that the Bristol birds (Mr. Jones's) had to be only "highly commended." Mrs. Allsopp had the first prize and cup. The *Cochins* surprised one from their number and goodness—thirteen pens of Cinnamon and Buff, and eight of them noticed. Twenty-two pens of *Cochins*, any other variety, and sixteen noticed. Lady Gwydyr's *Buffs* were in their right place—viz., first; Mrs. Allsopp's second will do after a time, but they are not full-grown yet. The *Cochins*, any other variety, showed a large number of Whites. All three prizes went to White birds. There was one pair of Blacks, but sadly small and weedy-looking. The *Park Brahma* class had some grand birds in it. Mr. Horace Lingwood took first and cup with the finest birds of all, but heavily hocked; the third prize, Mr. Unsworth's, was a nice pen. The *Light Brahma* was the largest class of all, having twenty-six pens. The first-prize thoroughly good, the second-prize very pretty; the third, Lady Gwydyr's, had a big but terribly yellow cock. The *Game* did not, I own, please me; there was not the gamey look, that indescribable something, which, like the look of a gentleman, we

all recognise, but cannot easily describe. I own I preferred the birds that took only the third prize among the Black-breasted Reds. Silver-pencilled *Hamburghs* but two entries, let me add and most excellent too; Mr. Beldon first and cup. The Golden-pencilled six entries; the first-prize birds neat but small. The Silver-spangled very nice; a pity that the cock in No. 121 was wry-tailed, for they were a neat pen. Gold-spangled, one pen only! The *Polands* were every one noticed; seven entries, but two pens empty. The *French* fowls seem still to be popular, as they show everywhere strongly. The Any other distinct variety class contained a beautiful pen of Black *Hamburghs*, Mr. Beldon's; they were first. A good pen of Malays, Mr. Hinton's, second; and a pretty pen of quaint-looking *Silkie*s, Mr. Woodgate's, third; and another pen of *Silkie*s was commended.

Of the *Bantams* I must speak in high terms. The Black-breasted and other Reds were, as usual, numerous. The cock of the second prize pleased me best, and a commended pen of Mr. Martin's, No. 161, consisted of a very stylish-looking pair of birds. Of the other *Game Bantams*, a pair of Piles first, and Duckwings second, both belonging to Mr. Entwisle. The White *Bantams* were not much, but the Blacks were excellent. Sebrights, only one pen of good ones, Mr. Leno's, and an odd pair of, I suppose, Yellow or Nankin *Bantams*, the cock hentailed.

On the whole, in looking at this Show I may echo the words of an eminent writer on poultry who was present, "It was the best chicken show seen in the provinces."

THE PIGEONS.—I must first state that these were few, far too few—only about seventy pens; and many birds, especially the Pouters and Almond Tumblers, were in heavy moult. The Carriers came naturally first. Mr. Fulton's Crystal Palace champion bird for two seasons, took, and rightly, the first prize and cup; and Mr. Yardley's second was a good second. The Carrier hens were only four. The Pouter cocks were choice in the extreme. The first-prize bird, Mr. H. Pratt's, measures 19½ inches in length, and 7½ inches in limb; it has, too, that great beauty narrowness of girth, which in a White, as this was, is particularly elegant. The second-prize bird, also White, measures 18½ inches in length and 7 inches in limb. All the birds in this class were noticed. The hen Pouters were also good. Mr. H. Pratt secured a second. The Barbs were not, except the first-prize cock, of the highest excellence; he is a fine bird, but very aged. The Almonds were but three pens, but such a three! The first-prize birds were rich in the extreme, with tails and flights showing the three colours, and the hen specially rich for a hen. Among other Tumblers were as good a pair of Agates as were ever seen by me, Mr. Yardley's. Mr. Cresswell's first-prize Fantails contained a most splendid cock; in Mr. Fulton's second was a lot of Scotch blood, with which I was pleased, for the Scotch birds are much the most elegant. There was a commended pen of Blues, No. 271, which will be wonders, at present they were too young for show. The Dragons were a superior class. Mr. Graham showed two pens of his Yellows, one of which was first. The Yellow is the most difficult colour to breed good, so that it rightly has the pre-eminence. The soundness of colour throughout in this pen was most satisfactory. In the second-prize birds the cock (a Blue) was very good, so was No. 280. So also a pen of Whites; indeed, all the birds shown were good. The Antwerps were a poor lot. The Jacobins, on the contrary, excellent; the hoods of the first-prize birds being beautifully flat on their heads. The Trumpeters were but two pens. The Nuns call for no marked notice, save that they were too few. In the Any other variety, a pair of White African Owls were first, and a pair of excellent Magpies were second.

Such were the Pigeons; but seventy strong, still a picked seventy. I shall bear in my mind a remembrance of Worcester Show, being the best of chicken shows, and of a small number of excellent Pigeons.

I must speak of the politeness and kindness of all the Worcester officials, Vice-Chairman, Secretary, and Committee. I also made the acquaintance of Mr. Allsop, the Pigeon judge, and a very able judge he is.

I must now in conclusion say something of Worcester itself—a noticeable and remarkable city; no mushroom growth of a recent day, but old and historic, and therefore very interesting. It is a red-brick city, the houses built of that material, which in time and with stone facings has a handsome look. Some of the streets are very fine, principally the Foregate, a stately and lengthened avenue, which running straight on east becomes then High Street, at the end of which comes full and clear to view the whole north side of the cathedral, which stands in a fairly ample piece of greensward. Various streets branch north and south. Below the west end of the cathedral, deep down, the Severn rolls a broad stream. Few prospects that I ever looked upon were as noticeable as that from the west of the cathedral—immediately under me the Severn and its fine five-arched bridge; the rich meadows just across; and far, but not too far, the line of the Malvern Hills, more peaked than most English

hills, and therefore prettier. This view lit up by a bright September sun was perfect. The exterior of the cathedral has been restored and looks scarcely venerable; the new face on the stonework, and the slates instead of lead, rather pain one. Though it contains all styles of Gothic, the light early English most catches the eye. Inside, all is bustle and confusion; carpenters, and masons, and other workmen are busy and have set up their temporary workshops. The noise of hammer, and saw, and plane jars on one's ear. In some parts the very pavement is up, and throughout all is shavings, and stone chips, and mortar, and wood. I long to see it when finished. The airy lightness of the interior is very pleasing. It was only in some parts that entrance was allowed, and I walked up to the anklings in shavings and dirt. King John has a better tomb than he deserved; and the most touching epitaph that I read was that on the tablet to the memory of the wife of good Izaak Walton—"Here lyeth buried (so much as could die) of Anne, wife of Izaak Walton. She died (alas! that she is dead) 17th April, 1662, aged 52." All disciples of old Izaak and lovers of the angle should pause over that epitaph. In the cloisters I looked for and found the famous black slab in the north side of the cloisters, with only one word on it—"Miserrimus." "The Most Miserable" is the meaning. Wordsworth wrote a touching and fine sonnet on it; but alas for poetry! the one who thus ordered his grave to be marked was no love-lorn one, no interesting being, no deeply penitent man, but a rich, selfish, and cantankerous old bachelor, who made everybody around him miserable, and as a just retribution made himself the most miserable of all. Thus it was, and is, and ever will be with selfish tyrants.

I leave the cathedral, and never since the parliamentary soldiers were quartered in it, and stripped it of its ornaments, and committed every deprivation was it, I should think, in such a topsyturvy state as now with its troop of, not, happily, destroyers, but restorers. May the work be safely and skilfully finished. The battle of September 3rd, 1651, was begun a mile from the city, and finally raged in the main street. I saw in the handsome Guildhall before mentioned two cannon and nine suits of old armour left by Charles II. after the battle. The Guildhall is a most noticeable and handsome building, standing a little back from the street, with a statue of Queen Anne in a niche over the door, and one of Charles I. and II. on either side of the door. The interior is well worthy of a visit, containing among its full-length portraits one by Reynolds of George III. One thing is much needed by visitors to Worcester—viz., a guide-book. Strange to say, not one is published. I was taken by Mr. Grainger, Vice-Chairman of the Committee of the Poultry Show, to see his beautiful china show-rooms; and he courteously offered me a card of entrance to his porcelain manufactory, but I had not time to go, but I saw in his show-rooms the lovely results.

Both Worcester and its Show were well worthy of a visit. I never received more kindness, nor was I ever more interested. I have two pieces of advice for all, and especially for young, poultry-fanciers. One is, Go to as many shows as you can. The other is, Take in, read, and digest Mr. Wright's new book; then you cannot fail to learn and understand prize poultry. May Worcester Show always flourish; and as to Worcester itself, "*Floreat semper fidelis civitas.*"—WILTSHIRE RECTOR.

THE CRYSTAL PALACE POULTRY SHOW.

As the time for this Show draws near, I wish to state through the Journal what appears to me to be a real grievance. Last year I was not there during the judging, because I consider the presence of exhibitors at such a time objectionable, but I slept at one of the hotels near the Palace, and at nine o'clock the next morning I joined others that I knew were going into the Show. The party I joined was admitted, but I and a friend who was with me were sent away for another hour, and the reason of this was, we were told, "that we were not the servants of exhibitors who were allowed admission to attend on their employers' birds." It was in vain we urged, "though not the servants of exhibitors, we were exhibitors themselves, and that our birds needed our attention quite as much as those which were waited on by servants." These in charge of the gate did not doubt our word that we were exhibitors, but said "they had orders to admit none but servants of exhibitors, and that they meant to keep their instructions."

I thought that if I could have returned in the coat I usually wear when feeding my birds I might have got in, but as it was I was kept out for an hour; whereas, I owned more Pigeons and poultry in the Show than in any one employer of those servants who were admitted. I believe all those whom I saw admitted to be honest men, but I do not know how many servants there were admitted who might not be honest men; perhaps among them might have been one who was seen by Mr. Hewitt waiting on birds which he said "were fighting." I intend sending a good many birds to the next Palace Show, and I hope they will contend well in the lists, but I hope they will not be waited on by any "servants" while I am kept out.

The case mentioned by Mr. Hewitt was not a solitary one, but merely exposed as an example to check a growing evil. Will servants be allowed in the Palace on Sunday, November 16th? Will they be allowed in an hour before exhibitors on other days? If so, I hope the public have more faith in their regard for dangerous competitors than I have. I for one shall be very glad if the Committee decide not to admit any exhibitors, much less "servants," who are personally interested and have not the same credit to maintain, until a certain time, and then admit them and the public together.

If this subject were not so important to exhibitors generally, I should not have trespassed so much on your valuable space.—H. M. MAYNARD, *Holmewood, Ryde.*

POULTRY EXHIBITORS.

It appears to me a difficult and also an unwise plan to exclude dealers from exhibiting. In the first place, what is a dealer? and secondly, who ought to be considered amateurs? I know several gentlemen who would be offended at being called dealers, but at the same time their birds are generally on sale, providing anyone be willing to pay their price. Now, there seems to me one way of getting out of the difficulty—that is, have two classes for those breeds that are likely to have the largest number of entries; a champion class (if I may be allowed to use the term), and a class for birds that have never previously won a first prize. I have not the slightest doubt in my own mind this would cause a greater number of entries and eventually repay committees for their consideration, at the same time giving many a chance who have hitherto frequently refrained from exhibiting, feeling sure they had no chance whilst having to compete against certain noted parties who invariably sweep away the prizes wherever they exhibit.

I quite agree with one of your correspondents as regards the taking more than one prize in each class. I think if it were made a rule to allow no one to take more than one prize in any class, this would be a means of increasing the number of entries.

Another point of great importance is having one uniform standard to go by in awarding the prizes. Whilst there are so many opinions as to points, how can an amateur, or, indeed, anyone, know what to exhibit? Why not have a meeting of the principal judges and settle this long-voiced question? I for one am ready to contribute my mite towards paying the expenses, and have no doubt, if the matter could be arranged, there are plenty more who would be willing to assist.—T. W. D.

MARKET RASEN POULTRY SHOW.

For a first attempt this meeting was good, and from the experience gained this year, no doubt the arrangements of future shows will be improved.

Grey *Dorkings* were not especially good, but some very excellent Brown Red *Game* were among the prize-winners. The *Hamburghs* were a very creditable lot, Black *Hamburghs* and Golden-pencilled ones more particularly. *Spanish* were not of good quality, nor shown in good condition. Both *Aylesbury* and *Rouen Ducks* were superior, and a few good *Buenos Ayrean Ducks* in capital plumage were exhibited. The *Geese*, a class in which single birds only were exhibited, were such as are but rarely seen, the entry being not only large, but the whole of them of very equal quality. *Turkeys* were few but very good.

The show of *Pigeons* was a remarkably good one, but many of them were placed too high for general inspection. *Canaries*, *Parrots*, *Foreign* and *English Cage Birds* were well represented.

DORRINGS.—1, — Cashmere, Loughborough. 2, — Waters, Elsham, Bigg. **GAME**.—1, A. Cauty, Barton-on-Humber. 2 and 3, H. R. Boucherett. **COCHINS**.—1, R. S. S. Woodgate, Tonbridge Wells. 2, — Cashmere. **BRAMBLING**.—1, W. E. Garner, Dyke, Bourne. 2, R. Swan, Lincoln. c, W. F. Dunn, Middle Raseen.

HAMBURGHS.—1 and 2, — Cashmere. *he*, J. Pilkington, Lincoln. c, J. Smith, Lincoln.

SPANISH.—1, A. Cauty. 2, G. S. Thompson, Barton-on-Humber.

BANTAMS.—1, R. Wingfield, Lodbury, Worcester. 2, H. Yardley, Birmingham.

COCK.—1, — Cashmere. 2, J. Johnson, Newark.

HEN.—1, R. S. S. Woodgate. 2, J. Johnson. *he*, T. G. Gilbert, Colingham.

NEWARK, G. Waters. — *Cashmere*. c, J. M. Atkinson, Alford (2).

CHICKENS.—1 and Cup, — *Cashmere* (Black *Hamburghs*). 2, A. Cauty (Brown Red *Game*). *he*, Mrs. Cross, Appleby, Bigg. c, Duckering, East Barkwith.

Mrs. T. Fowler, North Willingham; W. G. Waters; R. Chapman, Market Raseen.

c, T. & W. Livesley, Lincoln; Rev. T. R. Wright, Market Raseen.

BAVINGDON—Prize — Wilson, Market Raseen.

DUCKS.—*Rouen*.—1 and 2, R. Swann. 2, — Tateson, Reasby, Wraebly. *Aylesbury*.—1, Lady E. Henegge, Hampton. 2, — *Cashmere*. *he*, W. F. Dunn. c, W. F. Dunn.

— *Coulsbeck*, Market Raseen.

CHICKEN.—1, — *Hodgson*, sixhills. 2, — Turner, West Raseen. *he*, Mrs. Marriott, South Kelsey; Mrs. Fowler, J. Wilson; W. F. Dunn.

TERRING.—1, H. R. Boucherett. 2, W. F. Dunn.

SEBELY CLASS.—1, Mrs. Cross. 2, Lady E. Henegge. *he*, W. F. Dunn.

PIGEONS.

CARRIERS.—1 and Cup, — Baddeley, Hereford. *he*, W. Watkins, Buggleswade.

POUTERS.—1, J. E. Crofts, Blyth, Worksop. 2, J. F. Lovetsidge, Newark.

c, P. K. Spencer, Hereford; H. Yardley, Birmingham.

TRIBLETS.—1, H. Yardley. 2, — Baddeley.

BARRIS.—1, T. H. Dows, Boston. 2, H. Yardley. *he*, J. E. Crofts.

FANTAILS.—1, J. F. Lovetsidge. 2, P. K. Spencer.

JACOBS.—1, J. E. Crofts. 2, H. Yardley. *he*, R. Chapman.

ROCKS.—*Blue*.—1 and 2, C. Wilson, Market Raseen.

ANY OTHER VARIETY.—I. J. Walker, Burslem. 2, J. C. & H. Elwis, Doncaster. *hc*.—Baddley, J. E. Crofts (2); T. H. Dent.

SELLING CLASS.—I, J. E. Crofts. 2.—Kent, Lincoln. c, J. Walker.

Mr. Edward Hewitt, of Sparkbrook, near Birmingham, was the Judge.

NOTTINGHAM BIRD SHOW.

This was held on October 2nd, 3rd, and 4th.

NORWICH.—*Clear Yellow*.—1, Enoch & Atkins, Coventry. 2, C. H. Legge, Derby. 3, Adams & Athersuch, Coventry. *che*, G. Barnby, Derby. *hc*, J. Lark and Doyle, c, J. Newton, Nottingham. *Clear Buff*.—1, J. Clarke, Derby. 2, Brown & Gayton, Northampton. 3, E. Hyde, Melbourne. *che*, and *hc*, Adams and Athersuch. c, Limbaf & Carnall, Coventry.

NORWICH.—*Variegated Yellow*.—1, Brown & Gayton. 2, Adams & Athersuch. 3, R. Heuson, Derby. *che*, G. Cox, Northampton. *hc*, Adams & Athersuch. c, J. Clarke. *Variegated Buff*.—1, J. Clarke. 2 and 3, Adams & Athersuch. *che*, C. Martin, Spendon. *hc*, C. Legge. c, Donnan & Dearsley.

NORWICH.—*Ticked Yellow*.—1, Brown & Gayton. 2 and 3, Adams & Athersuch. *che*, T. Wright, Northampton. *hc*, G. Legge. c, Donnan & Dearsley; Hampton & Chamberlain, Leicester. *Ticked Buff*.—1, Adams & Athersuch. 2, Enoch and Atkins. 3, C. Merrin. *che*, H. Ball, Castle Donnington. *hc*, Limbaf and Carnall. c, Adams & Athersuch; G. Cox.

NORWICH.—*Crested Yellow*.—1 and *hc*, J. Judge, Derby. 2 and *hc*, G. Clipson, Northampton. 3, Donnan & Beardsley. *Crested Buff*.—1, J. Goode, Leicester. 2 and *che*, J. Selby. 3, Clarke & Doyle. *hc*, R. Hawman, Middlesborough. c, J. Judge.

BELOAN.—*Any variety*.—1, R. Hawman. 2 and *hc*, Bunting & Evans, Derby. 3 and c, T. Dove, Sutton-in-Ashfield. *che*, J. N. Harrison, Elcper.

LIZARD.—*Jonque*.—1, J. Martin, Salford. 2 and 3, R. Ritchie, Darlington. *che*, Bunting & Evans; W. Watson; J. Martin; Everton & Mounsey, Darlington. *hc*, W. Richards. *Grey*.—1, W. Watson. 2, Bunting & Evans. 3, R. Ritchie. *che*, W. Watson; J. Martin (2); T. Dove; R. Ritchie. *hc*, E. Hyde; Adams and Athersuch. c, Adams & Athersuch.

CINNAMON.—*Jonque*.—1, Adams & Athersuch. 2, Clarke & Doyle. 3, Brown & Gayton, Northampton. *che*, J. Linton, Nottingham; Clarke & Doyle. c, H. Haslam. *Buff*.—1, Clarke & Doyle. 2, Brown & Gayton. 3, Adams & Athersuch. *che*, R. May.

MULES.—*Any variety*.—1 *che*, and c, J. Spence, South Shields. 2, R. Hawman. 3, J. Stevens, Middlesborough. *hc*, M. Ward, Sneyton; Hampton & Chamberlain, Leicester.

BRITISH BIRDS.—*Any variety*.—1 and *hc*.—Burniston, Middlesborough. 2, S. Maylan. 3, C. L. Rothera, Nottingham; c, W. J. Reader, Ely; R. May.

SELLING CLASS.—1 and 2, Allen & Twidye, Nottingham. 3, E. Shaw.

JUDGES.—Messrs. Barwell & Tuckwood.

LEICESTER ORNITHOLOGICAL SOCIETY'S SHOW.

This Show was held in the Alexandra Rooms, New Walk, Leicester, on October 2nd, 3rd, and 4th.

NORWICH.—*Clear Yellow*.—1 and 2, Bemrose & Orme, Derby. 3, Adams and Athersuch, Coventry. *che*, Bemrose & Orme; Adams & Athersuch. *hc*, H. and D. Audley, c, J. Brooks, Oud y. *Clear Buff*.—1, 2, 3, and *che*, Bemrose & Orme. *hc*, S. Tomes, Northampton; Wand & Wright, Northampton. c, H. & D. Audley, Leicester.

NORWICH.—*Evenly-marked or Variegated Yellow*.—1 and 2, Bemrose & Orme. 3 and c, Adams & Athersuch. *che*, J. Audley, Leicester. *Evenly-marked or Variegated Buff*.—1 and 2, Bemrose & Orme. 3, J. Goode, Leicester. *che*, Adams & Athersuch; Martin & Griffin, Northampton. *hc*, S. Tomes; Adams and Athersuch.

NORWICH.—*Ticked or Unevenly-marked Yellow*.—1 and 3, Bemrose & Orme. 2, Adams & Athersuch. *che*, Bemrose & Orme; 1, Herbert, Wigston. c, G. Cox, Northampton. *Ticked or Unevenly-marked Buff*.—1, Bemrose & Orme. 2, Adams & Athersuch. 3, Wand & Wright. *che*, S. Tomes. *hc*, J. Brooks; Bemrose & Orme. c, H. & D. Audley.

NORWICH.—*Any variety of Crested Yellow*.—1, Withheld. 2 and 3, J. Goode. *Any variety of Crested Buff*.—1, J. Goode. 2, Martin & Griffin. 3, G. Cox. Extra 3, Lamplough & Bexson, Derby. *che*, Bemrose & Orme (2). *hc*, O. Love, Northampton; S. Tomes; H. & D. Audley.

LIZARD.—*Golden-spangled*.—1, W. Watson, Darlington. 2, S. Bunting, Derby. 3, Withheld. *che*, J. Goode. *Silver-spangled*.—1 and 2, W. Watson. 3, S. Bunt y. *hc*, Adams & Athersuch.

CINNAMON.—*Yellow*.—1 and 3, Bemrose & Orme. 2, Lamplough & Bexson. *hc*, T. Stubley, Leicester; S. Tomes. c, J. Brooks. *Buff*.—1, Bemrose & Orme. 2, Lamplough & Bexson. 3, S. Tomes. *che*, O. Love, Northampton. *hc*, G. Cox. c, R. Hawman, Middlesborough.

ANY OTHER VARIETY OF CANARY.—1, Bemrose & Orme. 2, F. R. Tebbitt, Leicester. 3, S. Bunting. *che*, Adams & Athersuch.

GOLDFINCH MULE.—1, J. Goode. 2, T. Hopkins, Leicester. 3, R. Hawman. *che*, T. Tenniswood, Middlesborough. *hc*, Hampton & Chamberlain; T. Hopkins.

BRITISH OR FOREIGN BIRDS.—1, J. Brooks. 2.—Cave, Leicester. 3, J. Hedges.

ANY VARIETY OF BIRD.—1, T. Fulton, Leicester. 2, T. Tenniswood. 3, S. Tomes. *che*, Bemrose & Orme; J. Goode. *hc*, H. & D. Audley; G. Gregory, Leicester; Hampton & Chamberlain; J. Goode. c, Wand & Wright; J. Greet, Leicester.

JUDGES.—Messrs. Moore & Wynne, of Northampton.

EXTRA PRIZES AT OXFORD SHOW.—The entries for the Oxford Show will close on Wednesday next, October 15th; the Judges being Messrs. Esquilant, Hewitt, Jones, Teebay, and Tegetmeier, who will be empowered to award extra prizes should the entries be unusually numerous and the specimens deserving. The Committee are trying to make arrangements for placing persons at the various railway junctions near Oxford, in order as far as possible to prevent any delay in the return of the fowls to their owners. Billett will supply the pens.

THE GAME COCK has recently come before the public, craving protection against the revived brutality that had arranged a so-called "International Cockfight," at Weaverham, in Cheshire, but which was happily cut short by a visit from the police, followed by a fine of £5 a-head. If the "gentlemen" who had come together to enjoy such "sport" could be credited with any grain of feeling, we would ask them to commit to memory

the following lines out of the "Parish Register" of the poet Crabbe. The poet, after describing other abominations to be found in a certain gamester's house, thus describes a cock-fight:—

"Here his poor bird the inhuman cocker brings,
Arms his hard heel, and clips his golden wings;
With spicy food th' impatient spirit feeds,
And shouts and curses as the battle bleeds,
Struck through the brain, deprived of both his eyes,
The vanquished bird must combat till he dies;
Must faintly peck at his victorious foe,
And reel and stagger at each feeble blow;
When fallen, the savage grasps his dabbled plumes,
His blood-stained arms for other deaths assumes;
And Janus the craven fowl that lost his stake,
And only bleat and perished for his sake."

—Parish Register (Introduction to Part I.)

Lord Jeffery, no mean judge, once declared that for descriptive power these lines equalled, if they did not surpass, anything to be found in the English language.—(Rock.)

CANARIES AT THE CRYSTAL PALACE SHOW.

THAT your readers may be able to judge of the value of Mr. R. J. Troake's statements respecting the Ticked Buff Norwich, 216, which he purchased at the last Crystal Palace Show, I give you an extract from his letter dated March 24th, in reply to my request to allow the birds to be sent to any person who might desire to test the question of colouring:—"I shall be very pleased to do, so far as I can, anything to accommodate you, but should not like to send the bird away now, as I hope he is settled down for the season's work. I will send to any person you may name a sufficient quantity of feathers from the saddle to answer for any testing purpose that may be required. For my own part I have tested it in various ways and fail to detect any colouring matter (including that tried at Cheltenham), and my conclusion now is, that the colour must be legitimate." I wish to call attention to the fact that Mr. Troake is a chemist, hence quite familiar with the best method of detecting any imposture.

Mr. Troake's particular grievance is, that the bird has "neither retained nor perpetuated the colour." Is Mr. Troake absolutely ignorant of the fact, well known to all who understand birds, that the second year's moulting unassisted by skilful artificial feeding is invariably inferior to the first year? Did Mr. Troake suppose, too, in buying the bird that the 40s. also included the knowledge of my method of feeding? I beg to remind Mr. Troake that the birds are judged for plumage and condition, and not for their breeding qualities. On this last point Mr. Troake may be an able authority.—EDWARD BEMROSE, *Market Place, Derby.*

[We shall insert Mr. Blakston's reply to Mr. Troake next week, together with notes on Hartlepool Show, where, we are informed, Mr. Bemrose has exhibited largely and successfully.—Eds.]

HONEY MARKET.

SINCE the "Handy-Book of Bees" was published, I have received many letters asking where honey and honeycomb could be sold. Some of these letters were written by ladies and working men living in country districts, where there is but little demand for honey. For many reasons I have declined to give the names of buyers. In fine seasons I have a large quantity to sell, and like to have a ready market for it all. For the last two years I have had a far greater demand for honey than I could supply, and I firmly believe the demand will ever increase. My neighbours, both rich and poor, like our honey, and buy it all very readily. Wholesale dealers keep writing for prices. Thirty years ago when I kept bees in Middlesex, I found no difficulty in selling honey. A wine merchant bought all my run honey at 1s. 3d. per lb., and Fortnum & Mason, of Piccadilly, London, took all my honeycomb at 1s. 6d. per lb. I believe the markets of England will never be overstocked with genuine English honey.

In bee-management Scotland is, I think, fifty years in advance of England, and the honey produced there in proportion to population is, I think, fifty times greater than it is here, and all is sold at good prices. Indeed, I have two letters now from Glasgow merchants wanting to buy of me.

I mention these things to encourage our English bee-keepers. Let them persevere in their efforts to get large supplies, and an outlet for it. If the factory operatives of any of our Lancashire towns were to taste genuine honey, they would be found swarming round the house where it is sold day after day. They do not know what real honey is. Some seven or eight years ago I took two samples of good honey to Manchester, with a view to take orders from chemists. In some of the principal streets of that city I called at almost every chemist's shop, but found I was too late, all of them had been supplied for that year. They tasted my honey, and said they had never seen any so good. Some of them let me see and taste theirs. It was exceedingly

mild to the taste, there was no smack of honey about it. I was given to understand it was from Narbonne, in France, and was sold at one time at 2s. 6d. per lb. On my way home I called at two more shops, in one of which I found the same class of honey ten shades darker in colour. My suspicions were here confirmed, that all the honey I had seen and tasted that day was manufactured from sugar by some process I was ignorant of. About six months ago a surgeon called here, and in course of conversation he told me he commenced his career as an apprentice to a chemist, and then was frequently employed in making honey. He was asked how it was made. He said, "To 2 lbs. of sugar and 1 lb. of water we put 1 lb. of honey, and boil all together. It looks like crystallised honey, and is sold at 1s. 4d. per lb., but it is nothing but a toffy." If this "toffy" or trashy confectionary find customers, what may we not expect when genuine honey becomes known? Consider also that hundreds of tons of foreign honey are imported into England, and here find buyers. Most of the foreign honey is far inferior in flavour to good English honey. The Chilian honey is the best and purest of all foreign honey that I have ever seen or tasted, but is not equal to British honey. The working classes, especially the miners and colliers of Scotland, use much honey at their tea-tables. It is used on bread as butter and preserved fruits are. In the north of England preserved fruit is used in large quantities by working people. A fruit-preserver of Stockport told the writer that he could not keep himself abreast of the demand. This was some three years ago, when he was preserving 150 tons of fruit, one-third being Gooseberries. Since then he has told me the demand for it is ever growing. I suppose that he now preserves about 200 tons of fruit. Bee-keepers, then, need not fear that honey good and genuine will ever be a drug in the market.

As for wax, they have only to ask a price for a genuine article. Chemists in making up ointment dare not use the wax of commerce, knowing it is, generally speaking, a spurious mixture of lard, rosin, and wax. Grocers, too, covet and readily purchase real wax, for they find no difficulty in selling it to ladies for cleaning and polishing furniture. We sell our clear honey at 1s. 3d. per lb.; heather or moorland honey, at 1s. per lb.; and honeycomb from 1s. 3d. to 1s. 6d. per lb.; wax at 2s. and 2s. 3d. per lb.—A. PETTIGREW, Sale.

COURAGE MOUNTETH WITH OCCASION.

I BEGAN bee-keeping this summer—no, perhaps I ought not to say that, as last summer I had a swarm given me in a common hive. It did very well till one day it was blown over, and after that it never did well, and the bees died in the winter; but this had luck, instead of disheartening me, first made me take an interest in bees. I searched all the JOURNALS OF HORTICULTURE and COTTAGE GARDENERS from No. 11 volume up to the present time, and read all I could find on bees. I procured "Bee-keeping for the Many" and "Profitable Bee-keeping," and studied them during last winter; lately I have been reading Langstroth. I at first thought I would "walk before I ran," and bought two flat-topped straw hives (Economic), but reading in one of your back numbers the experiences of a beginner with a Woodbury, and seeing how well he succeeded, I determined to have a Woodbury, so sent to London for one. My swarm, a gift as the giver said it was unlucky to buy bees, arrived on the 26th or My, before my hive! What a dilemma I was in! However, it came the next day, and having made all necessary preparations, and attached some bits of guide-comb as well as I could, though I did it so badly that two or three fell off soon after on the same evening, and taking a big walking-stick I went towards the straw skep in which the swarms was located. I felt so dreadfully nervous, for I thought, Here I am going to dash these bees out of this hive. How do I know they will take to this great box? Perhaps they will fly away, or, worse still, settle on me. How strongly inclined I felt to run away; but remembering how I should be laughed at if I turned coward, I seized the skep, and struck it with such force that I sent the top of it in. Out tumbled the bees—such a splendid swarm! I quickly placed the Woodbury over the moving mass, and it was quite delightful to hear the mighty hum and watch the bees marching into their new dwelling. Some of the stragglers I spooned-up and shook down in front of the hive, as directed by Langstroth. A tingling sensation on one of my fingers made me aware I had received my first wound, but I was too busily engaged watching and helping my bees into their new home to attend to it. Later in the evening I placed the hive on it—tand, and all was right.

If I tell you I hardly slept at all that night I suppose you will be amused; such was the sober truth; the bees drove all sleep from my eyes. In a couple of days, having kept out a frame for that purpose, I secured with clips three bits of honeycomb that fell out of the skep when I transferred the bees, and providing myself with some sweetened water and a roll of smouldering linen rags—still very nervous—took off the crown-board, slipped in the frame, noticed with much satisfaction some combs began in the frames, slid the crown-board on, and left them. I removed the supports in a few days, finding the bees had made

all secure. Nine out of the ten combs were begun; they had only been in the hive nine days. The 27th of June I put a glass super on, carefully wrapped in cotton wool, with two bits of guide-comb (all I had) in it, and did not look at it again for a fortnight, owing to being from home. When I did I found to my intense vexation no comb built, only a thick cluster of bees hanging at one end. The 21st of July I made a grand discovery—my bees had really begun making a comb. I caught a glimpse of it when the cluster of bees opened a little. I think that moment was one of the proudest moments of my life, for as no one about here has such a hive as mine, all skeps, I have had everyone telling me I shall do no good with these "new-fangled" hives. First I was told the bees would not take to the hive; I proved that wrong; and next, that they would not take to the super. So you see I have had no help except from books. I thought bees always worked from the centre of the super or hive; I found mine had begun the two outside combs first.

The beginning of August I saw the unlucky drones being dragged forth. I covered the wooden covering of my hive with a straw hackle, because I fancied the green paint attracted the heat. Did I do right? I also raised the adapting-board on wedges to give the bees more air. August 25th I took off the super, found two of the frames of the stock hive had stuck to the under side of the adapting-board. My bees got so furious that I received two stings before I discovered what was the matter. I retired, put on another pair of thicker gloves, and separated the frames with a knife. I managed to get the bees out of the super very well; they left directly it was tilted up a little. I found a little honey in the centre of one comb, which I afterwards tasted—my own honey; it was delicious. The bees had carried down all they had stored in the outside combs; about five combs were begun. I have put the super away till next year. I have another swarm of June 3rd, but they do not seem nearly so strong as the swarm in the Woodbury; the reason I believe to be is that I have not all the swarm, for the cottager from whom I bought them (for although I prefer to be given my bees, I am not too superstitious to buy) neglected to bring them the day they swarmed as she promised. The swarm had been put in my hive (an Economic, which I had previously left with the cottager, so I had no alternative but to have the swarm, so sent for them at once, and they were carefully carried home and no combs broken. So nine days after the swarm had come forth it was lodged in the garden. I tried a super on three weeks after swarming, but though the bees crowded into it, they refused to begin working, so I took it off at the end of August. The Woodbury swarm has appeared twice as strong as the other, more bees going in and out. The wasps have not troubled the bees much; if they get in they are hustled out immediately.

I cannot conclude without telling you how much your paper has helped me. Every week it is eagerly scanned to see if there is anything fresh about the bees. I assure you it has become much more interesting than any other kind of reading. My friends tease me, and say I have "bee on the brain." In spite of having my hands swollen several times, and once having to appear with a bandaged eye in consequence of the too close attention of one of my pets, and getting well teased, and asked if I was cured of my mania, to which I gave an indignant denial, I must sign myself—AN ENTHUSIASTIC MONMOUTHSHIRE LADY BEE-KEEPER.

SKELETONISING LEAVES.

THE solution for destroying the soft tissues is made by first dissolving 4 ozs. of common washing soda in a quart of boiling water; then add 2 ozs. of slaked quicklime, and boil for about fifteen minutes. Allow this solution to cool; afterwards pour off all the clear liquid into a clean saucepan. When the solution is at the boiling point, place the leaves carefully in the pan, and boil the whole together for an hour. Boiling water ought to be added occasionally, but sufficient only to replace that lost by evaporation. The epidermis and parenchyma of some leaves will more readily separate than in others. A good test is to try the leaves after they have been gently simmering (boiling) for about an hour, and if the cellular matter does not easily rub off betwixt the finger and thumb beneath cold water, boil them again for a short time. When the fleshy matter is found to be sufficiently softened, rub them separately, but very gently, beneath cold water until the perfect skeleton is exposed.

The skeletons at first are of a dirty white colour; to make them pure white, and therefore more beautiful, all that is necessary is to bleach them in a weak solution of chloride of lime. I have found the best solution is a large tablespoonful of chloride of lime to a quart of water; if a few drops of vinegar are added to the bleaching solution it is all the better, for then the free chloride is liberated. Do not allow them to remain too long in the bleaching liquor, or they will become very brittle, and cannot afterwards be handled without injury. About fifteen minutes are sufficient to make them white and clean-looking.

After the specimens are bleached, dry them in white blotting

paper, beneath a gentle pressure. Of course in this, as in other things, a little practice is needful to secure perfection. Simple leaves are the best for young beginners to experiment upon: vine, poplar, beech, and ivy leaves make excellent skeletons. Care must be exercised in the selection of leaves, as well as the period of the year and the state of the atmosphere when the specimens are collected, otherwise failure will be the result. The best months to gather the specimens are July to September. Never collect specimens in damp weather, and none but perfectly-matured leaves ought to be gathered.

A soft tooth-brush is a capital instrument for removing the soft tissues—much better than the finger and thumb. Indeed it is always advisable not to touch the leaves during the process, but to float them on a piece of wood when the brushing process is to be gone through.—J. B. C.—(English Mechanic.)

IPSWICH SHOW.—Acting under medical advice, Mr. Hewitt will not act as one of the Judges at this Show, but he hopes to fulfil his other engagements.

OUR LETTER BOX.

JUDGES AT POULTRY SHOW (Lester Bird).—Your letter would effect no good if published, and would probably be injurious.

LUMP IN FOWL'S FOOT (H. F. H.).—The callosities on your fowl's feet are not warts. All heavy birds are subject to the same. The great weight on the ball of the foot, and an occasional bruise, end by forming an abscess. It is from this cause heavy birds seem to find relief when they are able to squat on the grass. Where the swelling arises from the presence of some foreign substance, the removal of such a body is, of course, a cure; but when the patient is old, and has been getting more and more tender-footed for years, little can be done. It would have helped us to answer if you had stated the age of the bird. It is more than probable the hole of which you speak will never be closed again with skin, but we have known birds that live and fulfilled all their duties, although they had old sores upon their feet. We believe all you can do now will be to be sure the wound is thoroughly clean, then to apply some healing ointment, and to put the foot in a wash-leather bag. Put him in confinement, either in a small place or in any place where he will have grass, or something soft to walk upon.

TURKEYS' FACE SWOLLEN (L. M.).—Your young Turkeys are suffering from severe cold or incontinent roop. It is common at this season, when the nights get longer and colder. Wash the faces with cold water and vinegar. Do not prick them. Feed on stimulating food, ground oats, with a little pea and bean meal added, some green onion tops and some onion chopped with it. Give each bird two pills of camphor, each the size of a garden pea; also give twice per day some stale crusts soaked in strong beer. It may be they have roosted in a house where there are draughts. They would not mind such some weeks ago, but they would feel them now, and they would cause the cold from which they are suffering. See that they roost in a dry and sheltered spot, and while they are sickly do not let them out till the sun is up. They often suffer much from heavy cold dews and white frosts.

EXTENSIVE RABBIT BREEDING (W. H. H.).—We know of no such place as you seek. There was one many years ago at Aupthill, in Bedfordshire. It was kept by a solicitor named Fisher. He was before his time, and it failed for want of personal superintendence. There is no reason why Rabbits sh.uld not be bred as profitably in England as in Belgium; and although some may attempt to pooh-pooh the question, every day will bring fresh evidence that whatever adds to the food of a people by supplying nutriment at a moderate price, is not only a wise but a laudable pursuit. Your land should not be high-rented. Among the buildings there should be a spacious barn. All that you consume should be grown on the place, and produced at the lowest possible cost. The manure will help you to grow very large crops of green food, which must come in succession. Whenever you are without green food you will be losing money, or at least money's worth. The Belgians produce a sufficient number of Rabbits to enable them to send them by the ton, and to make a profit at 6d. per pound. They cut off the feet and ears and skin the carcass. All this offal goes for manure. The very cabbages are denuded of their lower leaves, and present the appearance of the trimmed Elms so common in parts of Middlesex, Berks, and Bucks. The houses are built in the plainest and most economical manner. Above all, the men who breed them start in a small way. They buy only that which they can pay for, and therefore do not start in debt. They have their correct and common-sense visions of a large establishment and considerable profits, and they attain to them, but it is by degrees. The failure of all our poultry schemes arises entirely from the fact that they want to start at maturity. They will have no childhood, nor adolescence. They must be "limited," have their directors, brokers, solicitors, bankers, managers, and by the time these are all provided the balance is, as Robert Macaire says, "zero." You may depend on your young Rabbits making 3s. per couple, and you can breed and feed them for less. If you have plenty of money you may start on a large scale; if you have not, put your shoulder to the wheel, see to it yourself, and you will increase and multiply.

MANDARIN WITH CAROLINA DUCKS (Subscriber).—Mandarins are very like Carolinas in all but plumage. They do sometimes interbreed, but seldom or never cross with any other breed. We believe we are correct in stating that very many years ago, when Colonel Sabine had the management of the Zoological Gardens, they had one Mandarin drake and no Duck; they therefore mated him with a Carolina Duck, and they bred freely. We should only keep them in pairs, and should give them pollard stems. East Indians may be put on at the rate of three Ducks to a drake. If your birds are properly pinioned they will be safely confined with 2 feet netting. When they find they have not the power of flight they become resigned. You need not fear your Carolinas and Mandarins crossing with other birds. Many have tried to induce them to do so, and all have failed.

LUMP IN PIGEON'S WING (A Reader).—Your bird has the complaint called "wing disease." Pinch out the flight-feathers of the wing so troubled, and by the time they have grown again the wing will most probably be well.

WHITE RUMP IN BLUE DUCKS (J. T.).—No blue bird having a white rump would now obtain a prize, it having been decided that the rump must be blue. All fancy points are difficult to obtain, and if they were easy they

would not be cared for. As each point is decided upon, fanciers must breed up to that standard, and face and overcome the difficulty.

NORTHAMPTON GOOD INTENT ORNITHOLOGICAL SOCIETY.—The Committee of Management in connection with the above Society have passed the following resolution, which will be strictly enforced:—"Should any unsuspected unnatural-coloured specimens be sent to our forthcoming Show, they will not be staged under any consideration, but will be immediately removed from the hall, and the Committee will take such measures as they deem necessary for the strict enforcement of Regulation 4. See schedule."

ROCHDALE RABBIT SHOW.—We are asked by Mr. Boyle, jun., to state that he was not the writer of the report which praised his Rabbits so highly.

IPSWICH DOG SHOW (F. W. C.).—Mr. Groom was certainly wrong to reply as he did, for the Show takes place on the 15th inst. If we inserted your letter we should have to afford space for replies.

GLASS SUPERS NOT FILLED (E. M. J.).—We advise you to remove from your hives the small glasses which are not filled, for if left on till spring they might be filled with brood before the bees begin to store up honey. As soon as the hives become full, say about the beginning of May, put the glasses on again. The advice you have received to discontinue feeding should not be carried out if your hives have not food enough to keep the bees till March. The sooner they receive enough the better. It is also time to cover and protect your hives for the winter. Damp hives and severe frost injure bees in winter.

METEOROLOGICAL OBSERVATIONS,

CAMDEN SQUARE, LONDON.

Lat. 51° 32' 40" N.; Long. 0° 8' 0" W.; Altitude 111 feet.

Table with columns: DATE, 9 A.M., IN THE DAY, Rain. Sub-columns include Baromet. (at sea level), Hygrometer (Dry, Wet), Direction of Wind, Temp. of Sun at 1 ft., Shade Temperature (Max, Min), Radiation Temperature (In sun, On glass), and In.

REMARKS.

- 1st.—Very hazy morning and evening, and not by any means bright during the rest of the day.
2nd.—A very pleasant day; rather cloudy in the evening, but fine at night.
3rd.—Rain in the past night; very slight rain once or twice during the day, but not sufficient to wet the stones; the air warm and very oppressive.
4th.—Dull, dark, and rather chilly; sprinkling of rain, but not sufficient to measure.
5th.—Dull till noon; afternoon fine and less hazy than for some days.
6th.—Very fine in the morning, but rather cloudy in the after part of the day.
7th.—Dull morning; rain commencing about noon, continued till the evening; night fine.

Mean temperature (at 9 A.M.) about 3° higher than last week; the temperature generally more equable, the nights being warmer, and the days cooler; there being but little sun, and frequent haze. No rain till the 7th, but very heavy dews.—G. J. SYMONS.

COVENT GARDEN MARKET.—OCTOBER 8.

THERE is very little to all to last week's report. Trade is limited very much to the wholesale branches. Continental supplies are large, comprising Apples, Pears, Grapes, Melons, and a few late Peaches.

FRUIT.

Table listing fruit prices: Apples, Apricots, Cherries, Chestnuts, Currants, Figs, Filberts, Cobs, Gooseberries, Grapes, Lemons, Melons, Mulberries, Nectarines, Oranges, Peaches, Pears, Pine Apples, Quinces, Raspberries, Strawberries, Walnuts.

VEGETABLES.

Table listing vegetable prices: Artichokes, Asparagus, French Beans, Kidney Beans, Beet, Broccoli, Cabbage, Capsicums, Celery, Carraway, Celery, Cole-worts, Cucumbers, Endive, Fennel, Garlic, Herbs, Horseradish, Leeks, Lettuce, Mushrooms, Mustard & Cress, Onions, Parsley, Parsnips, Peas, Potatoes, Radishes, Rhubarb, Salad, Scorzonera, Sea-kale, Shallots, Spinach, Tomatoes, Turnips, Vegetable Marrows.

WEEKLY CALENDAR.

Day of Month	Day of Week	OCTOBER 16—22, 1873.	Average Temperature near London.			Rain in 43 years	Sun Rises	Sun Sets.	Moon Rises.	Moon Sets.	Moon's Age.	Clock after Sun.	Day of Year.					
			Day.	Night.	Mean.	Days.	m. h.	m. h.	m. h.	m. h.	Days.	m. s.						
16	Th	Valmerius died, 1730.	59.0	40.1	49.5	18	28	af 6	3	af 5	34	0	4	25	14	26	289	
17	F		58.8	40.7	49.8	19	30	6	1	5	46	1	13	4	26	14	38	290
18	S		60.4	40.7	50.6	21	31	6	59	4	55	2	25	4	27	14	49	291
19	SEN	19 SUNDAY AFTER TRINITY.	59.4	41.7	50.5	22	33	6	57	4	4	4	37	4	28	15	0	292
20	M		59.0	39.2	49.1	20	35	6	55	4	14	5	48	4	29	15	10	293
21	Tu		58.4	39.5	49.0	18	37	6	53	4	25	6	59	4	●	15	20	294
22	W	Sir Roderick Marchison died, 1871.	58.9	42.4	50.6	23	38	6	51	4	38	7	14	5	1	15	28	295

From observations taken near London during forty-three years, the average day temperature of the week is 59.1°; and its night temperature 40.6°. The greatest heat was 69°, on the 22nd, 1863; and the lowest cold 29°, on the 21st, 1842. The greatest fall of rain was 0.96 inch.

WINTER FLOWER GARDENING.—No. 2.



HE beds, when cleared of their summer and autumn occupants, should be trenched, a liberal dressing of manure being applied and put in between the spits in trenching. Leaf soil or well-rotted manure should be applied to the surface and pointed-in with a fork. If the beds are to be planted with bulbs, or plants that do not succeed in a close soil, sand or some other opening material may be added and mixed with the soil, and to most kinds of ground a dressing of lime would be very beneficial, especially those that are heavy and close. All soils except chalk and limestone are benefited by the application of lime and old mortar rubbish, broken up small so as not to interfere with the dressing of the beds.

Now, as we intend to occupy the beds at once, this trenching and manuring of the beds may seem superfluous and not consonant with good practice; but I hold that autumn is the proper time to enrich the ground, so that by spring the materials may be dissolved or decomposed, and so mixed with the soil, ready in a liquid or gaseous form, for the summer plants to lay hold of; and not in spring prior to planting, as some time must elapse ere the fertilising properties are mixed with the soil, and in a form for the roots to benefit by. The plants that we shall call to our aid for winter gardening will be shrubs and plants with green, coloured, and variegated foliage, with a few flowering subjects that will avail us between now and the end of March.

The first subjects I will name are shrubs, and the first on the list shall be the Ivy, and of the tree kinds, there being few, if any, evergreens than can vie with these in the bright gloss of their leaves and decided characters.

Hedera arborea Rægnieriana.—Deep green, bright, glossy, large, heart-shaped leaves. Distinct and good.

H. arborea aurea.—Large, thick, leathery leaves, with golden variegation.

H. arborea elegantissima.—Thick leaves, with white variegation.

H. arborea fructu-luteo.—Large, thick, leathery leaves, bright deep green. When covered with its bright yellow berries it is magnificent.

The Ivies above named are very distinct, and of themselves afford materials for making a good bed, or bed alone, each and all, separately or together. We can have a centre of the bright, deep green, bold-foliaged Rægnieriana, a broad band of the golden, and margin the bed with the silver, and on the extreme edge of all Snowdrops, placing them in a continuous line about 3 inches from the margin of the grass, where they may remain permanently. Chumps of Snowdrops should be planted in the angles that will be formed by the outer line of Ivies, so as to prevent any appearance of soil on the margin of the bed. The Ivies should be grown in pots, so that they can be moved safely, or at least for a time, potting them in autumn when removed from their summer quarters, and in pots that will hold the roots comfortably. Light

fibrous loam, with a third of leaf soil or well-rotted manure, and a fourth of old mortar rubbish, will grow them well. The pots should be well drained, and the potting firm. When placed in the beds the pots should be plunged so that the rims may be covered, but when removed from the beds they should only be plunged level with the rim. In summer they should be well supplied with water and occasionally liquid manure, the pots being surfaced with fresh sheep droppings or cow dung, mixed with an equal quantity of loam, laid on an inch thick, and dished for holding water. The shoots should be kept closely pinched, if they are disposed to grow at all irregularly, and the plants formed into bushes 12 to 18 inches high, keeping them to a single short stem. They are best grafted on the common Ivy (*Hedera Helix*), choosing for grafts parts that have the tree character well developed. For town gardens these Ivies are invaluable, and give a charm no beds of bulbs can afford in winter.

Aucuba japonica mascula.—Green leaves, not unlike those of the common Laurel.

A. japonica limbata.—Bright green leaves, with a broad stripe of white up the centre equal to about one-third the width of the leaf.

A. japonica longifolia.—Bright deep green leaves, longer and narrower than any other variety; the leaves deeply serrated, elegant in growth.

To these we may add the old variety with its golden-blotched leaves.

These plants are also well suited for town gardens, and move with such fine balls as to be well adapted for beds in winter, as they can be moved without experiencing any or a very slight check, which tends to a close leafy growth, all irregularities of growth being removed in summer so as to promote and maintain a compact growth. If any pruning be required, which will apply to the strong growths only, it should be done in spring, before or when growth commences. The plants ought to have single stems, branching close to the ground, and be kept dwarf, though it is well to have them of three sizes—12 inches, 18 inches, and 24 inches for large beds. The roots may be kept within bounds by cutting away their long parts in autumn. After planting in the beds in autumn they should have a good watering to settle the soil about the roots, and also in spring after they are placed in the reserve ground.

The Aucubas form fine masses either separately or together. The green kinds may have edgings of double red Hepatica or the single white Hepatica; *A. limbata* margined with double red Hepatica; and the old sort, with yellow-blotched leaves, margined with blue Hepatica or Scilla sibirica.

If they are massed in one bed the green-leaved mascula may occupy the centre, with limbata next it, then longifolia, and the old sort outside, margined with blue Hepatica; or the planting may be reversed, dispensing with mascula, and margining the bed with *Euonymus radicans variegatus*, or if the situation be exposed, *Skimmia japonica*.

Skimmia japonica.—Leaves green, margined with

creamy white, and bearing bright red berries. This is simply superb for a small bed by itself, and very desirable for margins to those of larger growth. It moves well, having good balls, and requires peat soil.

Erica herbacea carnea.—Grows but a few inches high, is a mass of bright, deep flesh-coloured bloom in December onwards, and is fine for margins or small beds. It requires sandy peaty soil.

Andromeda floribunda.—Deep green leaves, with white bell-shaped flowers, and sweet. The plant naturally forms globular heads, and is one of the finest of low-growing shrubs. It lifts well, having an excellent ball for the purpose. Requires sandy peat soil.

Vinca elegantissima.—Creamy or yellowish variegated-leaved Periwinkle, and very fine, either as a margin to beds of other kinds of shrubs, or in a bed margined with blue Hepatica or Scilla sibirica.

Hypericum calycinum.—This has pale green, or rather yellowish green, foliage, but in some cases is subject to lose its leaves in winter, otherwise it is very desirable; and yet I can hardly recommend it, owing to its liability to loss of leaves. I have, however, seen it very fine in foliage during winter, and when this is the case it may advantageously be employed. It moves well.

Now, those are all I can from experience advise of shrubs for town gardens. Rhododendron daphnoides, myrtifolium, ovatum, and Wilsoni have neat foliage, are of low growth, and may with safety be employed, they moving with excellent balls, and give quite a cheering appearance during the winter months, besides flowers in early summer.—G. ABBEY.

THE MANETTI STOCK.

LET me warn any of my fellow rosarians not to be over-kind to Roses worked on the Manetti stock. I have lost since last autumn nearly two hundred plants of the best varieties, and I firmly believe that it is from having made my soil too rich. Mr. Keynes in his catalogue says, "It is difficult to give the Rose too rich a soil." I think he should add in another edition, "if worked on the Briar." The trees that have died here were nearly all supplied from his nursery, together with a large number of standards. The Manettis were small weak plants, but the standards were very fine. I had six Briars and six Manettis of each variety; they were planted in exactly the same soil—an exceedingly rich compost of the top spit of old pastures, ditch-seourings, and horse manure. The standards for the most part did well, but, with the exception of Clotilda Rolland, there is scarcely a healthy dwarf left. I took up a lot of them and sent them to Salisbury, and asked if they could account for it. A great deal of the soil was attached to the roots, and so they could see how they had been treated. The foreman in the absence of Mr. Keynes wrote back, "Your soil is too good; take up all your dwarfs and plant standards there instead." This I am going to do, and I advise all Rose-growers who find their Manettis gradually dying down to lift them and put them in lighter and poorer soil.

This, however, only shows what a wonderful stock the Manetti is for Reses. It does not require one-quarter the dressing that the Briar does. It is far more elegant in appearance, and it lives four times as long. Mr. Radclyffe told me that I might grow Manetti Roses in brick dust, and I believe him. My natural soil here is worse than brick dust, and I am going to try a few hundreds of Manettis in it after first deeply trenching and dressing it. There is another great recommendation also in the Manetti, and that is the great ease with which you can increase the stocks. When you have only to plant cuttings, and when struck bud them, or, if you do not want to be bothered to do this, or have not the space to spare, can give an order to any good nurseryman for as many as you require, you have not the slightest difficulty in working as many as you please. But with the Briar it is altogether *vice-versa*, as a man said of his second wife, when he put an epitaph on his first wife's tomb, "She died in love, and peace, and goodwill towards all mankind."

The Briar is a most difficult subject to handle. In the first place the farmers do not like their hedges pulled about. Many of the largest cultivators of the land forbid any Briar-man to come on their farms. The work, too, of extracting them is the very roughest that can be imagined. "Please, sir," said my Briar-man to me, "will you give an old coat and a pair of overalls to get them Briars in, for mine last year were all torn to rags?" "Why, man, my things would not last you a

week. Go and buy some fustians, and I will give you my clothes when you have done." Then, again, there is the great demand for Briars, which causes them to be very scarce, and it is hardly any use going over the same farms two years in succession. Then, too, in this part, and I dare say in many others, the farmers who allow you to go over their farms expect a *quid pro quo*, so altogether it is expensive work. And yet except for Teas the Manetti will produce as fine, and in many soils much finer Roses than the Briar. If anyone doubts this who is used to growing the Briar only in a grand, strong, stiff loam, I would refer him to Mr. Cranston, of Hereford. Let him visit his nurseries, or look at his stands at one of our great Rose shows, and he will see what the Manetti can do. We in the west could do nothing without the Manetti, and every day we live we bless the man who introduced it—the man who has done more than anyone in England to improve the Rose, and promote its culture—the man whom Mr. Reynolds Hole so fitly terms, "Field Marshal Thomas Rivers."—JOHN B. M. CAMM, *Monkton Wyld*.

A FEW SORTS OF TOMATOES.—No. 1.

KNOWING that of late years this valuable fruit or vegetable has rapidly increased in favour and popularity, I thought it would be well to grow a few of the many sorts that have from time to time been introduced as candidates for a share of public patronage, and try to prove their worth when compared to that old and well-tried variety the Common Red, or Large Red as it is sometimes called; and at the same time I was fully prepared, both from the descriptions given of these new varieties, and from the belief that those who introduce them were fully aware of the high merits of the Common Red Tomato, and the estimation in which it is held by cultivators in this country, to find that there was considerable advance made in these new introductions. The result, however, has not in several cases come up to my expectations, as the descriptions below will testify. Before proceeding to describe each individual variety, I will just state the conditions under which they were grown. My intention was to treat them as nearly as possible all alike; I therefore gave them all a southern aspect against a wall 10 feet high. I prepared stations for the plants by digging out places 2 feet wide and 18 inches deep. I took off the first spit of earth and formed a ridge with it round the hole; these holes were then filled up with well-rotted manure of whatever sort came to hand, and dug-in with the earth at the bottom, and mixed well with it. This was done in March, and before the plants were put in, the soil had time to become sweet and pulverised. Seeds of the different sorts were sown in a gentle heat the second week in March, and the second week in May the plants were put out in their respective places. At this time the different holes required a little filling-up; therefore a portion of the soil previously laid outside was mixed-up with half-rotten manure and put on. This operation was repeated, as long as the soil lasted, several different times during the growth of the plants; and plentiful supplies of water, and sometimes liquid manure added to it, were given to them twice a-week. The plants were all allowed to grow to the height of 4 feet, were confined to one stem to that height, at which they were stopped, and pinched-in to that height during the summer; consequently there were from four to ten bunches or clusters of fruit on each plant, according to its habit of producing them. As the fruit grew each cluster received a thinning, till all the plants had one and a final thinning. As the shoots came forth they were pinched-off, leaving a few leaves at the base of each shoot. The fruit swelled amazingly according to its respective size and habit, and on the 10th of September the first dish of fruit was picked. The following is my description and opinion of the different sorts.

ORANGEFIELD.—Moderate in growth, very prolific. Fruit large and fleshy. Skin thin and deeply ribbed. Ripens to a good colour, and on the wall it is ready to pick nearly a week before any other sort. When grown in the open ground trained to stakes, for which this sort is particularly suitable, its fruit is fit to gather at the same time as the Common Red Tomato. On the whole, I consider this sort well worth growing, and I believe it is excellent for pot culture and forcing.

SIMS'S MAMMOTH.—Growth vigorous. Foliage distinct from any of the red class of Tomatoes, being broader and coarser, much lighter in colour, and having rather a drooping habit. It is a moderate bearer, with fruit of middle size, slightly ribbed but fleshy, with a thin skin, and more pulpy in pro-

portion to its size than the preceding sort. It is both smooth and soft, ripens very slowly, and is fully a week behind the Common Red. I consider this a second-rate variety.

THE TROPHY.—A coarse-growing sort. The foliage and habit are identical with the Common Red, and it is a moderate bearer. The fruit is produced in loose clusters with very long stalks or stems, but it is both broad and thick, and grows to a large size, very many of the fruit weighing from three-quarters to a pound each. It is not very thickly nor deeply ribbed. It is one of the broad and flat sorts, but it is very fleshy, though coarse-grained. The skin is thick, and it ripens very slowly, being fully a fortnight behind the common sort. I fancy the weather has not been hot enough to bring this fruit to perfection, otherwise to me it seems to possess some qualities which will induce me to grow it again.

HEPPER'S GOLIATH.—Grown as it was close by the side of the preceding sort, I have been unable to discover any difference between the two. If I have the right one (and I believe I have, for it is the same as I saw under that name elsewhere), it is identical with The Trophy in every respect.

CHARTER OAK PRIZE.—As far as habit of growth, size, and colour of foliage goes it is similar to the Large Common Red, but its fruit are totally different. The majority of them are approaching to a round shape, though many are different, slightly ribbed towards the stalk, and scarcely any ribbing on the fleshy portion of the fruit. It is a full-sized thick fruit, flattened on the top, and is characterised by each fruit having a hole in the top half or three-quarters of an inch over and the same in depth, terminating in a point. If this peculiarity could be got rid of, it would be one of the best Tomatoes grown; as it is, it is very little short of it. The skin is thin, and the flesh is very pulpy and fine in texture. It ripens quickly after the Common Red, which I have taken as a standard in forming my conclusions. It is my opinion that Charter Oak Prize is a first-rate sort to grow. Its flavour, I am told, is excellent, and it ripens to a better colour than any I have yet named.—THOMAS RECORD.

AN EXPERIENCE IN TRANSPLANTING VINES.

MR. WRIGHT has written an excellent practical article on the Vine, and I wish he would give his directions for making the first-rate Vine border of which he speaks. I am induced by that article to send you the result of an experiment I lately made on Vines. I feel sure that it will interest some of your readers. It was so unexpectedly successful, and so strongly illustrates the hardy nature of the Vine. One can almost do what one likes with it; the difficulty is to kill it.

My vinery, containing five Vines, did not succeed; they grew weakly, and though there was plenty of fruit, the grapes always cracked before ripening, and were useless. The Vines were about twenty years old. Believing that I had truly surmised the causes of the failure, I determined to move the house to a better position, with an attempt to replant the same Vines in it, but fully expecting that they would, at that age, be killed by the removal; it was, however, worth trying.

My plan was this:—In February of last year I cut the Vines down, far below any buds, to within 6 inches or a foot from the ground. This ought to have been done the preceding autumn. They bled profusely for three weeks, and I gave them over as having sunk under the severe operation; but the violent shock caused a reaction and a vigorous effort. Some little time afterwards they began to bud, and threw out, instead of their former weakly branches, the strongest shoots, perhaps, that I ever saw growing on a Vine. I let them grow all the summer, stopping the tops slightly in the autumn to ensure perfect ripening. In November I moved them. The new border had been excavated half a yard deep, and filled with a good, kindly, but rather light loam, without a particle of manure or dressing of any kind. The roots were spread out carefully fan-fashion, as near the surface as possible, and lightly covered—not trodden, which I consider a mistaken practice. A good coating of stable manure was spread over the surface soon after. I intend never to dig the border, but feed by successions of top-dressings. This year I let the Vines grow by themselves for some time to recover. About June I headed them down again, but this time to the lowest new shoot. They have since been doing well, and have made very fairly strong well-matured shoots, and (the best test of a Vine's being in a healthy condition) large leaves. Grapes do not crack in the house now. Applying the result of this experiment to Mr. Wright's remarks upon the spurring system, in which I entirely agree, I fancy that it

suggests a method of renovating Vines, and filling up the blanks of which he speaks.—ROBB. BLACKBURN, *Selham Rectory.*

AUTUMN ROSES.

Now, while the sunset glories of our Roses still linger, while a glowing tint here and there ever reminds us of the meridian splendour, let us wander through our garden, let us note with grateful pen the names of those varieties which are proving that they deserve the title of "Hybrid Perpetual."

The rude winds of the equinox, like fretful children tired out with play, have cried themselves to sleep; and gentle autumn is tenderly loosening from the long shoots the wearied and worn-out leaves. On every side signs of decay and desolation provoke in the heart a sweet melancholy; and earth's children that have borne the burden and heat of the day are sighing for rest. But even as we write, the sweet fragrance of autumn Violets, born as it were before their time, harbingers of another spring, a bright to-morrow, mingles with that of the queen of flowers, and whispers to the falling leaves and the drooping heart that blessed promise, "Thou, too, shalt rise again." Yes, we love our sweet flowers, but they fade. We love the fair things of this pleasant earth, but both they and it shall pass away. Happy those who can say in childlike faith, "It is well."

But we must have eyes now only for the Roses. The past season has been on the whole rather unfavourable. In the spring and early summer we suffered much from high winds, and during the latter part of the summer and early autumn the heavy rains spoil the blooms. The last fortnight has, however, been lovely, and I never remember such an abundant and beautiful autumn bloom as we have had this season. We are still cutting Roses that would not disgrace the benches of any flower show; and as there are, probably, many who are about to plant, it may not be inopportune to mention the names of those that have done, and are still doing well. We will take them alphabetically.

Abel Grand is still blooming freely. This Rose is a true Hybrid Perpetual, but the quality of the autumn flowers is much inferior to that of the summer.

Alfred Colomb begins to bloom rather late—seldom before the first week in July, but is of first-rate excellence both in summer and autumn. It is still in bloom.

Baronne de Muguard.—A pretty and constant white Rose for the garden; it is too small for show. This has been blooming freely this autumn.

Belle Lyonnaise (Tea).—A valuable addition to this class, equal in all points, apparently, to *Gloire de Dijon*, but lighter in colour. Still blooming beautifully.

Boule de Neige.—White; very pretty and sweet. Blooming freely at present.

Camille Bernardin.—A Rose of first-rate excellence, in bloom from early summer to late autumn, and always sweet and good. One of the very best.

Catherine Mermet (Tea).—A good and distinct Rose, very free-blooming.

Cécile Forestier (Tea-scented Noisette).—A most useful and pretty Rose. Early, late, and constant bloomer.

Centifolia Rosa.—This Rose has been lovely with us in the present year; but it blooms very sparingly in autumn. We still cut, however, a few exquisitely-shaped blooms.

Charles Lefebvre.—A grand Rose of fine substance and quality, not very floriferous, but still producing excellent blooms.

Comtesse d'Orford.—A thoroughly good summer and autumn Rose, lacking no good quality but scent. Still blooming freely. Extra good.

Devoniensis.—One of the very best Teas. Lovely, sweet, and free-blooming.

Dr. Andry.—A little uncertain during summer, but very good this autumn. A grand Rose when in character.

Duchesse d'Orléans.—Opens late, but always very good in autumn. It blooms till cut down by frost.

Dupuy-Louain.—A most splendid Rose, good all the season through; robust, free-blooming, of splendid shape and colour. After this season's experience I should place it among the first twelve. It is still blooming beautifully.

Emilie Hansburg.—This Rose comes into bloom very late, and, moreover, throws up many blind shoots. The flower is most charming, but too sparingly produced to warrant my giving it such a high recommendation as many did last season.

Ferdinand de Lesseps.—A lovely and fragrant Rose, much

like Exposition de Brie, on which, however, it is an improvement. An abundant autumn-bloomer.

Fisher Holmes.—A beautiful dark Rose, with thick petals. A constant and late bloomer.

Général Jacqueminot.—Not very double, but in every other good quality not to be surpassed. It has bloomed beautifully this season.

Gloire de Dijon.—Same as ever—good.

John Hopper.—We cut a most lovely bloom of this Rose to-day (October 7th); but it is not usually up to the mark late in the season, though very fine and constant earlier.

La France.—Not so good as usual this season. Fine weather appears to suit this Rose best, though it does tolerably well at all times. Very floriferous and sweet.

Louis Van Houtte.—A superb dark Rose, gorgeous in colour, richly scented, and constant. A fine autumn-bloomer.

Madame de Rothschild.—A magnificent Rose, a true Hybrid Perpetual; but it has not been so good as usual with us this season. No scent.

Madame Victor Verdier.—A superb crimson-scarlet Rose, good in every way. Very free and fine in autumn.

Madame Willermoz (Tea).—A most beautiful and free-blooming Rose. Still to the front.

Mlle. E. Verdier.—Most charming, distinct, very floriferous, and a thorough perpetual. One of the best, but it has no scent.

Marquise de St. Amand.—Very good, blooming well this autumn.

Marquise de Castellane.—A Rose that is better with us in autumn than in summer. A lovely clear rose colour, and very free-blooming.

Maréchal Niel.—A grand Rose, Tea-scented, blooming very early in summer and late in autumn, but sparingly in mid-season, except from buds of the year. This Rose has been more than usually good this season, and is still producing excellent blooms.

Paul Néron comes in late; its chief recommendation is its great size.

Pierre Notting.—A good Rose, producing fine autumn blooms, but rather uncertain early in the season.

Séateur Victor.—As good as Madame Victor Verdier, which it much resembles.

Souvenir d'un Ami (Tea).—This Rose has done remarkably well this season early and late; still in bloom.

Souvenir d'Elise (Tea).—A lovely sleepy-looking Rose, with large petals, very constant, and still in bloom.

Souvenir de la Malmaison.—A good old Rose, well known as an abundant autumn-bloomer.

Victor Verdier.—Still in flower. A fine handsome Rose, but scentless.

In making these notes at the present time many most excellent Roses are of necessity omitted, such as Marie Baumann, Prince Camille de Rohan, and others, which do admirably up to the end of August, but afterwards have blooms so much inferior to those produced earlier in the season as to be almost worthless.

What is chiefly remarkable is, that of the thirty-six varieties named, no less than eight are Roses sent out in 1870—viz., Belle Lyonnaise, Catherine Mermet, Comtesse d'Oxford, Ferdinand de Lesseps, Louise Van Houtte, Mlle. Eugénie Verdier, Marquise de Castellane, and Paul Néron.

It is also remarkable that, although such a multitude of new varieties were introduced in 1872, my experience of them has not led me to give any of them a place in the above list. The most promising appear to be Etienne Levet, Richard Wallace, President Theirs, and Lyonnais, three of which are scentless. I should much like to hear if any of the 1872 Roses have done better in other hands.

Of the new Roses of 1873 which have bloomed in my garden this season, the most promising appear to be Claude Levet, MacMahon, Duhamel de Monceau, Félicien David, Mrs. Veitch, and Madame Lacharme. Perle de Lyon (Tea) is apparently a valuable acquisition.—R. W. BEADLEY, *South Devon*.

DOUBLE-BLOSSOMED PEACH FRUITFUL.—In the gardens at Clontarf, near Dublin, the seat of Sir A. Guinness, Bart., is to be seen on a wall a beautiful, trained specimen of the double-flowering Peach, bearing from four to five dozen splendid fruit—well coloured, and of a most delightful flavour. Mr. Smith, the intelligent gardener, informs me it has fruited before. Is it not a very unusual thing to see fruit as above stated? I

may also state that the crops of Apples and Pears are everything that could be desired; some are most extraordinary fruits.—A. O., *October 8th*.

BUSH AND PYRAMID APPLE AND PEAR TREES.

I AM glad of the success of Mr. Douglas with the Apple on the Paradise, and the Pear on the Quince stock. What have others to say on the subject? Have those cultivating these trees found them produce satisfactory crops in the last three seasons?

Our Blenheim Orange is eight or nine years planted, and I do not think it has produced a single fruit, and is about as likely to do so as it ever was. Other specimens of the same kind are no better, the first fruit has yet to appear on them. There is reason to know they are on the Doucin stock, on which are other kinds which seem to thrive, except the Hawthornden, which is cankered to a frightful extent. Even the Ribston Pippin is remarkably vigorous and free of canker, not a speck anywhere to be seen on the shoots, branches, or stems. But as if to tell us that the freedom from canker is not due to the stock, we have a Ribston on the same stock that was entirely eaten by canker to within 6 inches of the stock two years ago, and this tree has now branches as free of canker as the others.

Beurré Hardy Pear is a magnificent pyramid, as free on the Quince as we have it on the Pear stock. The graft has in this instance "overruled the stock quite." Other instances may be mentioned in Jargonelle, Zéphirin Grégoire, Beurré de Capiaumont, Bergamotte Espéren, Beurré Bivort, Beurré Diel, Beurré d'Aremberg, Marie Louise, and Beurré Giffard of the dwarfing influence attributed to the stock not being apparent, and in no wise contributing to their fruitfulness.

The effects of the Quince on the Louise Bonne are so marked that two trees have died outright, and another has all the leaves withered and the wood drying-up. More are so weak in growth that it is plain their days are numbered. What a contrast to those we have of this kind on the Pear! Who will set us right in the matter of stocks for fruit trees?—G. ABBEY.

TUBERLESS POTATOES.

EXAMPLES are asked for. I produce one. It may, however, not meet the case of "H. H. S." I was the other day called to sit or stand in judgment on apparently one of the finest pieces of Potatoes ever seen growing. The strength, length, and vigour of the haulm were extraordinary. The yield was by the owner expected to be immense. It was nothing—absolutely nothing. There were no tubers, and no signs of there having been any. Neither were there any traces of wireworm or other subterranean enemies which might be supposed to have destroyed the incipient tubers. They, the wireworms, have, however, in this case no right to be blamed, as the cause was clear. The plot on which the Potatoes were growing was deep, light, old garden ground. Its depth and lightness were further increased by shifting a lot more similar soil and putting on the top of it, making a depth of not less than 4 feet of soil rich in humus and deficient in calcareous matter. In such soil tubers will not form.

In a square of the garden under my charge I found that the Potato plants would not tuber. It was a black mould 3 to 4 feet deep, and for years the practice had been to trench into it hotbed manure—mainly rotted leaves—freely; so light was it that no difficulty was found in sinking a spade quite up to the handle. Stopping the manure and the trenching, and lightly digging-in fresh soil, as roadside trimmings, &c., and even planting some crops without digging at all, have been the means of consolidating the plot and making it better for everything. There must be some resisting power in the soil to induce a free formation of tubers. In soils too hard the tubers form in a cluster close round the stem, they ripen early and are small, lacking support by a cramped and restricted root or fibre action. In frames, if light soil is used and thrown in lightly also, the crop will not be so early or productive as if the same soil were trodden reasonably firm. Some soil, of course, requires no artificial firming, it may be already too firm and too close, and must be trenched to secure aération and what we call lightness. But the indiscriminate trenched of all soils for Potatoes is erroneous. Soot is one of the best manures on heavy soil for Potatoes—and perhaps everything else—but if freely used on very light and also deeply-worked

ground the result will be any amount of top and veruſſe bottom. As a ſolution of "H. H. S.'s" difficulty theremarks may be a "mile off the mark;" it is, however, aſſe experience that may be uſeful to ſomebody.

Some Belgian Kidneys purchaſed in the maſts, preſumably the ſame as thoſe to which "H. H. S. Mudes, are really excellent in table qualities—light, whitened of perfect flavour. Before cooking the ſkin is light red they are earlier than the Regents, and hardly average epers. On this account they will not be extenſively grov good in quality though they are.—J. WRIGHT.

PROPAGATING CENTAUREA RAGUSINA.

MR. ROBERT STEVENS (e page 253) has moſt certainly achieved a great ſucceſs rooting cuttings of theſe plants ready for potting-off in two or three days. For thoſe who may not have his means or ad ſucceſs the following mode of ſtriking Centaurea may be uſeful; it is a plan which has been practiſed for ſome years a unvarying ſucceſs. Let a few old plants of Centaurea ad in the borders all the winter, and at the latter end of Feb or beginning of April take them up, and ſtrip-off the te ſhoots with a heel, then remove the lower leaves, and ble-in the ſide ſhoots in the flower beds where they are inſted to ſtand during the ſummer. Take care to make eaebutting firm in the ground, and ſucceſs is certain.—A SCREWER FOR THIRTEEN YEARS.

THE RIBSTON PIPPIN.

IN poſe to Mr. J. Wright's invitation by Journal of 9th October, I report the poſſeſſion of buſh trees ſix to ſeven years of age from grafts; bright bark, glowing foliage, and gorous ſtem, branch, and twig, fruiting but ſparely, but maing fruit-ſpurs abundantly. The ſtocks are Crab, the ſix to 7 feet in height and diameter of head, and the ſoil byn heavy loam, ſubſtratum marl, and underlying ſandſtone. Theſe of equal ſize and vigour I poſſeſs of various varieties, : ſoil apparently genial to all alike; pyramids alſo, 10 to 12 feet high, tapering from 6 to 1 foot in diameter. I have pple, Pear, and Plum trees on Crab, Pear, Quince, and plum ſtocks, fruiting and preparing to fruit without much, if ny, diſtinction in growth and health. I have yearly ſtrown the ſurface ſoil with lime after top-forking over, more to get poroſity than to give this ingredient to the land. Sand, too, was added, ſo that lime and ſilica may contribute to the ſeeming ſucceſs of my trees; but development, ſize, and chary pruning, I imagine, have their degree of deſert in my hands.

As to Paradise ſtocks, a definition of the name is wanting. Are theſe ſtocks Engliſh or French, Burr Knot, Nonesuch, Stibbert, Doncin, Pommier de Paradis, or Apple-pip ſeedlings, or what? I know a little of theſe ſtocks, though but little, and fancy, by comparison with the Crab, that they won't laſt, and although predispoſed to fruit ſoon, do ſo fitfully; in fact, bear the "hectic fluſh" of bloom, and will die of conſumption induc'd by precocity. I may be wrong, and am open to correction. I think that we muſt reaſon from analogy, and following the preference of Mr. Douglas for Crab ſtocks and ſtandard trees, we muſt not depart too far from Nature's becheſts in our own cultural conceſts.—S.

NOTES ON LILIES.—No. 4.

LILIUM TIGRINUM FLORE-PLENO.

BEFORE deſcribing this Lily I will, according to your ſuggeſtion, ſay a few words as to our mode of growing Lilies. We have found the beſt ſoil to be a mixture of two parts peat and one part of loam, with, when the loam is at all ſtiff, an addition of half a part of ſharp river ſand. In the orchard houſe we prefer to uſe rather large pots, and to place the bulbs from 1 to 2 inches under the ſoil. When ſtrong growth has begun the plants require frequent watering. When Lilies are grown in the open ground we have found moſt ſorts grow well in dwarf Rhododendron beds in deep peat. We have had this ſeaſon ſome ſplendid clumps of *L. auratum* at the top of a rootwork with a northern aſpect, in a deep bed of about three parts peat to one part of loam; while *L. Leichtlinii* has bloomed well in an eaſt rockwork border, on ſoil compoſed of about two parts loam and one of peat. In the open, to eſcape danger from froſt, we plant the bulbs 5 or 6 inches deep. Some Lilies, like the old garden white Lily, *L. candidum ſimplex*, ſeem to prefer a larger admixture of loam; and according to

Mr. Berkeley's experience, *L. Szovitsianum* blooms well in a ſtiff ſoil. *L. ſpecioſum (lanceifolium)* is eaſily pleaſed. We tried three ſets of equal-ſized bulbs in as different compoſt as poſſible—ſome all loam, ſome all peat, ſome loam and old manure, and ſome in our uſual mixture of two parts peat and one of loam with a little ſand. The laſt ſhowed rather the beſt growth, but there was no very ſerious difference between any of the pots. This ſeaſon in our beds in the open we ſhall uſe rather a larger proportion of loam to the peat. Here, as we have no more eaſts than mice, Lilies in the open muſt take their chance of water from the ſkies, as they very ſeldom get it from the water-barrow.



Liliium tigrinum flore-pleno.

To return to the ſubject of the photograph, the double Tiger Lily. Its beauty depends more than in moſt Lilies on its cultivation. We have heard more than one good authority ſpeak ſlightly of it, ſimply becauſe they had never ſeen it decently well grown. We have it flowering fairly well in a rockwork bed facing the north, but not at all to compare with the plant photographed. Its height from the ſoil of the pot was 5 feet. It had thirteen blooms to a ſtem. The leaves were 7 1/2 inches long. The flower, beſides being very beautiful, has the merit of laſting long. We found our firſt bulb among ſome Lilies from Japan. It was curious to ſee the firſt bloom expanding its petals, one tier after another; we did not know what to make of it. We ſhowed it at South Kenſington in Auguſt, 1870, when it received a firſt-claſſ certificate, which in my humble opinion it moſt thoroughly deſerves.—GEORGE F. WILSON.

ARAUACARIA IMBRICATA FROM ENGLISH-SAVED SEED.—MESSRS. MITCHELL, of the Pitdown Nurseries, near Uckfield, have a diſpoſing batch of ſeveral hundred Araucarias, raiſed from

seed gathered off one of the fine specimens of this tree, for which Piltown is so famous. The tree is about seventeen years old.—E. J.

CULTURE OF CAPE GERANIUMS.

In answer to Mr. J. R. Pearson's paragraph in your number of the 2nd of October about the growing of Cape Geraniums, I send the following few remarks, which I hope will prove beneficial to him, and many others besides. I have grown these curious-looking plants, and have flowered them with what may be termed success in the following manner:—They should be well ripened during the hottest of the summer months, allowing them little or no water from the end of July until the month of October, and then start them as soon as you like in a pretty fair heat, as near 60° as possible; and I can assure Mr. Pearson and all who grow this class of plants that they will have flowers, and that in abundance. Although their flowers are not of much consequence, still they make a pretty show for a month or two early in the spring. They are very easily grown, with a little attention of course; and Mr. Pearson need not be surprised at their losing their leaves, as they are deciduous.

As I am not acquainted with any of the places about London, I cannot direct him where to go to see a good collection. I shall be very glad to give him any other information regarding them if required.—ANDREW SCOTT, *The Gardens, Maris Bank, Loanhead, Edinburgh.*

[We are much obliged by the above, and hope we shall have more from the same and other pens. The only cultural point Mr. Scott has not noticed is a description of the soil he employs. This omission reminded us that thirty years ago we visited the Cape of Good Hope, and that when at the headquarters of the wild Geraniums (Table Mountain), we were surprised to see the soil in which they flourished. We turned to the journal of our travel, and the following is an extract from notes we made at the time:—

"In our wandering to-day (November 20th) we got to a villa in the suburbs, with a garden hedge of the Prickly Pear (*Opuntia vulgaris*), covered with its gorgeous yellow flowers. It appeared the most splendid exhibition in vegetable nature I had ever seen. Growing also wild we saw the Alocs, which in our climate are said to bloom but once in one hundred years; but here they are to be seen in every direction with their gigantic flower stems, and looked upon as a weed! I was told their only use is 'to wean babies!' which I found upon further inquiry is by means of the bitter juice of the plant being applied to the breast of the mother, and rendering it unpalatable. It is very rare to see a genuine Hottentot; they are not black, but leaden-coloured. The jetty blacks with woolly hair are Mosambiques. The waggons from the country drawn, as we saw them, by eighteen bullocks two abreast, with a driver riding, and a little boy running in advance and leading the two headmost, are very peculiar features of this place. The lower description of blacks go universally with naked feet, but some of them, both men and women, wear one of the most primitive kind of clogs imaginable. It is simply a wooden sole, raised as English clogs are by two transverse pieces, and kept on the foot solely by means of a piece of iron with a flat broad knob, which is passed between the great toe and the next. They have three markets daily. The green market is attended by poor blacks from the neighbouring country with the produce of their gardens, which they spread out upon a cloth, and squat by the side of their little commodities beneath the shelter of another cloth spread out as an umbrella. We are unfortunately just between the blossoming and the fruit seasons. Mr. Justice Kekewich tells me the first makes the country the most gorgeous spectacle possible, and he likened it then to the richest Turkey carpet. We saw in the market abundance of Garlic, Oranges, Lemons, green Almonds, a kind of Turnip-rooted Cabbage (which is a very nice vegetable, tasting between a Vegetable Marrow and a Turnip), Parsnips? (or roots somewhat like them), Potatoes, Parsley, and other pot herbs.

"At half-past seven A.M. I started from Mr. Kekewich's, with the guide he had provided—a bastard Hottentot named Jonas, and an intelligent little boy, a son of Mr. Kekewich's housekeeper. After passing several villas and small vineyards, Hopeville, the residence of the Chief Justice Sir John Wilde, &c., we arrived at a public pump, at which our guide filled the bottle that was to accompany us. We then got on to a rudely-stoned (to say paved would convey an idea of regularity) road, which follows the course of one of the mountain streams, and

leads to a rude water-mill, picturesquely situated among Fig and other trees, from among which its overshot wheel was very perceptible. The stream puzzles its way through huge blocks of granite, of which the mountain is composed, and it serves as the chief means of washing the clothes of the town, for hither the washerwomen resort, and at the time I was there about fifty of them were employed in the process of cleansing. This did not add a little to the interest of the scene. They are universally Mosambiques, black, and shining as ebony. Dressed in white with red handkerchiefs round their heads, and with arms bared to the shoulders, and legs equally so to above the knees, they stand in the rushing stream each before a smooth-surfaced block of granite; they wet the clothes, soap them, and having kneaded them like dough for some time, they redip them into the water, and then taking them by one end they swing them round their heads in the course of beating them (not violently) upon the block of granite. They rinse them in a tub which each has, and complete the process by spreading the clothes upon the blocks of granite around, and sprinkling them for hours with water by means of a cow's horn. In more than one instance I saw a woman thus employed with a child at her back. There is a house about half a mile up the stream where they deposit the clothes that are not finished, and where they are taken care of until the next morning. The path from here became gradually less traceable, and soon we had no other mark than the stream. This continued until we nearly reached the gorge through which we had to pass on to the table summit, and this is the only even slightly dangerous part, for it is here alone that you have to leap from the points of one huge block of granite to those of another, and if you slip your fall is not upon the softest of surfaces, and your legs may get wedged in the intervening spaces. It is a fatiguing ascent throughout, for it is a continued passage over granite blocks, and the few steps you take upon the soil fall upon the loosest possible of sand. Every yard's advance was interesting, for everywhere around were plants which I have been accustomed to see in the vases of a parlour or greenhouse. *Mesembryanthemums*, Cape Heaths, Geraniums, and many others are in profusion and greatest luxuriance. The luxuriance would suggest that we cultivate Geraniums in too rich a soil, for here they grow in nothing but pulverised granite, plentifully supplied with moisture. Apes, tortoises, and lizards are to be found in the mountain, but we saw none. The view is the chief attraction, and this fully compensated me for the three hours' labour in ascending for whether looking down upon Table Bay and Cape Town, or more to the southward over Simon's Bay, or into the interior, it was magnificent and extensive; such a grand foreground of granite in its confused masses, interspersed with, to me, the strange foliage of shrubs I never beheld before."

CALCEOLARIAS.

In the very useful matter conveyed in recent communications on the disease and means of prevention, I observe that one point which I have repeatedly found valuable has not been noticed. I have grown the Calceolaria for many years, and at times in soils naturally unsuited to healthy growth, and resulting in partial failures, giving much trouble. The best remedy or preventive of disease I ever found was the very simple one of a change of cuttings. When grown on a light soil the growth appeared to get weak and degenerated, and the plants from cuttings continuously produced on such soil lacked vigour to begin with. A batch of sturdy cuttings grown on a soil approaching clay produced results most marked and beneficial. From infancy to death they showed their strength, and were proof against the ills to which the weaker ones succumbed. Not in one year, but ten, and perhaps nearer twenty, I have proved the advantage of "foreign" cuttings put in by the side of my own, and taken from soil of an opposite character.

My practice is similar to that of most others—selecting stubby cuttings and putting them in at the end of the present month (October). On a firm bottom a good covering of soot—not a mere dusting, but fairly covering the ground—is spread, over this 3 or 4 inches of sound loam trodden firm, topped with a little finer and lighter soil and sand. I like inserting the cuttings 5 or 6 inches apart, and never removing them until they go at once into their blooming quarters. This, however, is a question of numbers and spare lights to cover them. When lights are limited they are put in twice as thickly, and half taken out in spring and turned into Celery trenches (beds 4½ feet wide). The ends and sides are roughly boarded, and

as the lights face the north, shading the glass is very seldom necessary. If very bright at the time of putting in, a little is sometimes given for the first week. In winter, after they are frosted, they are covered until it thaws again, whether it is twenty-four hours or twenty-four days. At planting-out time they are in fine order, and are planted deeply in deep-dug ground. Deep and careful planting is of the first importance. The soot at the bottom fulfils two objects, both good ones—keeping worms down, and imparting to the plants luxuriant health clothed in deep dark green foliage. Healthy hardy plants at the outset, which set disease at defiance, are what all should aim at. They take a great deal more killing than weak ones, with hardly enough life in them to fatten the lean green fly which they cannot resist. Undoubtedly, healthy cuttings to begin with, and no pampering or coddling afterwards, are essential conditions to success. If these are secured, and to them are added sound culture afterwards, and still disease ensues, the manager is sincerely to be pitied in his unthankful, hopeless, miserable task.

There may be those who have no glass covering at all, and yet desire to have *Calcোলarias*. They need not despair, as hardy short-jointed cuttings dibbled in a north border now, and left to take care of themselves, will give a useful proportion of nice plants ready for lifting on or before the 1st of next May. Some of the best plants I have seen these last three years were raised with absolutely no protection whatever. The cuttings were of exposed outside growth, and hardy when put in. In this state they are about as hardy as young Cabbage plants, and possible loss in one or the other is provided against by prudent people in planting more than is really required.—J. WRIGHT.

SEA-KALE SEEDLINGS.

I HAVE no hesitation in saying that, under ordinary circumstances, there is no necessity whatever for growing Sea-kale two years before forcing; it is labour lost. Plants grown from chopped roots make a lot of spray which has to be regularly thinned-out, and during the growing season the crowns left have to be watched, and the seed-stems removed when they appear, which further induces the plants to make lateral growths, which have again to be thinned-out in their turn, and in the end, though perhaps two or three good crowns will be secured to each plant, they will be no better than seedlings of one year's growth. I say this after having adhered to the seedling plan, and no other, for nine years. We never have a successional quarter of Sea-kale; we cannot afford the room, but force a whole quarter of seedling plants every year. Without extraordinary culture we have had plants from seed more than 5 feet across by October. At this date, September 15th, we have them above 4 feet, generally, with robust crowns, and roots like Carrots—seed plants which will throw heads, when they come to be forced, that ought to satisfy anyone. Before long, gardeners will be planning their crops for another year; I should therefore advise them to go in for the seedling plan without fear—for very many yet stick to the dibbling process—and they will save both time and space. Our Sea-kale quarter is not always trenched, but just as often only dug; generally following Potatoes or Celery. To guard against failure of a crop, which is the only risk by seed, it is worth while to red-lead the seeds, and to sow thickly. The first will effectually stop all depredations from vermin, and thick sowing will insure a crop. It is soon enough to sow by the end of March or beginning of April. On one occasion, and the only one on which we had to sow twice, the seed was put in about the 10th of June; and with a little coaxing we had plants fit for forcing by the end of the season. Some of the best seed we ever used was gathered from wild plants on the coast of Wales. The seeds were small, but the plants turned out as usual.—J. S. (in *The Gardener*).

IN MEMORIAM.

I TRUST that it is no feeling of fraternal partiality that leads me to think that a notice of a dear and valued brother who has just entered into his rest ought to find a place in the columns of our Journal. Of this I am sure, that even if I be unduly partial, there is that kindness of feeling amongst its readers and contributors (not paralled, I believe, by any other paper, and owing in no small degree to the gentleness of our Editors), that I shall be at once pardoned for the bit I take if it be one; but if to be a thorough and genuine florist of the old

school, to have a kindly feeling towards the brotherhood of gardeners, do not entitle one to a niche in our columns, I do not know what does.

My brother, JAMES REYNOLDS DOMBRAIN, from our earliest days was associated with me in our love of gardening, and in practically carrying out our tastes, and up to the very last that same love continued. Our tastes, too, took the same line in gardening. Like myself, he cared more for florists' flowers than for any other flowers, and, like myself, the Auricula took the chief place in his affections. Engaged in official duties in the Control department of the War Office, he had lived in our own home up to about ten years ago, and thus was enabled to find a relaxation from the duties of official life in the cultivation of his favourites. With the Auricula he also cultivated Carnations, Picotees, Pinks, and Ranunculuses, and of late years the Gladiolus. Of all these he was a successful exhibitor, although he cultivated them not for that purpose, but from his sheer love of flowers. No one was more easily satisfied with even a moderate share of success than he was; no one ever saw him ruffled because others had beaten him in the conflict; no one was ever more ready to acknowledge the superiority of those who had gone ahead of him. About the time I mention, owing to one of those changes which most public services are subject to, he was ordered abroad, and for five years was quartered at Gibraltar. The heat of the climate, working on a constitution already having a tendency that way, laid permanently the foundation of a disease of the liver, which ultimately proved fatal. On his return from thence he again renewed his cultures, and Auriculas again held the foremost place; and almost the very last letter I had from him told me of his success in exhibiting a stand of Gladioli only one short month before his death. He was one of the Honorary Secretaries of the Royal Horticultural Society of Ireland for many years, and endeared himself to all who came in contact with him through the courtesy and thoroughly gentlemanly manner he always treated everyone, no matter what his station.

It would ill become me to intrude on strangers the more sacred things connected with home life, but it is to me a great happiness that in looking back over the many years of intercourse we have had together, not once has a cloud come between us; and I mourn the loss of a loving brother—not lost indeed, but, I verily believe, gone before. Somewhat younger than myself, it speaks to me with no uncertain sound; and I fear to be reminded by it that, like the flowers we love, our period of life must soon be over, to live, if we are truly wise, where death never comes.—D., *Deal*.

DESTROYING WASPS.

I HAVE just seen in THE JOURNAL OF HORTICULTURE, No. 653, page 249, how to destroy wasps. The hints that Mr. Pocock has been pleased to give will, I am sure, be taken advantage of. I remember the time when some of the noblemen and gentlemen in Scotland give the power to their head gardeners to reward the under gardeners to kill such pests, but this, I think, has to a very great extent been given up. The Earl of Traquair for many years gave a liberal reward to the children in the neighbourhood for the destruction of wasps. In 1815, on the 26th of April, there were delivered 756 dozen; on the 3rd May, 111 dozen; on the 10th May, 59½ dozen; and on the 17th May, 643½ dozen; making in all the incredible number of 18,876 wasps in the course of four weeks, and in one parish.—WM. LAURIE, *Dupplin Castle Gardens*.

I ENDORSE Mr. Pocock's remarks about wasps. Apart from the suffering which unfortunately this vicious insect has the power to inflict, a power too often most wantonly executed, it is most destructive to our fruit, and so convinced am I of this fact, that I wage a war of extermination against its tribe. I offer the reward of 3d. (three pence) for every wasp killed before the 1st of May, and give from 6d. to 1s. 6d. for every nest according to size. Mr. Pocock's recipe will stupefy the flies, but not kill them or the larvae, and I shall be glad if any of your readers will inform me how to preserve the nests, and yet destroy the insects and grubs in the cells.—SUBSCRIBER.

HOTELA JAPONICA.—Your correspondent Mr. G. Taylor, on page 267, speaks of using the spikes of *Hetelia japonica* in conjunction with Gladiolus flowers for dinner-table decoration. These, no doubt, would be a charming combination, but to me the difficulty lies in getting this *Hotelia* to bloom at the end of

the year. Perhaps your correspondent would kindly give us a few hints to enable us to accomplish this. With me, in the neighbourhood of London, it always blooms during early summer; but if I could have it in bloom now it would be a valuable acquisition.—W. G.

PROPOSED SHOW OF THE ROYAL HORTICULTURAL SOCIETY AT ABERDEEN.

On the 7th inst. a meeting was held in the Imperial Hotel, Aberdeen, to take into consideration a proposal to invite the Royal Horticultural Society of England to hold their annual provincial show there. The meeting was called by circular by the Lord Provost, in whose absence the Marquis of Huntly took the chair. There were present the Earl of Kintore; Mr. J. Farley Leith, M.P.; Mr. Gordon, of Parkhill; Sheriffs Dove, Wilson, and Comrie Thomson; Sir John Clark, of Tillypronie; Major Turner, of Turner Hall; Mr. Leith, of Whitehange; Mr. Gordon, of Craigmyle; Mr. Ferguson, of Kimmundy; Mr. George Reid, seedsman; Mr. James Cocker, nurseryman; Mr. W. Smith, nurseryman; Mr. Foggio, Invercauld; Mr. Milne, accountant; Mr. Tough; Mr. Taylor, Allanvale; Mr. Symon; Mr. J. S. Henderson, Secretary of the Horticultural Society, &c.

Mr. Henderson stated the nature of an interview he had had with Mr. Lindsay, Secretary of the Royal Horticultural Society of England. They should consider themselves very highly honoured by the proposal coming from such a quarter, it being the first time the show had been suggested to be held in Scotland. Mr. Lindsay then stated that having occasion to call upon Mr. Henderson, it had occurred to him to ask whether it would be possible at any time to hold the English show at Aberdeen. He could not pledge the Society to accept their invitation, but Aberdeen had many recommendations, especially in its continuous sea connection with London. Glasgow has great wealth, but it lacked that advantage; and although application had been made to Glasgow, it was quite open to Aberdeen to send an invitation. These shows had been held for five or six years, and, with one or two exceptions, had been very successful. It was the object of the Society to make the shows a means of introducing scientific lectures, and having the most experienced horticulturists and botanists in the world in the Society, this feature could not fail to be a success. If the show were held at Aberdeen five or six acres of ground would be required, and it would be necessary to raise in the locality £1000 for prizes, and to raise a guarantee fund of £500. The Society give £500, and pay any deficit after drawing upon the guarantee fund, should that be necessary, and the half of the profits would go to the guarantors. Some conversation took place, and the general feeling was that, while thinking well of the proposal, it would not be possible to raise the necessary funds in the district.

The following Committee was appointed to make inquiries on the subject, and to report to another meeting—viz., the Lord Provost, Lord Kintore, Mr. Irvine of Drum, the Marquis of Huntly, Mr. Fordyce, M.P., Sheriff Thomson, Mr. Lindsay, Sheriff Wilson, Mr. Gordon of Craigmyle, Mr. George Reid, Dr. Geddes, Mr. Smith, and Mr. Henderson, Secretary.—(*Montrose Review*.)

THE FUNGUS EXHIBITION AT SOUTH KENSINGTON.

EVERYONE who visits the annual Fungus Show of the Royal Horticultural Society, must be struck by the extremely beautiful colouring of many of the Fungi exhibited. Species tinted with crimson, carmine, and vermilion are very common, and most of these belong to the genus *Russula*, so named on account of the red colours of so many of its members. *Russula rosacea*, *R. rubra*, *R. sanguinea*, and many other highly-tinted species are always found upon the tables: most of the species of this section are highly poisonous, though a few are mild or even edible. A scarlet Fungus of great beauty is seen in *Agaricus muscarius*, a plant by no means uncommon in Birch woods and other places. It is a narcotic poison, and is always well represented at the shows. Every visitor to the recent display must have been struck with the extreme beauty of a group of plants of *Russula aurata* never before seen at the South Kensington shows, and this time brought by Miss Louisa E. Hubbard from Horsham. The colour was dazzling yellow shaded into vermilion; the gills pale buff with a sulphur-coloured edge. Passing from the red species into the orange, we have various members of the genus *Cortinarium*, generally shaded with rich orange-brown. *C. sanguineus* was well represented with its

blood-red shading; but *C. cinnabarinus* was not at the Show this year. One of the very best groups was that of *Cortinarium orellanus*, the tints being of the richest orange. This plant, not hitherto exhibited, or, indeed, published as British, was found by Miss Sarah Holliman in Epping Forest, a district, though well worked, which produces new species every year. The *Cortinarium* are also known by their rusty gills and veil resembling the web of the spider. Most of the yellow plants come under the genus *Hygrophorus*, so named on account of the watery substance of many of the species. We noticed *H. ceraceus* and many of the other yellow species well known for the extreme luminosity of their tints. *H. psittacinus* is yellow and green, after the manner of the colouring of parrots. A well-known green *Russula*, *R. virescens*, was poorly represented, though by no means an uncommon plant in the London district. The black *Russula nigricans* had many representatives.

Most white *Agaricus* are found under the genus *Agaricus*, and the majority of the white-spored species are very sober in their hues, many or most of them being probably edible. The white milky species coming under *Lactarius*, however, are best avoided, as many are known to be dangerous poisons. The curious parasitic *Nyctalis parasitica* was brought by Mr. English, growing, as usual, upon a dead *Russula nigricans*. At the north of London, however, this plant generally grows upon *Russula foetens*. The odours of the Fungi exhibited are generally remarked. *Phallus impudicus* was on the table in all its glory; and Miss Hubbard brought *Agaricus cucumis*, which has a terrible odour of stale fish. *A. sulphureus*, potent of gas tar, was abundantly represented.

Some truly gigantic specimens of *Polyporus* were brought in *P. fraxineus* and *P. applanatus*, with the huge polyporoid mass recently found under the Bank of England. Some fine large plants of *Paxillus atro-tomentosus* were brought from Woburn by the Rev. W. W. Newbould, and many other Fungi of extreme rarity and interest were gathered together from all quarters, the room provided for the display being, however, altogether insufficient.

As on previous occasions, most if not all the well-known edible and poisonous species were arranged in groups, and anyone taking an interest in the subject of Fungi as food could not fail to be pleased with the enormous number of species brought together. The Exhibition is always rendered doubly valuable and attractive by the presence of Mr. Berkeley, Mr. Currey, and others, who are ever both able and willing to answer questions, impart instruction, and give their own experiences of the plants exhibited.—W. G. S.

PORTRAITS OF PLANTS, FLOWERS, AND FRUITS.

LILIAM (HYBRIDUM) KRAMERI. *Nat. ord.*, Liliaceæ. *Linn.*, Hexandria Monogynia.—This cross-bred was raised from Japanese parents. "*Lilium Kramerii* has been forwarded for figuring both by G. Wilson, Esq., F.L.S., and by Messrs. Barr and Sngden, to the former of which gentlemen a first-class certificate was awarded for it by the Royal Horticultural Society. According to Mr. Baker it is a hybrid between *L. speciosum* and *L. japonicum*, an opinion which Mr. Wilson thinks confirmed by its foliage and odour. It would be interesting to know precisely, respecting this relationship, which of the parents took the father's part, and which the mother's duties. Mr. Wilson informs me that he believes it was sent by Mr. Kramer, of Japan, to Messrs. Teutschel, of Colchester, two years ago under three varieties, accompanied by coloured drawings. Of these No. 1 had rather expanded flowers like *L. longiflorum*, with mauve tint on the back of the petals. No. 2 was wholly mauve. No. 3 was wholly white. Of these Mr. Wilson has flowered Nos. 1 and 2, of which No. 1 had not smooth edges to the petals, and No. 2 was of a deeper mauve than in the drawing. Mr. Barr has been good enough to give me precisely similar information as the result of his experience, with the addition that these Lilies vary much in size according to cultivation."—(*Bot. Mag.*, t. 6058.)

CARAGUATA ZAHNII. *Nat. ord.*, Bromeliaceæ. *Linn.*, Hexandria Monogynia.—Flowers yellow, sheath crimson. Dr. Hooker says he has "adopted the specific name proposed for this splendid plant by its importers, Messrs. Veitch, in commemoration of the services of their excellent collector Mr. Zahn, who discovered it in 1870 in Chiriqui, Central America, shortly before he perished by drowning, a victim to his enterprise, on his way to Costa Rica. The genus *Caraguata* comprises the *Tillandsias* with united petals, and filaments adnate to the tube of the corolla."—(*Bot. Mag.*, t. 6059.)

LINARIA SAGITTATA. *Nat. ord.*, Scrophulariaceæ. *Linn.*, Didynamia Angiosperma.—Flowers yellow. "*Linaria sagittata* is a common plant about Magador, and extends as far

south as Agadir. It is also found in the Island of Lancerotte, one of the Canaries, and that one considerably the nearest to the Maroccan coast, but in no other island of that group, which looks as if it were a comparatively recent importation that had not as yet spread further to the westward. The specimen here figured was raised from seeds brought by us from Marocco in 1871, and which flowered in June of the present year in Mr. Maw's garden, and in the Royal Gardens, Kew."—(*Bot. Mag.*, t. 6060).

PLECTYPHORA ASELLIFORMIS var. *CONCOLOR*. *Nat. ord.*, Cactaceae. *Linn.*, *Icosandria Monogynia*.—Flowers purple, yellow, and green. Native of Mexico. "This remarkable and still very rare plant has been long known amongst Cactus growers, and has in fact been in the trade for many years, having been imported by the Brothers Tonel from Mexico, where it was said to have been found with the equally anomalous Cactaceous genus *Anhalonium* (Hll. Hort., vol. xvi., t. 605 a). It was first published by Ehrenberg, from specimens grown in Berlin in 1843, but nothing was known of its floral character till Lemaire, in 1858, published in the 'Illustration Horticole,' quoted above, an excellent figure of it, with a very full and interesting description."—(*Bot. Mag.*, t. 6061.)

RUBUS DELICIOSUS. *Nat. ord.*, Rosaceae. *Linn.*, *Icosandria Polygynia*.—"A very interesting and little-known plant, described by its discoverer, the late Dr. James, as bearing a fruit of delicious sweetness and considerable size; the latter of which characters is not borne out by the specimens communicated by Mr. Henry, and figured herewith. Whatever may be the qualities of its fruit, there is no question about the handsomeness of the flowering plant, whose flowers somewhat resemble those of a white Rose in size and abundance. It is a native of the Rocky Mountains, between the latitudes 39° and 45° N., on alpine ridges, where it was discovered by Dr. James in 1822, and there are specimens in the Kew Herbarium, collected by James in the Colorado territory in 1861, and by E. Hall and J. P. Harbour in 1862. Between the dates of 1822 and 1861 it does not seem to have been seen by any naturalist. Torrey and Gray (l.c.) and G. Don, in his 'Gardeners' Dictionary,' describe the flowers as purple, which is not the case.

"*Rubus deliciosus* was introduced into cultivation in England by my friend Isaac Anderson-Henry, F.L.S., of Hay Lodge, Edinburgh, who received the seeds from N.W. America in N. lat. 44°, and flowered the plants he raised from them in May, 1870. He describes it as 'a bush a yard high, covered with large lovely blossoms, and quite an ornamental plant, irrespective of the coming fruit.' The fruit, however, did not come either in that or the following year, but in the end of last July Mr. Anderson-Henry sent a fruit, and which was of a maroon brown colour and agreeable taste."—(*Bot. Mag.*, t. 6062.)

ARUCULA *Charles J. Perry*.—"This splendid self Auricula was raised by Mr. Turner, of Slough, and was very deservedly awarded a first-class certificate by the Floral Committee of the Royal Horticultural Society at its meeting on May 7th, 1873. In the class of selfs it claims a very high position, possessing as it does so many of the good properties essential to constitute a first-class flower. It is a healthy free grower, has fine handsome white-dusted foliage, and produces stout large trusses of its lovely flowers. The colour is a beautiful deep violet, the pips being large and flat, remarkably smooth on the edge, and very circular, while the colours are well proportioned, with a good white paste. It is a flower of firm substance, and is not only very distinct, but particularly attractive, and in every way well worthy a place in the most select collections of these most interesting spring flowers."—(*Florist and Pomologist*.)

THE REV. JOHN HUYSHE'S PEARS IN NEW ZEALAND.

I HAVE fruited for the first time two of his admirable varieties of Pears this season—the Victoria and Prince Consort—and find that their texture, juice, and flavour are underrated rather than overrated, in your description in THE JOURNAL OF HORTICULTURE for 1867. The Victoria variety is now in season here (July 30th) with me, and proves to have all the merits the most fastidious lover of the Pear can desire. My fruit of them both are from double-grafted trees, which I think causes them to be very fine. After your diagrams appeared, not many months afterwards young trees of them were in Melbourne, for private firms import largely and with great spirit from Europe; hence my fruiting them so soon by taking

a few grafts off the young trees on arriving here for me from Melbourne, and inserting them on old trees. I think the influence of our climate has had a good deal to do with their arriving at such perfection. I send you an outline section of a Winter Nellis now in season, no turnip flavour here, but one that will gratify the palate.—W. SWALE, *Avonside Botanic Garden, Canterbury, N.Z.*

[The drawing represents the Pear of the full size and the usual form.—Eds.]

LAMBTON CASTLE.—No. 1.

THE SEAT OF THE EARL OF DURHAM.

THERE are few rivers that present us with a greater diversity of outline than the Wear, a stream which traverses the county of Durham, and eventually enters the sea at Sunderland. True, it may not be so hard-worked as some of the Lancashire rivers in the way of supplying water power, for the reason that it runs through a district where the steam engine may be said to perform not only the offices that water power does elsewhere, but also many of those usually done by manual labour; and even now, in spite of its pollution, it is a fine river, and in its course past the city of Durham, its steep and precipitous banks clothed with timber running up to the walls of the venerable cathedral, add considerably to the charm which that old city and its various associations present to the traveller, for by a circuitous bend the river seems almost to encircle the town. Proceeding further on it is occasionally seen hemmed-in by high and precipitous banks, with naked rock overhanging its channel, and its bed a floor of that material; while anon it has a serpentine course through flat and extensive meadows, which at times of high floods have evidently been overflowed. Then it enters some rugged glen, as at the place now immediately under notice; but before doing so, its tortuous course through the meadows that bound Chester-le-Street shows in some measure the character of the stream and its adjuncts, for on its banks we noticed two of the most prominent plants were the common Tansy and Senecio Jacobæa, both in flower, while we did not see the purple Loosestrife, so common in many other places; but our chances of observation were few, for in fact we approached Lambton Castle from another direction.

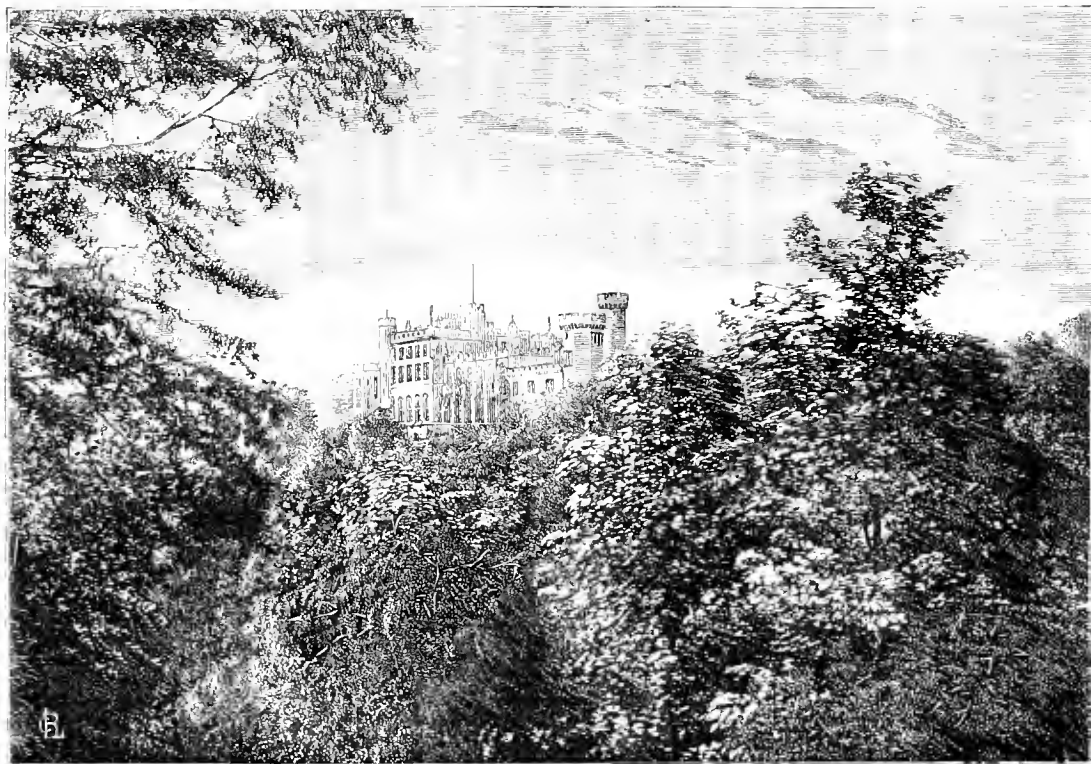
Fence Houses, a village of no great dimensions, is some two miles or more to the south, but there an important railway offers the nearest station to alight, and proceeding some distance along country lanes we reach one of the entrances to the park, or rather domain, for at this particular place it is a wood of considerable dimensions. An excellent carriage road carries us on underneath some well-grown Oaks, beneath whose widespread branches *Rhododendrons* of all ages and sizes are luxuriating alternately with Hollies, Yews, and other evergreens, with all the intervening spaces not occupied by them either dotted over with noble examples of the male Fern, or entirely covered with the common Brake, leaving but few places for other herbage to show itself; nevertheless, we noticed a fine group of that ornamental British plant which has never had its merits fairly acknowledged, the *Equisetum*, and its appearance in a mass was certainly good. But we must not linger, and our road continuing to descend we at length come to a position where some additional planting would seem to have been recently done, and some of the fashionable Pinuses appear to have been employed; still not having time to examine them closely we proceed, and descending further, a turn of the road brings us in sight of the gardens lying immediately before us, but on the opposite side of the Wear, which it should be stated is here a wide navigable river. Pausing to look at the garden from this point the traveller is impressed with the magnitude of the glass structures, of which, I believe, there are twenty-seven in all, and most of them large. The first impulse also would be that it is exceedingly snug and well sheltered, for the woods that screen it at the back rise considerably above the structures and dressed grounds. On the other hand, the ugly idea starts up that a situation which appears to be so carefully carved out of a forest, is not unlikely to be visited by late spring frosts, lying as it does below everything around it. With this, however, we have nothing to do, but proceeding a little further on we see an ornamental bridge that leads direct to the garden, while the carriage road skirts the banks of the river for some distance farther, the steep banks to the left being timbered to the top, and there is the same admixture of *Rhododendrons*, Ferns, &c., as previ-

onsly described, with the addition of naked rocks peeping out in places, and now and then a stream of water rushing down a lateral gully to join the main river below. This carriage road passes the front of the Castle, which is built on the top of a steep grassy slope on the opposite side of the river, where the roadway is carried over the river by a bridge, and by an easy curve and gradient ascends the hill and reaches the front door.

Where Lambton Castle is now, formerly stood Harraton Hall, the seat of the noble family of D'Arcy. It is a modern building, being erected, as was the bridge over the Wear, after the designs of Bononi, early in the present century. The Lambton, or, as it was originally spelt, the Lamtan family are noticed in records contemporary with our first Norman kings, and are the only family in the county of Durham except the Lumleys that retain the residence from whence they derive their name, which is Lambton House, still standing at a short distance from the Castle.

A little to the north-east of Lambton Castle and on the left side of the river is an eminence called Worm's Hill, the reputed scene of a legend well known, and some years ago believed in by many people in the north. The case was this: The young heir of Lambton was one of a class not extinct yet, it is to be

feared, that led a dissolute life, and was guilty of all manner of wickedness short of murder; and amongst other improper acts he used to amuse himself in fishing on Sundays, and on one of these occasions instead of a fish he caught a worm, which was of such a singular and hideous description that he had some difficulty in disengaging it from his line, and after so doing threw it into a pit or pond, where it continued to grow to such an extraordinary size, and its voracity for food was so great, that it soon made the whole neighbourhood a wilderness, and all attempts to kill it resulted in the discomfiture or death of its assailants. It is said that when at rest it coiled itself several times round the sides of the hill in question, leaving on the bank its marks, which are still visible. Meanwhile the young man whose irreligion had been the cause of this plague had betaken himself to other lands, and after a variety of fortune returned home an altered man, and set about destroying this monster by arraying himself in a complete suit of armour, on the outside of which a great number of sharp knife-blades were fixed, and enticing it to the river, took his stand on a rock in the stream and awaited its attack, which was in the serpent fashion of coiling itself around his antagonist; but in this instance the number of cutting blades cut



LAMBTON CASTLE, S.W. VIEW.

it up into slices, which the current washed away. The obnoxious and all-dreaded worm disappeared. How far this story may be tinged with the religious feelings that predominated in the dark ages it is needless to enter into; suffice it to say the terraced-like marks remain on the hill, and the legend has survived many generations.

I could dwell upon other legends and upon the botany of Lambton. Leaving this fine fortress-like mansion to be described hereafter, we retrace our steps, and taking advantage of the ornamental iron bridge previously alluded to, we find ourselves in a good position for taking in the whole at a glance, and few gardens present a richer panorama. To be brief in the description, I may say that both the Castle and the garden occupy the left bank of the river Wear, which at this place runs in a north-easterly direction, so that the garden in a great measure faces the south-east; and although the right bank at this place rises somewhat suddenly, scarcely giving room for the carriage road to be formed along the side of the

river, the other side affords a level space of perhaps 200 yards wide or more, which is the site of the kitchen garden. At the northern extremity of this level tract the ground rises abruptly, and on this the glass structures are erected in a double tier, the lower one being also considerably above the level of the kitchen garden; a terrace wall with ample room for Vine borders, &c. separating the two; while in like manner the second or upper tier of houses is faced with a steep sloping bank of turf, on which flower-beds forming an agreeable pattern as a whole are cut out, and at the time of my visit they were well filled with the choicest bedding plants. I may also observe that the original kitchen garden here was a square, the lower tier of glass houses alluded to forming its northern boundary, with walls at the east and west sides, and a hedge at the south side nearest the river. This feature still exists, but large additions in the way of kitchen-garden ground have been made on the east side, while on the west side a still larger space had been cleared of timber and was formed into a

flower garden on so extensive a scale, that taken in connection with the ribbon borders on the terrace wall, the flower-beds on the grass slopes, and those met with elsewhere, I was told about a hundred thousand were yearly bedded-out; for be it observed that in immediate connection with the mansion there were not any, or at all events very few beds; and properly so too, for a Norman fortress-like residence does not seem the place for such kind of decoration. But we must return, and, accompanied by Mr. Hunter, endeavour to give some description of the occupants of the glass houses, as well as other matters connected with this fine place.

To such of our readers as visited the late fruit show at Manchester, the remembrance of the fine Grapes exhibited from this place must have left an impression not easily forgotten. A bunch of Black Hamburgh Grapes weighing upwards of 13 lbs. is a horticultural phenomenon that does not present itself every day. In fact, there is reason to believe that it never did so before; besides which, other Grapes were equally well grown with the Hamburgh. Another feature in fruit-growing has been achieved at Lambton, which, though not unexampled, is but seldom accomplished, and that is the rearing and fruiting of Pines from seed; and one at least, if not more, is of great promise and likely to make its way as a new fruit, while others are also coming on. But we will take a glance at the Grapes first, and by way of commencement may say that the bulk of the Vines—in fact, I believe the whole of them—are planted inside the house, and the whole of the interior is formed into borders; not but that the roots may have access outside as well, but all are planted inside. Furthermore, I may add that most of the vineries are lean-to houses of ample width and medium pitch, while most of the pineries are span or partly span-roofed, and one or two orchard houses are also of the latter class. The central house of the lower tier differs from all the others in being made into an interesting conservatory, and united with the upper tier by a broad flight of steps in its centre leading to the level on which the other houses stand, the whole being judiciously arranged with choice specimen plants, so that the difference in the levels of the two compartments which compose this conservatory is an advantage rather than the contrary. In this house I noticed a very fine pair of *Dicksonia*, the same of *Yucca gloriosa variegata*. *Phormium tenax variegatum* was also well represented; so were the *Draenas*, *Latanias*, and other fine-foliaged plants, with the necessary admixture of flowering ones, amongst which *Campanula pyramidalis* was exceedingly well done. The roof was draped with climbers, and baskets were suspended at suitable places; one or two formed of *Lomaria gibba* looked very well, while those of *Tradescantia*, ivy-leaved *Geraniums*, and other plants, were also good; but the end of August is not the time a conservatory is thought to be the most attractive. After noticing some good plants of *Camellias* that were being prepared to occupy the house at the proper time, with plenty of *Azaleas* and the like, I again turned my attention to the contents of the fruit houses.

The extraordinarily fine Grapes exhibited by Mr. Hunter from this place at the late Manchester Show will have prepared your readers for hearing of something wonderful, and I can fully bear out all that has been said about the merits of these Grapes from having seen them in their growing state. But first of all I will advert to the character of the house in which they were grown, which, be it observed, did not differ in any essential particular from what is met with everywhere—a rather broad lean-to house with front lights consisting of about 2 feet of glass; and the character of the glazing and size of the squares were of the ordinary type. The top air, however, was admitted by leverage moving flaps on hinges, rather than by sliding the lights down, and the front upright lights were made to open, and were on the whole more often used by Mr. Hunter than the back ones. The pitch of the roof was of a medium kind. The length of the rafter, however, was greater than is often the case, though not remarkably so, while in all other respects the houses presented the ordinary stamp of vineries of their class, and were all heated with hot water, the pipes being in most cases divided rather than running in clusters; they were also all near the ground. The Vines—the all-important Vines—were in every case planted inside, the permanent ones against the front lights, while in some houses recently planted the back wall was also covered with Vines, from which excellent Grapes were also obtained, and even in one or two cases that Mr. Hunter pointed out to me, where the roof Vines had almost entirely deprived the back ones of every trace of sunshine, there were some fine

bunches of fruit equally well coloured with those on the rafters, thus showing that the soil, the treatment, and the attentions which constitute the requirements of Vines were all to their liking; and the best of health, not coarse and gross pithy shoots, met the eye everywhere, and in all cases where the fruit had not been cut excellent crops were to be seen.

As there were several houses devoted entirely to Grape-growing, most of the popular kinds of the day were duly represented, the most general one, of course, being Black Hamburgh, which was remarkably fine. Most of the rods bearing this variety were heavily loaded, and in general the bunches, if we call them such, resembled a cluster of bunches, and as well as being large were also well coloured. Mr. Hunter pointed one out to me as being not unlikely to weigh 12 lbs.—a monster of a bunch, which, as the sequel proved, he had underestimated, for it proved to exceed 13 lbs.! As your readers will be aware, it was shown at Manchester and carried off the prize as the heaviest black bunch at the Show, and possibly it was the heaviest that was ever produced; but other bunches exceeding 9 lbs. were also furnished by the same house and of the same kind, and I was told one upwards of 9½ lbs. had been cut a few days before. I should hardly expect that houses containing such large bunches of Grapes of this variety were ever met with before, and the Vines had not been limited to a small number of bunches, but the crop, taken as a whole, including the rods having the heaviest bunches on was good; even the shy-bearing kinds, as *Barbarossa* and one or two others, were equally loaded with the Hamburghs and *Museats*, which, as everyone knows, in general show plenty of bunches.

Next to the Black Hamburgh alluded to, the *Madrasfield Court* was very fine. It is certainly a fine Grape; and as it appears to have carried off honours at the Show above alluded to, it may be mentioned here with something like an exception to its useful qualities, as Mr. Hunter reports its keeping badly. This, however, need not militate against its merits at the time being as looking exceedingly well, and there were some large bunches of it. Although neither so good nor so large as the Hamburgh and *Barbarossa*, and, perhaps, one or two other kinds, still it is evidently a deserving Grape, one that is often met with elsewhere in good condition, and which is highly spoken of at table.

Calabrian Raisin.—A fine, large, white Grape tolerably well known, but not always well managed. Here it was grown to the size which imparts value to a Grape whose chief merit is its size; and *Calabrian Raisin* or *Raisin de Calabre*, for it has both names, carries with it a noble appearance as a white Grape, and is, moreover, a good keeper, and one which when well ripened is not without its merits at table. Bunches of enormous size were, of course, furnished at Lambton.

Barbarossa [*Gros Guillaume*].—This fine Grape is but seldom met with now-a-days, its reputation as a bad cropper, or, in other words, of being shy in showing bunches, had told sadly against it; but anyone who has seen it at Lambton must be of a different opinion, for like all others the crop was good, and the bunches remarkably good. I should think the largest must have exceeded 10 lbs., and that, too, a long nicely-tapered bunch, not the short, stubby, cluster of bunches represented by the Black Hamburgh. The bunches, though not quite ripe at the time I saw them, looked nevertheless likely to attain a good black hue, which is not always the case with this variety. As a Grape it would seem to require some special treatment, being tender, and like *Lady Downe's* and some others, late in ripening. It is, however, well worth a place in a collection.

Trobbiano.—Also a large white Grape, which when well ripened is very good. It is likewise a good keeper, and one of the best setters we have. The bunch, however, is generally short and irregularly-shaped; even when it attains a large size, as is the case at Lambton, the bunches seem all shaggy, and there is often a deficiency in bloom in this kind which mars its appearance at table or at an exhibition. It is, however, a useful Grape for all that, and although it belongs to a section that has long had only an indifferent name in the country, it is really a good Grape when thoroughly ripe, and immense bunches of it are not unusual, there being some excellent examples at Lambton, but nothing to compare with the Hamburgh previously spoken of, nor some of the other kinds that will be noticed. It is, however, often denied the necessary amount of fire heat required to ripen it thoroughly, and when not finished-off well it is only a second-class Grape. Many of the best examples we see of it at horticultural shows are far from ripe, and consequently of indifferent flavour.

Golden Champion.—This Grape, like all the others previously described, was also good, and seemed free from the fault so often attributed to it—i.e., cracking, and the bunches were all nicely shaped and of good size, the berries, it is almost needless to say, being very large. Mr. Hunter was of opinion that this Grape would outlive much of the abuse that had been heaped upon it, but doubted whether it would attain the distinction of some of the well-known kinds. Certainly nothing could be finer than its appearance at Lambton, and I understood it had been good last year also, the bunches being equally fine, and the berries large and uniform.

Mrs. Pince's Muscat.—This was also good, and well maintained the good name it has acquired elsewhere, the bunches being large and well filled out, which is not the case in every place at which it is grown; where we are accustomed to see a large well-formed bunch when in the young state, but the berries not swelling out to the required size, it has a naked, stalky appearance. This was not the case with the examples at Lambton, all being fully grown out and filled-in, so that the laying down a bunch on its side revealed but few foot-stalks. It was also well coloured—another difficulty often encountered with this Grape; and the rods bearing it were heavily loaded. On the whole, all that has been said in favour of this Grape may be said to be fully borne out by what was seen of it here.

Seedling White.—A very promising Grape, the rod of which I was told was only inarched on the stock supporting it in 1872, and yet there were four very fine bunches upon it—one or more might be 5 lbs. weight or upwards—while its qualities in the matter of flavour were not inferior to its appearance, so that I expect we shall hear something more of this Grape, as it had the appearance of one likely to keep well. The stalk supporting the berry was stout, and the general appearance of the whole robust and hardy, and there certainly is a lack of good-keeping Grapes of the white kind. The Golden Champion, even with those who manage it best, fails in this matter; and although now and then the White Muscat is met with in a tolerably good condition late in the winter, it is more often shrank and ragged, and at best cannot equal the black Grapes in keeping qualities; the Syrian, Nice, and Trebbiano, whether they constitute one, two, or three kinds, are all found faulty in the stalk late in the year; therefore, a really good-keeping white Grape will be an acquisition. I hope Mr. Hunter will give us some more particulars about this promising Grape.

Muscat of Alexandria.—I need not say this Grape was extensively grown, as well as the varieties into which it is subdivided, as Bowood and Tynninghams Muscat, and also Canon Hall, and like the other kinds named they were all good; the old or normal form being, nevertheless, the greatest favourite. Most excellent fruit well ripened was shown in one of the houses, while the foliage was also all that could be wished for.

Black Seedling.—This was also a promising fruit, one or two bunches appearing to exceed 5 lbs. in weight. It had some resemblance to Gros Guillaume, and like it would appear to be more difficult to colour well, but the bunches were well shaped, berries good, and there was still ample time for it to colour well, which it promised to do, when it would present a robust, well-conditional appearance. It is a fine-looking Grape, and one likely to make a name.

Lady Down's.—I need hardly say that this fine Grape was also largely grown, and there were plenty of fine bunches of it too, but Mr. Hunter was not so anxious to have this Grape so very large, as he justly observed that for very late keeping a medium-sized bunch was invariably better than a very large one; and the same remark held good with regard to the Alicante and West's St. Peter's, which however good in January are not always the best to look at in August. All three were extensively grown, and in the best possible condition, but they were not so likely to figure at important fruit shows in September as they might do after Christmas, especially as there was no lack of other kinds more befitting the time of year, and accordingly better suited for the occasion.

Alicante.—This useful late Grape was also duly represented, and more than one fine cane of it was loaded with large, well-shaped bunches that promised to be of good service when the short dark days of winter rendered such fruit really valuable. I am not sure whether Mr. Hunter mentioned the varieties included under the name of Alicante, for by catalogues and the opinions of growers there seem to be more kinds than one. At all events the normal kind, if it be right to call it such, was in the best possible form, and all but finished.

Of the other kinds of Grapes, I believe, but am not certain, that Gros Colman was grown; also Royal Vineyard, Foster's White Seedling, and some others, but I omitted to notice them distinctly, and therefore must leave their description to other hands. I ought not to omit mentioning that in looking over the Grape houses, one producing some of the finest fruit was only planted in 1869, while in another house, a Black Hamburgh Vine planted against the back wall occupied the whole length of it, which was somewhere about 90 feet. I may also further remark, that notwithstanding the large size of the bunches described above, and their worth confirmed by the position they took at the Manchester Show (Mr. Hunter taking the lion's share of prizes for Grapes), the foliage was not extraordinarily large, certainly not so large as is met with in places where the fruit is not half so fine, neither was the wood larger or stouter than is often seen in other places, but it was as hard as twigs of Beech where it had ripened, and the foliage was in all cases healthy; even when it was ripening off the early Vines, it had the healthy yellow appearance which out-door foliage ought to have when clear of insect or other ailments.—J. ROSSON.

NOTES AND GLEANINGS.

DR. HOOKER says that Captain Markham has most kindly presented to the Herbarium of the Royal Gardens, Kew, a small but very interesting collection of plants brought back by him from his recent Arctic voyage. Amongst them are four specimens which he obtained from Dr. Bessel, who collected them in lat. 82° N., the most northern position from which any phanerogamic vegetation has hitherto been procured. The locality appears to have been on the east side of Smith's Sound. The species are *Draba alpina*, L. (Alpine Whitlow Grass); *Cerastium alpinum*, L. (Alpine Mouse-ear Chickweed); *Taraxacum Dens-leonis*, Desf. var. (Dandelion); *Poa flexuosa*, Wahl. (Zigzag Meadow Grass).—(Nature.)

— THE financial results of the MANCHESTER FRUIT AND FLOWER SHOW were:—Receipts, £2367 8s. 10d.; expenditure, £2134 3s. 5d. There is therefore a balance in its favour of £233 5s. 5d.

— THE volume of ARTISANS' REPORTS UPON THE VIENNA EXHIBITION, published by the Society for the Promotion of Scientific Industry, Manchester, will be published about the 20th of this month. There are thirty-six reports.

— ANOTHER instance of the EFFECT OF SOIL ON THE COLOURS OF FLOWERS is furnished by Herr Max Leichtlin, who transplanted a *Lilium Coridion* into heath soil, when the flowers changed from sulphur yellow to red. This fact would appear to show that *L. Parthenicon* and *Coridion* are in reality varieties of the same species.—(English Mechanic.)

— NOT long since we were shown a collection of JAPAN FLAGS (*IRIS KEMPFERII*), which impressed us as being unusually fine. They have proved entirely hardy in the latitude of New York, and the flowers are large and of a great variety of colours, from pure white to deep blue, beautifully veined and mottled, many of them tipped with yellow. Their easy cultivation and propagation must certainly make them popular with the horticultural public, as they belong to a class of plants that know how to take care of themselves. They bloom after the old German Flags, and thus aid in prolonging the season.—(New York Tribune.)

WORK FOR THE WEEK.

KITCHEN GARDEN.

RARELY do we have a more favourable season than the present one for digging and trenching ground, and as there are few gardens but would be benefited by the latter operation, I trust the fine weather will not be allowed to pass without attention to this subject. *Asparagus* is generally considered to be one of the greatest luxuries the garden produces, but it is very rarely found to be what it ought to be, and this arises in a great measure from the beds being improperly made. It is a very common practice not to attempt to prepare the ground till the time of planting; a large quantity of dung is then dug-in, and the roots immediately planted. It is not our intention at present to give the details of planting, but only to recommend those who intend making new beds in the spring to prepare the ground immediately by digging-in and well mixing a large quantity of dung and leaf mould with the soil; the ground may then be slightly forked-up in the spring, and the beds formed and planted. Tie-up *Cardoons* for blanching when the leaves are quite dry; twist haybands round so that the earth does not

come in contact with the leaves when earthed-up. Take advantage of the present fine weather to earth-up *Celery*; keep the whole of the leaves together. Continue to prick-out *Cauliflowers* under hand-glasses and in frames. Any that are not fit for use should be preserved in a cool place, or the leaves may be wrapped round the head and the whole plant buried in light dry soil. *Cucumbers* in boxes should have a top dressing of rich soil occasionally. In giving water at the root, let it be heated to 80°. Fill-up and dress *Herb beds* for the winter. Dig-up a portion of *Horse-radish* for winter use; clear away the leaves as soon as decayed. Continue to take up the main crops of *Potatoes*, the weather being at present very favourable for the purpose. Keep up a succession of *Small Salads* by sowing in boxes and placing them in a forcing house.

FRUIT GARDEN.

Gather all kinds of Apples as soon as the stalks separate easily from the branches; but as some adhere very firmly, the best criterion of fitness for gathering is to slice a fruit up the middle and see if the seeds are approaching maturity. Care should be taken to keep all late fruit from light and from air if it is desirable to keep it long. This should be particularly attended to in the case of those fruits gathered before being sufficiently mature, otherwise they will be disfigured by shrivelling, &c. The season of any favourite Apple or Pear may be prolonged by gathering at different times, and by subjecting the first gathering to a higher temperature, so as to promote the saccharine fermentation. Care should be taken that the increased temperature is not attended with too dry an atmosphere, or the juices of the fruit will be unnecessarily exhausted. The fruit cannot be better dealt with at present than by placing them thinly on open shelves. Look after Filberts and Walnuts, and see that they neither become too moist nor get too much dried, as in either case the kernel will be injured. Fruit trees of all kinds should now be planted. After planting those against walls, nail-in the branches, so that they may not be broken by the wind. Strawberries may yet be planted if the plants are strong. Prune Gooseberry and Currant bushes.

FLOWER GARDEN.

Now that the frosts have rendered the flower garden shabby for the season, the principal thing to attend to will be the storing such plants as it is desirable to preserve for another season. I am not an advocate for preserving many old plants, but there are certain tribes which bloom all the better for being a year or two old. Among these I class more particularly Scarlet Pelargoniums and shrubby *Calceolarias*, and of these I make it a rule to keep all the plants I can find room for. *Calceolarias* are generally potted in the smallest-sized pot that they can be put into, and if convenient placed for a week or two in a close pit; but if not, they are at once placed under the greenhouse stage, where they remain until turned into cold pits in the spring. For Scarlet Pelargoniums provide a range of span-roofed pits filled with tan, which at this season should receive sufficient fresh material to excite a gentle fermentation in the mass. In this tan the Pelargoniums are placed after being cut down, stowing them as thickly as possible, and the pits are kept pretty close until the plants have made fresh leaves, after which they are inured to the air and receive the same treatment as other plants, taking care, of course, to secure them against frost throughout the winter. In spring, about March, they are potted and placed in heat until they are well established, after which they are hardened-off preparatory to being planted-out in May. These plants will be excellent for dwarf beds, as they do not grow so vigorously as young ones. Scarlet Pelargoniums may also be preserved in boxes, securely packed in dry peat earth. As the flower beds are cleared they should have a coating of leaf mould, and then be dug-up and left rough, so as to receive the benefit of frost; or should the flower garden be near the dwelling house, where it is constantly seen from the windows, the beds may be filled with hardy evergreens kept in pots for the purpose. Take-up *Dubias* immediately the tops are destroyed by frost, it does not benefit them in the slightest degree to let them remain any longer in the ground. Where worms are troublesome on lawns they should now be destroyed with lime water.

GREENHOUSE AND CONSERVATORY.

From this time till late in the spring some climbers in the conservatory will require pruning and thinning-out. The whole of them will require a little dressing now or soon, especially when they obstruct the light. Where only one climber is grown it must be pruned according to the time you want it to be in flower next summer. The earlier they are wanted in flower the sooner they must be pruned. One great advantage in climbers of this nature is, that most of them flower on the current year's growth like the Grape Vine. All such ought to be very closely pruned at the final dressing. Some people are afraid to cut off much wood, and their plants soon get disordered.

STOVE.

From October to May the principal watering in the stove should be done before noon, and to the middle or end of January the house should be kept as dry as possible; a slight syringing,

however, will be useful to keep the foliage clean from dust, &c. A sunny morning is the best time to water overhead, and once in ten days will be often enough. All plants that require pruning or thinning-out before the next growing season should be dressed at once to give more room for the rest. *Clerodendrons*, *Vincas*, and other fast-growing plants, which require large pots in summer, should never be wintered in these large pots; turn them out, shake all the soil from them, and place them in as small pots as you can get their roots into, but do not prune the latter much at this time.

PITS AND FRAMES.

All plants in this department should be got in order for winter as quickly as possible. Those that are well established may be placed in their winter quarters at once, giving the most valuable ones the best places, but those which are not well rooted may be kept in heat a few weeks longer, for though Theory may say, "Keep them as quiet as possible," Practice, which is a much better guide, says, "Keep them growing until they are thoroughly established, unless you wish to consign them prematurely to the rubbish heap."—W. KEANE.

DOINGS OF THE LAST WEEK.

SINCE writing last week's doings a change has taken place in the weather—a heavy rain on Wednesday, followed on Thursday morning by a sharp frost 4° below the freezing point. Of course all tender subjects have suffered very considerably, and the beauty of the flower garden is over for this season.

KITCHEN GARDEN.

On all dry and gravelly soils there is considerable difficulty in obtaining good *Cabbages*, *Savoys*, *Brussels Sprouts*, &c., and more difficulty still with *Cauliflowers* and *Broccoli*. In our light soil we have given up the latter altogether. Of *Cauliflowers* we make one sowing in the autumn and another early in spring. The autumn sowing is now ready to go out under the hand-lights, but the ground is not yet ready. They do well on the *Gladiolus* ground, no manure being required. As soon as the *Gladioli* are lifted the ground is simply forked over, and the lights put on; they are 22 inches square, and each hand-light contains four plants; of course a few more are planted under each light to be thinned-out and planted in the open ground in March.

Planted Lettuce in a dry south border. We have reduced our stock of varieties to one only. We used to sow the Brown Dutch Cabbage Lettuce for planting in autumn to stand the winter with the Paris and Brown Cos; but the Cabbage Lettuce were never used when the Cos varieties were to be had, and the White Cos were preferred to the Brown. After trying many varieties new and old, we have selected Hicks' Hardy White Cos as being the best. It is simply a selected strain of the Paris Cos, and is very like a white Cos which has been grown by some of the cottagers in this neighbourhood for twenty or thirty years. We select a dry day, and a time when the plants are dry, to earth-up *Celery*; do not attempt to do it unless it is dry, as the plants are very liable to decay with us even under favourable circumstances.

The wet coming on Wednesday last prevented our finishing gathering Pears and Apples. The fruit of some sorts seemed to have a firm hold, although the pips had become brown. The old Nonpareil and Scarlet Nonpareil hang on the longest, the first named more so than the second. While the foliage is on the trees and the fruit hangs firmly it must continue to swell; but on the other hand, if it is allowed to hang late, frosts, high winds, and rain do much damage; and the fruit does not keep so well if it is gathered after being exposed to much rain. The largest proportion of our Apple trees are worked upon the Paradise stock, and Pears on the Quince, and they bear abundantly with summer pruning or pinching, so that it is not necessary to lift any of them to induce fruitfulness. If this was necessary it would be done at once, so that the trees would become established before winter. When the trees had been only two or three years planted we removed them by taking out a deep trench at one end of the border where they were planted, and trenching the border from one end to the other, removing the trees as the ground was trenched. The object in doing this was to work the ground well, and mix-in with the staple some clayey loam, in order to improve the character of the light soil. Where old trees had grown, before the young ones are planted it is highly desirable to work-in some turfy loam amongst the roots; or if this is not to be obtained, the top spit from any cultivated field would be beneficial to the trees. If the trees are planted in a new garden which has not previously grown fruit trees, this would not be necessary. All that would be required would be to dig a trench round the tree at a greater or less distance as the tree is large or small, dig well down under the roots, so that a spade can be readily thrust underneath the ball and the tree heaved over partially on one side; then throw it over in an opposite direction, so that any tap roots can be cut through.

FRUIT AND FORCING HOUSES.

Many good growers of *Pine Apples* keep up a high tempera-

ture both in their fruiting and succession houses during the winter. Our houses are kept at about 60° now, and during cold weather the temperature falls to about 55°, and occasionally lower. In the fruiting house there are a number of fruits in different stages of development. There are ripe and ripening Queens, and for later use, Smooth-leaved Cayenne, Charlotte Rothschild, and Jamaica. The Smooth-leaved Cayenne is certainly the best winter Pine, and produces the greatest weight as well as the best quality of fruit for the space it occupies. A moderately dry atmosphere suits them best at this season, and much care is needful in watering.

Late Vineries also require to be constantly attended to in the matter of airing. No plants requiring water should be in the houses where Grapes are hanging ripe; a dry atmosphere is essential to the fruit keeping. We are constantly on the lookout for decaying berries, and have them removed as soon as decay commences. Where ranges of houses, as is the case here, are heated by one boiler, and the fire is constantly kept burning, the hot water can be turned on to the vineries in the morning when the ventilators are opened, and turned off again early in the afternoon, so that the pipes may be cooled down considerably before the house is shut up. The house should not be shut up when the pipes are hot.

Training and tying Cucumbers to the trellises. These are moveable, so that they can be fixed nearer the glass in winter, and further removed from it in summer. The winter distance is 9 inches, and in summer 14 inches. Thrrips are very troublesome, and there is no more effective method of destroying them than by fumigating with tobacco, and this must be persistently followed up until the thrrips are destroyed. We read of growing Cucumbers in dung frames during winter and keeping up the heat by linings, but this seems to us like going back to the dark ages, and the time when two fires were required for an ordinary vinery. There is certainly no better way of growing Cucumbers in winter than by planting them in a house or pit heated by hot water and training them to a trellis overhead.

PLANT HOUSES AND CONSERVATORY.

A re-arrangement of these was necessary after the frost of Thursday. A few hardwooded plants were outside, and it was necessary to get in all the *Chrysanthemums*, as the flowers had considerably advanced on some of them. Those blooms intended for exhibition should not have the outer florets destroyed by frosts. The blossoms are all set now, even the latest, and no time should be lost in thinning them out. Last week allusion was made to the method of training for dwarf specimens, especially exhibition. On one occasion at the Chrysanthemum Show at South Kensington those trained in this form were set aside by the judges for plants trained in a natural manner—that is, all the shoots were trained upright in the form of an inverted cone or pyramid, but the natural-trained plants were in excellent condition, and the flowers far superior to the others in quality—two points of the very greatest importance. In judging Chrysanthemums, or, indeed, any other flowering plants, we would give quality of flowers and health of foliage the greatest number of points.

Cyclamns.—Our plants are three years old, and have been much admired for the beauty of the foliage. Nearly all our visitors ask how they were grown. The seed was sown in February, 1871, and as soon as the plants were fit to handle they were pricked-out singly in small pots, and the pots placed on shelves near the glass in the Pine house. They were grown in heat all the summer, and each plant produced from twelve to thirty-six flowers or more the following autumn and winter. Since the first year the plants have not been grown in heat. As soon as the flowering period is over in the spring the plants are placed near the glass in a heated pit, and when they have made some growth they are re-potted. In May they are removed to a cold frame facing north, and all flowers are picked off as they appear. About the last week in September they are removed to the conservatory or greenhouse, and are allowed to flower. They require plenty of water all the growing period, nor must the plants be allowed to become dry in winter when in flower, but avoid watering the leaves, and water must not be allowed to lodge in the centre of the plants.

The earliest-potted *Hyacinths* are making growth in the plunging material. The Roman *Hyacinths* have grown an inch, and have been removed to a cold pit. They will in a few days be placed where they can have a gentle heat.

FLOWER GARDEN.

The frost and a continuous rain have made sad havoc with the flowering plants. The more tender subjects are quite black, and the rest are over for the season. As soon as the weather shall be fine we will have everything cleared off except *Calceolarias*. From a press of other work the cuttings of these have not yet been put in. There is plenty of time yet, and nothing is gained by having them early, unless cuttings of any variety should be scarce, when it is well to propagate early in order to obtain cuttings in the spring. A number of the beds are planted with *Hyacinths* and *Tulips*, but we only plant in alternate years. The bulbs planted last autumn were not disturbed in the spring,

the bedding plants being put in amongst them when the leaves were yet green. When these are removed the beds will be hoed and raked, and probably a dressing of fine soil put over the surface. With this treatment the bulbs do well the second year.—J. DOUGLAS.

TO CORRESPONDENTS.

N.B.—Many questions must remain unanswered until next week.

BOOKS (H. G.).—Hencey's "Elementary Course of Botany," edited by Dr. Masters. The price of the "Cottage Gardeners' Dictionary," free by post, is 7s. 2d.

BUSH AND PYRAMID FRUIT TREES (S.).—We must decline inserting any more but the results of practice.

WINTER TEMPERATURE OF GREENHOUSE (H. T.).—The heat required for all the plants you name, and for every other needing greenhouse treatment, should be a night temperature from now up to March of 40° to 45°, and in very severe weather it may fall to 38°, but the nearer 40° the better. In the day the temperature should be 45°, and not exceeding 50°, from fire heat, admitting air on all favourable occasions, but not lowering the temperature below 45°, though in severe weather a day temperature of 40° is better than heating the pipes or other surface very much to give a higher temperature. The birds and plants will do well together as regards temperature.

DOUBLE-GLAZING FOR RESISTING COLD (*Inquirer*).—You do not say what the temperature of the two pits may be when they are covered with the lights, or shut up, but we will presume the lights to be put on close when the temperature of the frames or pits is 41°, and out-doors at 35°, and down to freezing-point by dark, falling to 22° by morning. We do not presume to tell how much less frost would enter the pit with double sashes than the one with single, as so much depends on the wind and continuance of the frost, for it might be fit of frost all night, or only half as many, though the thermometer register 10° in the morning. Double sashes are equal to about 5° of temperature, or a structure with double sashes will be 5° higher in a dull cold period than one with single sashes, the conditions being equal.

MOISTURE ON FERNS IN UNHEATED FERNERY (*Idem*).—Very few of our native or hardy exotic Ferns will endure the continual dripping on their fronds of water from a jet, but if only occasional the following would succeed:—*Asplenium Adiantum-nigrum*, *A. marinum*, *Adiantum Capillus-Veneris*, *Asplenium Filix-foemina*, vars. *apiciforme*, *corymbiferum*, *plumosum*; *Blechnum Spicatum imbricatum*, *Lastrea dilatata cristata*, *L. Filix-mas cristata*, *L. opaca*, *Osmunda regalis cristata*, *Polypodium vulgare cambricum*, *Polystichum aculeatum*, *P. angulare proliferum*, *P. angulare multifidum*, *Scolopendrium vulgare*, vars. *corymbiferum*, *crispum maximum*, *sagittatum cristatum*, *ramosum majus*, *ramo-cristatum*, and *fissum*, and *Woodwardia areolata* and *radicans*. If kept constantly moist the Filmy Ferns, *Trichomanes radicans* and var. *Andrewsii*, *Hymenophyllum tumbridgeense*, and *H. Wilsonii*; and if not often wet you may add to those preceding the Filmy Ferns, *Oncidium japonicum*, *Niphobolus lingua*, *Lomaria alpina*, *L. magellanica*, *Litobrochia vespertilionis*, and *Cyrtomium falcatum*.

CUCUMBER LEAVES MUTATED (R. D. W.).—The leaves sent are perforated by some insect, probably crickets, that may be poisoned by phosphorus paste spread on thin slices of bread; or the leaves may be eaten by caterpillars, which may be taken by examining the plants, especially the under side of the leaves. Examine the plants at night with a lantern, when you may probably take the marauders at work.

PIPES FOR LEAN-TO HOUSE (R. F.).—Your small lean-to house will answer well for bedding plants with two 3-inch pipes along the front, and in summer it would answer for Cucumbers and Melons. We should have a pathway along the back, with shelves over to utilize space, and the whole of the front for plants on a lattice stage, to be taken out in summer. The cutting frame will answer best if heated by a tank covered with slates or boards, and over this a few inches of sawdust or other plunging materials; or you may put in a few inches of rubbish, and then 3 or 4 inches of soil, and insert the cuttings in it. The sides of the tank left free will give sufficient top heat.

LAWN PATCHY (*Idem*).—We should apply a dressing of very rotten manure to the lawn in March, or rich compost, and early in April rake it well with an iron rake, and sow over it 6 lbs. *Festuca duriuscula*, 8 lbs. *Cynosurus cristatus*, and 8 lbs. *Trifolium minus*, with 4 lbs. *Poa nemoralis* sempervirens in mixture for one acre. Rake lightly after sowing, and roll well, not mowing until May, and then keep well mown and rolled. A dressing of guano in moist weather in May would much improve the growth of the grass.

FRAMES UPON BRICK ARCHES (*Idem*).—You may have the frames placed on brickwork pigeon-holed, and with arches also under the bed pigeon-holed, and so constructed they answer very well, having walled spaces for linings about 2 feet wide. Such pits are not uncommon, and very odd.

WHITE BEDDING VIOLA (F. T., Dublin).—There is not a white bedding *Viola* equal to *Viola Perfection* in habit and quality, but there is a yellow one—viz., *Viola grandiflora major*, nearly equal to it in blooming qualities. Perhaps the best white bedding *Pansy* is Dean's White Bedder.

IVY NOT CLINGING TO WALL (E. G. W.).—We advise you to nail-up the shoots to the wall with shreds as they grow, and the Ivy will not fall from the wall, but cling to it after the shreds are rotten, or, if it show that tendency, secure the main shoots with iron holdfasts.

MELONS FAILING (R. F. H.).—We do not consider the cause of the failure to be in the dry heat given off by the hot-water pipes. They were not, probably, surrounded and covered with rubble brought over the pipes 6 inches. Had it been so, and the plants duly watered, the roots would not have suffered. We, however, prefer the pipes in a chamber, the pipes covered with boards or slates, leaving the joints open, then about 3 inches of rough compost or rubble on the slates, and then 10 inches or a foot of soil upon that. We presume you have other pipes for top heat, which should be provided with evaporation-troughs.

SPACE IN SMALL GREENHOUSE (F. N. R.).—The stove you mention has no tube to carry the results into the burning fuel into the open air, consequently the plants would be all injured and many killed.

FRUITS IN SMALL GREENHOUSE (F. N. R.).—*Best* July Green Gage, Green Gage, Coe's Golden Prop, and Tokworth Imperiale. *Cooking*—Early Orleans, Goliath, and Autumn Compote.

LILIUMS AFTER FLOWERING (*St. Home*).—The Liliams should have the dead flowers cut off, or at least be kept from seedling, and the plants placed in a cold pit, house, or out of doors in a sheltered position, where they may remain until the leaves fall, only keeping the soil moist, and when the stems are quite yellow cut them down, just over the bulb. We twist the stem out, as it parts freely from the bulb when the latter is mature. Turning the plants out of the pits, remove all the soil which comes freely from the roots, and reset with the crown of the bulb about 2 in. below the rim, using a compost of two parts fibrous light loam, one part each leaf soil, sandy fibrous peat, and old dry manure, with a half part silver sand and pieces of charcoal, the loam and peat broken-up but not sifted. The bulbs should be just covered with soil. Keep in a pit or other structure safe from frost and moist.

ERICAS FAILING (*T. J.*).—We think the Ericas were injured by the excessive drought, and were killed by the deluging watering you applied to them, but too late. The case would have been different had you watered the bed before the shoots of the plants had become dried, but when once this class of plants become thoroughly dried the watering only hastens their decay, the wood turns quite brown, and the plants go off at the neck. We think had you watered earlier the plants would have lived. It is of no use watering these plants after they become thoroughly dried. If they become dry, it is best to moisten the soil by degrees, commencing by sprinkling overhead, and so restore the foliage ere the soil is made very wet. The soil should, however, be kept moist, and then the plants will not suffer. We are obliged by the spores of the scarce Fern.

HEATING A PIT (*M.*).—You do not state whether the pit you propose heating is on the same level as, above, or below the greenhouse and vivary. If it is on the same level or above, there will be no difficulty, but if below we do not see how the pit is to be heated without having a separate heating apparatus for it. It would be best to take a flow-pipe direct from the boiler across the end of the greenhouse and the path outside to the pit, and two 2-inch pipes all round will give you the heat you may need, either for forcing or other purposes. The return-pipe will need to be connected with the return of the greenhouse. We should take the flow-pipe in the pit down two sides, across one end, and then return by the same route under the flow-pipes. This will give you two rows of pipes. It is hardly worth while having a separate boiler for so small a pit, and whilst we were about it we should contrive to have the other pit heated, taking the pipes named round both. It would be very little more expensive than only heating one pit, and would be a great convenience. You will need valves to shut-off or turn-on the heat as required. They ought to be as near the boiler as convenient.

THE MANETTI STOCK (*D. R.*).—It is a Rose raised from seed by an Italian named Manetti. You must buy the stocks of some nurseryman, or from one bush raise more from its cuttings.

CUT FLOWER COMPANY (*W. F.*).—We do not know anything about the Company.

WINTER TREATMENT OF VINES (*C. S.*).—The Vines from which the Grapes are cut should have all possible ventilation, and ought not to be syringed, but be kept dry. When the leaves fall, or in December, prune them, and thoroughly cleaning the house dress them with a sulphur, soft soap, and tobacco-juice composition. Scrape soft soap to a gallon of tobacco juice, brought to the consistency of paint with sulphur. The rods of the Vines should be freed of the loose bark, and washed with a stiff brush, then brush the mixture well into the crevices, taking care not to rub off the eyes. The house should be kept cool and dry, not higher than 40 from the heat until the Vines are started. The trips you may destroy by fumigating the house with tobacco two nights in succession, and again in ten days or fortnight.

TOMATOES TO FRUIT IN JUNE (*J. M.*).—For fruiting in June the seed should be sown early in January, and the plants grown in and fringed in a cucumber or other house with a similar temperature, assigning them a light airy position. We have not tried raising them from cuttings, though the idea has often occurred to us.

LILACS FOR FORCING (*F. W. T.*).—Lilacs for forcing are best purchased at a nursery where they are grown as dwarf plants well set with buds 1 or 2 in. apart. All they require is to be potted in light fibrous loam, and placed in a house with a temperature of 45° for about a fortnight, and then in one with a temperature of 55° to 65°, where they will soon come into flower, and when the flowers open remove to the conservatory. They should be sprinkled overhead with water if the temperature of the house twice daily until the flowers show colour, and it should then be discontinued. They will flower in the conservatory in due time if introduced, a few plants at fortnightly or three-weeks intervals from November up to March inclusive. For raising plants suckers should be planted in line a foot apart, and 18 inches between the lines, in an open situation, where they may remain two years, and then be transplanted, doubling the distance, and after other two or three years they will be fit to force, or as soon as they form flower-buds sufficiently plentifully. The Persian is the most dwarf, and with Charles X. are the best kinds for forcing.

TREATMENT OF CHERRIES ON MAHALEB STOCK (*A. Yorkshirer man*).—The best information is to be found in Rivers's "Miniature Fruit Garden." The roots of your trees must have struck into unfruitable soil. We invariably find this stock do well in light soils. Do all the pruning in summer. All that the trees require is to thin-out the wood where it is crowded, and to shorten long shoots. Birds eat Belle Agathe Cherry, but the fruit does not seem to be attractive to them as that of the summer Cherries. We have not seen the starlings attack it, probably they obtain preferable food at this season. Six feet will be too close, they ought to be 2 feet at the least.

VINE MILDEW (*E. S.*).—The old Vine is in a bad position. The roots in your house should be out-ripe. Plant two at the front as you propose. Do not plant any climbers; they will be in the way of the Vines, and will probably introduce red spider. If the Vines do well they will cover all the roof next season. If you try to do too much with your little house, you will do nothing well.

OLD VINES NOT SUCCEEDING (*J.*).—In the first place the house does not receive light enough, but instead of fixing an iron rod in your proposal, there should be a tray 14 inches from the glass front and back. It is very easy to renew the house with young wood by training-up a young rod annually, and gradually cutting out the old rods. We think these are the answers to your questions. If not, state in a few words the information you require.

MORELLO CHERRY NOT FRUITING (*W. H.*).—This Cherry succeeds in almost any description of soil, but prefers a medium loam. If apples is allowed to breed on the tree the branches will occasionally die-off. Yours being planted close to a spring in an unfruitable position, and this of itself may account for the branches dying-off.

NAMES OF FRUITS.—Unavoidably postponed until next week.

NAMES OF PLANTS (*G. E. H.*).—1, *Aschepias crassifolia*; 2, *Selaginella Martensii*; 3, *Celsia Areturus*. (*S. D.*)—1, *Anemone japonica*; 2, *Crassula spathulata* (*J. H. B.*);—*Polypodium vulgare* (*J. B. M.*);—*Davallia canariensis* and *Aspidium trifoliatum*. (*Oakdown*).—*Asplenium medium* and *Nephrodium* (*Lactrea*) *dilatatum*, var. (*E. D.*)—1, *Eupatorium*, apparently *Weymannianum*, *Engl.*; 2, *Lycopersicon tomentosum*; 3, *Convolvulus trieloid* (*C. minor*) of gardens. (*G. Jamson*) 1, *Nephrodium* (*Lactrea*) *dilatatum*; 2, *Davallia spathulata*; 3, *Polypodium trichomanes*, *Hall.* (*C. Taylor*).—Perhaps a *Nymphaea*, but we cannot name from specimen sent. (*W. H.*)—1, *A. Myriophyllum*; 2, a *Potamogeton*. (*W. T.*)—*Browallia data*. The *Caladium* is a florists' variety.

POULTRY, BEE, AND PIGEON CHRONICLE.

LET THE BEST BIRDS WIN.

How is it that Messrs. A, B, and C, those "noted parties," as "T. W. D." calls them, win all the prizes at poultry shows? And how is it that Messrs. D, E, and F, who want to do so, but can't, grumble so much, and grudge them their success? Let me try to answer these two questions fairly and plainly.

In the first place let us see who A, B, and C are. Many of the grumblers say, "Oh! these people are nearly all 'dealers.' They make a living by travelling about with their birds to all the poultry shows. It is no use trying against them. They ought not to be allowed to exhibit in the same classes with us. If this sort of thing is to go on, I know one thing—I shall give up exhibiting altogether," leaving us to infer that thus poultry shows would go to the dogs. Another suggests that the "noted parties" should only be allowed to take one prize in each class. Another that there should be a champion class for those who have good birds, and another class for the "scrubs." (Query, should the first prize be given for the best or the worst bird?) and how much ought the public to be paid for looking at them? Another wants to handicap the best birds so heavily as to make it improbable that the owners would exhibit them. Another, who has an eye to business, would compel those insatiable devourers of prizes to affix such a low price to their choicest specimens that they would inevitably be claimed by one of the D, E, F fraternity. But then, of course, he would never be so unfeeling as to exhibit them more than once against his former brethren in affliction, or else he would place an equally low price upon them as that at which he himself claimed them, in order that E and F might have a chance too.

Let us ask, first of all, Is it true that nearly all the successful exhibitors are "dealers"? I must answer in a somewhat enigmatical manner, and say, Yes and No. Yes, if D, E, F mean that their birds are bred for sale as well as for other objects. No, if they mean that the majority of prizewinners devote themselves entirely to the rearing and exhibiting of poultry for the purpose of gaining a livelihood by it. Let the catalogues of our leading poultry shows speak for themselves. They will record a still more emphatic "No." Begin with Dorkings, and work down to Bantams, and you will find that in almost every instance the principal prizes fall into the hands of some amateur who devotes his or her energies to the production in perfection of some particular breed, whose success is a proof that patience, labour, time, and money have been freely expended, and expended not in vain—a success which Messrs. D, E, and F should still less grudge, since it is the result, as a rule, of experience gained by repeated failures; a goal which has been at last gained after much disappointment, with a fainting heart, it may be, still bravely hoping against hope. Let D, E, and F follow the same course, and then, and not till then, will they experience the refreshing exultation that follows the winning of the first victory—not with purchased weapons, but with birds that have been bred by oneself.

Now, as to the obstacles that D, E, and F suggest should be placed in the way, in order to prevent poor A, B, and C from obtaining their just reward, would it be well to debar A, B, and C from taking more than one prize in each class? First, would it be well for poultry-show committees? Secondly, would it secure the desired end—viz., the mention in the prize list of D, E, and F's inferior birds? In answer to the first question, "T. W. D." says, "I think if it were made a rule to allow no one to take more than one prize in any class, this would be a means also of increasing (the italics are mine) the number of entries." Truly the thoughts of mankind in general, and of "T. W. D." in particular, are very wonderful—quite beyond the comprehension of such dull intellects as mine; for as one who has acted on the committee, and as the secretary of a poultry show, I confess that I should have declined to try the experiment suggested, fearing that those who now are in the habit of entering two, three, or four pens in each class, would do as I should most certainly do myself, enter only one. But "T. W. D." will say, "Yes, but many in such a case would enter, who, with inferior birds, would have a chance of securing one of the prizes; better than if one exhibitor had it in his power to sweep them all away." I am inclined to think that

their first experiment would teach them that bad birds stand no more chance, even with such a rule, than they did before. The only difference would be, that whereas before A and B divided the prizes, now A would be first, B second, C third, and D, E, F, & Co. would be, as before, "left out in the cold."

Again, would it answer to have separate classes in poultry shows for "dealers" and "amateurs?" In my judgment, No. The great majority of exhibitors are not "dealers" in the common acceptance of the term, but "amateurs." There are comparatively very few who have the temerity to attempt to gain a living by breeding and exhibiting fancy poultry. It is a marvel to me how any who do attempt it manage to succeed, considering the competition they meet with from the immense number of amateurs, who, grudging neither time nor money so that they may ride their hobby well, can ride, moreover, with a heart free from care and anxiety, seeing that even if they fail they have little to lose. I should say, therefore, that it is not the "amateur" who competes at a disadvantage, but the "dealer;" and I would always back any experienced amateur who devotes himself entirely to one or two breeds (not more) to beat any number of dealers who have to devote attention to every breed indiscriminately.

But some have said, "Why should this distinction be made at flower shows and not at poultry shows?" The cases are widely different. I have said before that those who gain a living entirely by breeding fancy poultry and Pigeons are very few—too few by far to make it worth while for committees to offer special prizes for them. On the other hand, the name of those who cultivate flowers and plants for sale as a means of livelihood is legion, and consequently nurserymen's classes are always well filled. The poultry amateur also widely differs from the amateur horticulturist; for whereas the one is, as a rule, willing to sell his stock, and, moreover, is only too glad to make a profit by it if he can, the other exhibits his productions without any view to sale, and usually only for the pleasure and honour of the thing. There is thus not the slightest difficulty in drawing the line between nurserymen and amateurs, but to attempt to do so between poultry-dealers and poultry-amateurs would be far more difficult, and would inevitably lead to endless squabbles and displays of ill-feeling.

Again, would separate classes for champion birds, and for birds that have never won a prize, as suggested by "T. W. D.," answer? I think not. The object of a poultry show is not to encourage the breeding of bad birds, but good, and it would be a waste of money, and a perversion of the object for which such shows were instituted, to make it a recognised possibility for a bad bird to obtain the recommendation of a first prize. Many speak and write as though the object of a poultry-show committee, in arranging their prize list, ought to be to distribute as evenly as possible among exhibitors the amount of cups and money they offer for prizes. Such people invariably feel aggrieved if a portion of the spoil does not fall to their share. They abuse the judges, they abuse the prize list, they abuse the committee, they abuse the successful exhibitors, and blame, in short, everybody and everything except those who are really to blame—viz., themselves. The heading of my paper expresses the doubt which exists in my mind as to whether this unreasonable disposition is not incurable in many cases. I trust, however, that others are erring from want of thought, and if my words help to dispel their illusions I shall be more than satisfied. In conclusion, I would add that I have written the above in no unfriendly spirit towards those whose communications show that they differ from the foregoing opinions. If they can say anything that will conclusively prove me to be mistaken, I shall willingly acknowledge my error; meanwhile I cordially hope that my friends (if they will allow me to call them so) D, E, and F will cease to grumble, and say with me, with a hearty good shake of the hand, let the best birds win.—R. W. BEACHEY.

I QUITE agree with "T. W. D." that it would be difficult and unwise to prevent dealers exhibiting. If they possess first-rate birds, and can win first prizes, why shouldn't they? If they have bred the birds, so much to their credit; and if they have bought them, cannot amateurs also buy such for the same money? I think it would be a good plan to have a separate class for young birds, especially in some of the Pigeon classes, at the larger shows, and then all would have a good chance; but when there is only one class, and a dealer shows the best bird, and consequently gets the first prize, let the disappointed amateur say to himself, "Well, the bird deserves it; let me try and breed such."—ALMOND TUMBLER.

"We think this subject has been sufficiently discussed.—EDS."

EXHIBITING ANOTHER OWNER'S POULTRY.

I HAVE Rouen Ducks, Spanish, and Brahmas, which I intend exhibiting at a show which will take place at the end of the month. Two friends of mine, one who has ceased exhibiting altogether, and another who does not like the bother of exhibiting, have, the first one some splendid Game, and the other

Aylesbury Ducks. Would it be right for me to borrow them and exhibit them along with mine in my own name?—CRAB.

[It would be an untruth, and if the birds, not your own, gained a prize that would give your poultry-yard a good reputation it did not deserve. Why not exhibit them in the names of the rightful owners, you taking the risk and the profit if any?—EDS.]

THE CRYSTAL PALACE SHOW.

I WAS just thinking, as I sat waiting for the postman bringing the Journal with the Crystal Palace list, what a great advantage exhibitors had who could go with their fowls to a show a long distance off. The first thing that took my attention lately on the Journal's arrival was Mr. Maynard's letter. Now, my birds will have to leave home early on Saturday morning, travel upwards of two hundred miles, including I do not know how many changes, and will have to be taken across the city in a van. Of course, the Committee will attend to them on arrival; but what chance will they have if it come to something like a point of equal merit between my birds and the birds of an exhibitor whose man has been allowed in, we will say, early on Monday morning before the Judges commence, just to attend to his birds, to wash their heads, and rub them down to make them look fresh? My birds having had that done on Saturday morning would look dull compared with his, consequently I should lose.

I think, after they are delivered up to the Committee, no exhibitor or his man ought to be allowed to enter the place of exhibition until after the judging is over.

There is another small matter I hope the Committee will reconsider—namely, compelling exhibitors to send their birds in separate hampers. I shall show two hens in one class, not for sale: how much better it would be if I could send them in one hamper divided in the middle with canvas. It would save carriage, and encourage exhibitors to make above one entry when it is on the single-bird system. To a person who understands his work it would be no detriment to pen and hamper them, and I should think the Committee will have none but competent persons at a show like that at the Crystal Palace.—F. M. A.

In reply to Mr. Maynard's letter, the Committee purposes strictly carrying out the rules of the Show, and no person will be admitted to the building except those engaged by the Committee, before the Palace is open to the public.

With regard to persons obtaining admission under the pretence suggested by Mr. Maynard, we gave no authority to the policeman who had charge of the door to pass them, and if they prevailed upon him to allow them to enter, they must have concealed themselves in the building, as no one was seen by us, and we are sure no one approached the Judges until the public were admitted. We much regret Mr. Maynard did not call attention to this subject at an earlier period, as it would have enabled us to trace the matter, for the Committee would not knowingly allow any breach of the rules to pass unnoticed, they being of opinion that the only way to treat exhibitors fairly is to place all on an equality, and that can only be done by faithfully carrying out their "rules and regulations."—C. HOWARD AND W. I. NICHOLS, *Hon. Secs.*

FARNWORTH POULTRY SHOW.

THIS Show was held on the 2nd inst., and it may be necessary to add for some of our readers that the town is near Warrington, in Lancashire. The pens were nearly one hundred more in number than last year.

GAME.—Black-breasted Reds.—1, T. P. Lyon, Liverpool. 2, J. Fletcher, Stone-cloagh. 3, J. Platt, Winsford. Brown-breasted Reds.—1 and 2, J. Platt. 3, T. P. Lyon. Any other variety.—1, J. Fletcher. 2, J. E. Andrews, Worcester. 3, E. Bell, Burton-on-Trent. Cock.—Any colour.—1 and Cup, C. W. Brierley, Middleton. 2, J. Chesters, Nantwich. 3, J. Cock, Worcester.

DORKINGS.—1 and Cup, Rev. E. Bartrum, Berkhamstead. 2, Miss Davies, Chester. 3, J. Robinson, Garstang.

S. SPANISH.—1 and Cup, J. Leeming, Preston. 2, H. Wilkinson, Earby. 3, J. Walker, Salford.

COCHINS.—Cinnamon or Buff.—1 and 2, W. A. Taylor, Manchester. 3, W. A. Burnell, Southwell. Any other variety.—1, W. A. Taylor. 2 and 3, W. A. Burnell.

HAMBURGERS.—Gold-pencilled.—1, J. Robinson. 2, W. Speakman, Nantwich. 3, A. F. Faulkner, Thrapston. Silver-pencilled.—1 and 2, J. Robinson. 3, M. M. Gibson, Sheepshed. Gold-spangled.—1, J. Robinson. 2, T. Walker, Denton. 3, N. M. Prior, Denton. Silver-spangled.—1 and Cup, N. Marlor. 2, J. Robinson, 3, J. B. Parry, Newton.

POLANDS.—1, J. Fearney, Loughton. 2, J. Robinson. 3, W. A. Taylor. BRAHMA BOOTIES.—1 and Cup, J. H. Pickles, Birkdale. 2, T. F. Ansell, St. Helens. 3, P. Unsworth, Louth.

BANTAMS.—Game.—1, 2, and Cup, W. F. Adde, Preston. 3, G. Maples, jun., Wavertree. Any variety except Game.—1, W. A. Taylor. 2, H. B. Smith, Preston. 3, E. Walton, Horncliffe.

GAES.—Cock.—1 and 2, W. F. Adde. 3, G. Maples, jun.

ANY OTHER VARIETY.—1, T. F. Ansell (Dark Brahmas). 2, R. B. Wood, Uttoxeter (Cove-Cours). 3, N. Marlor.

SELLING CLASS.—Chickens.—1, T. P. Lyon. 2, W. A. Burnell. 3, T. F. Ansell.

DUCKS.—Rouen.—1, J. Walker, Rochdale. 2 and 3, W. Evans, Whiston. Aylesbury.—1, 2, and 3, J. Walker. Any other variety.—1, M. Leao, Dunstable. 2, E. L. Wigam. 3, R. Gladstone, jun.

GENESE.—1 and 2, J. Walker. 3, J. Storey, Stokesley.

TURKEYS.—1, J. Brookwell, Wigam. 2, Rev. N. J. Bally, Newbury.

The Judges were Mr. G. Teebay, Fulwood, Preston; and Mr.

G. Fell, Warrington. Mr. Hewitt was prevented attending by illness.

HARTLEPOOL POULTRY SHOW.

THE Society has the support of some of the principal gentlemen of the borough, and the Market Hall is placed at the disposal of the Committee; than this it would be very difficult to find a more suitable building, with its crescent-formed stalls on which to stage each class of Pigeons, and an excellent light is thrown on every object from the top. Excellent pens were provided for the poultry, and were a great improvement upon those of last year, but the Pigeons were shown in the same lock-up, bell-shaped pens of Mr. Rule's, and which we have drawn attention to before. The first nine classes in poultry were only moderately supported, and some of the birds were in a terrible state of moult, not at all fit to be away from their homes; but scarcely a pen of these won a prize, there being sufficient in full plumage to bear off the honours, and yet quality was not sacrificed for the sake of feather.

Of *Dorkings* there were but three pens of Dark Greys, but all good, and of Buff *Cochins* five, and the cup for the first ten classes was awarded here to a promising pair of chickens. In *Cochins*, any other, were Partridge first and second, and White third, all very good. In *Brahmas*, a pen of large Light birds stood first, and a good pair of Dark chickens second, the pullet in the latter pen being most perfectly pencilled. *Polish* were a grand lot, but not quite full in feather, but the first-prize Silvers extremely large and compact in crest. *Fowls*, any other, came next, and Spanish were placed first, good Malay chickens second, and Spanish third.

Of *Ducks*, *Rouen* were first, a very large and perfect pair, the two next pens being of fair quality, and the rest poor. *Aylesbarys* were a capital class, all being of less or more merit, and the winners very large. In Any other variety of *Ducks*, a pair of *Mandarins*, in the full blaze of their gorgeous plumage, were first, very neat *Brown Calls* second, and *Black* third.

The *Selling* class was very large, and some excellent purchases were made through that medium. *Game*, as classes, were only moderate in quality, and some of the pens empty through an awkward mistake on the part of an exhibitor. In *Reds*, the first-prize *Brown-breasted* chickens were a smart stylish pair, the second being pretty good *Black Reds*, and the third-prize pen containing the best hen in the class, but mated to a coarse bad-footed cock. *Game*, any other colour, were *Duckwings* in beautiful bloom first and cup (old birds); second birds of the same colour, as also the third, which pen contained the most stylish pullet shown. In single cocks, a strong well-built *Brown Red* first, a good *Duckwing* second, and a *Black Red* hen third.

Bantams were the feature of the poultry classes, the whole being well supported in numbers and quality, and many more prizes might well have been awarded in all the classes, the cup in this section being carried off by an exquisite pair of adult *Piles*. In *Reds*, the winners were first *Brown Red* chickens, second old *Black Reds*, and third chickens of that kind. *Game*, Any other colour, were *Piles* first, *Duckwings* second, and *Piles* third. In *Blacks* were some neat specimens, the three winning pens of chickens being such as will not be easily beaten, the style, ear, comb, and size being just perfection. In Any other variety of *Bantams*, the first were *Silver-laced*, of the long-coveted shade of ground colour and otherwise good; the second *White-booted*, and the third *Silver Sebrights* of the antiquated variety. In *Bantams*, single cock or hen, a grand old *Black* (the hero of many fights) won the first, while an equally good *Black cockerel* was second, and *Brown Red cockerel* third. For *Hamburgs* there were five classes, many pens being good, while others were just as poor; the *Silver-spangled* chickens to which the cup was awarded were well and evenly spangled, and altogether one of the best pens we have seen this season, while the first-prize *Gold-spangled* ran them rather close for the plate.

Pigeons were next, and they were a tough lot, the entries being very large, and the competition most unpleasantly keen. In *Short-faced Tumblers* the winners were all *Almond*, the head properties of some of the birds being extraordinary, though some were a little too dark through age. In *Tumblers*, *Long-faced*, Mr. Harvey won with a most perfect *Red Mottle*, the second being a *Black Mottle*, and third an exquisite *Red-breast*, while there were several good-coloured *Almonds* in the class. *Carriers*, first a capital *Black* cock, not quite clear of the moult, but eagerly chined at £20; second, an old well-worn *Black* cock; and third, a good well-shown *Dun*. The hens in this class were not good as compared with the cocks. In *Pouters*, Mr. Rule's grand *Blue* cock won not only the first in his class but also the cup for the best bird in the Show; the second was a long *Red*, and third a handsome *Blue* hen. *Farbs* were not good, most of the best being somewhat *blear-eyed*, while in *Trumpeters* the recent importations won all the prizes, and do not call for special remark. *Fantails*, as will be seen on reference to the names, were marvels for style and quality, but the winners left little chance for the rest, although they were good also. In

Jacobins a very neat *Red* hen was first, a good *Red* cock second, and *Black* third. *Turbits* had twenty-four entries, and would have made two grand classes; a *Blue* cock, full of head qualities, being first, a very small and sound-coloured *Black* second, and a somewhat large but otherwise perfect *Silver* third. *English Owls* were a good but irregular class, many varieties of head being shown; the first and third prizes went to *Blues*, and the second to *Powdered Blue*, all these being good in head and gullet, while birds of more beautiful colour (as for instance some splendid *Powdered Blues* with long thin heads and beaks), were commended. *Maggies* all good, the prizes going to first a *Yellow*, second a *Red*, and third *Black*. *Dragoons*, twenty-five birds shown, and scarcely one but that might have won a few years back, while the contest among the first half-dozen birds was almost a puzzle, and the prize awarded to *Blues*, the first only beating the second bird by a little superiority in strength of build, and the third coming very close, and evidently a much younger bird. Any other variety was a puzzle, as also the *Selling* class, there being twenty-nine birds in the former and thirty-seven in the latter. In the first-named class a foreign *Blue Owl* was first, a *Pigmy Pouter* second, and a *Laced* or *Trillback* of unusual excellence third. With such an entry as the above before them we think it not at all unwise of the new Society at *Middlesborough* to give the large number of classes they are now offering for the *Pigeon* fanciers.

To follow up with such an entry of *Rabbits* shows that section is full of spirit, and when we can measure one after another throughout a long class without coming upon a single one so short as 20 inches in ear, it is a signal that the winners of this generation of *Rabbits* may look out or they may become losers with the next. The does in this section did not measure as well as the bucks, but the latter were entirely beaten by the does in style, quality of ear, and size, and the medal was given to a most handsome *Blue-and-white*, the second prize going to the *Long Sutton* cup *Rabbit*, which seemed to have lost in style and elasticity of ear to some extent. *Silver Greys* were not numerous, but the first-prize *Rabbit* also won the medal for the section. *Himalayan* were not so good as we have seen, though the first was well marked and good in points. In the *Variety* class they were numerous and good, the prizes being divided between the *Dutch* and *Angora*, a most exquisite young *Blue Dutch* doe being first, an *Angora* very fine in fur second, and Mr. Boyle's grand *Grey Dutch* buck third, several other very good *Dutch* being highly commended.

DORKINGS.—1, W. Harvey, Sheffield. 2, J. White, Warlaby, Northallerton 3, M. M. Cashmore, Sheepshead.

COCHINS.—*Buff and Cinnamon*.—Cup, 1, and 3, G. H. Procter, Darham. 2, W. Harvey. *Any other colour*.—1, T. M. Derry, Gedney. 2, W. Harvey. 3, E. Smith, Timperley. *he*, M. M. Cashmore.

BRAHMA FOOTRAS.—1, and 2, H. Beldon, Goststock, Bingley. 3, C. Carr Wilden, Bingley. *he*, C. Venables, Castle Eden.

POLISH.—1, and 2, H. Beldon. 3, W. Croft, Lendal, York. *c*, A. M. Balmer Bishop Auckland.

GAME—REDS.—1, E. Winwood, Worcester. 2, R. Britton, South Otterington Thrusk. 3, C. Venables, Castle Eden. *Any other colour*.—1 and Cup, J. Fletcher, Stoneclogh, Manchester (Duckwing) 2, W. F. Entwistle, Westfield, Bradford. 3, H. C. & W. J. Mason, Drippington, Leeds. *he*, J. Johnson, Bishop Auckland (Duckwing). *c*, W. Youngblood, Darlington. *Single Birds*.—*Any colour*.—1, W. F. Entwistle. 2, W. Allow, High Barnes, Sunderland. 3, R. Britton, South Otterington, Thrusk. *c*, E. Winwood, Worcester.

BLACK BANTAMS.—1, W. F. Entwistle. 2, W. C. Dawson, Whitby. 3, J. Nelson. *he*, J. & W. Gill, Bishop Auckland; J. A. Brooke, Hunslet, Leeds; J. Barlow, Sunderland; D. Hunter, Sunderland; W. F. Entwistle. *c*, J. Robson; A. J. Nixon, Burton-on-Trent. *Any other colour*.—Cup, 1, and 2, W. F. Entwistle. 3, J. Robson; R. Wingfield, Worcester. *he*, J. Mago, Gloucester; J. Barlow; D. Hunter, Sunderland.

BANTAMS—BLACK.—1 and 2, B. H. Ashton, Mottram, Manchester. 3, H. Beldon. *he*, J. Nelson. *Any other variety*.—1, H. Beldon. 2, J. H. Cartwright, Bishop Auckland. 3, T. P. Carver. *Single Birds—Any variety*.—1, W. Rogers, Sunderland. 2, R. H. Ashton. 3, W. F. Entwistle. *he*, J. Nelson. *he*, W. C. Dawson; H. Beldon; J. Russell, Whitby. *c*, W. Robinson, Whitehaven; J. Barlow, Sunderland; T. Ayre, West Auckland (Pile).

HAMBURGS—Gold-spangled.—1, J. Bowness, Newchurch. 2, H. Beldon. 3, Keenleyside & Harburn, Bishop Auckland. *Silver-spangled*.—Cup and 1, H. Beldon. 2, M. M. Cashmore.

HAMBURGS—Gold-pencilled.—1, H. Beldon. 2, J. Bowness, Newchurch. 3, D. Waller, Stokesley. *he*, W. G. Purdon, Driffield. *Silver-pencilled*.—1, H. Beldon. 2, J. Bowness, Newchurch. 3, M. M. Cashmore. *he*, T. Dowell, Sunderland.

HAMBURGS—Black, or any other colour.—1, H. Beldon. 2, J. Bowness. 3, J. Stott & Booth, Bury.

DUCKS—ROUEN.—1, J. Nelson, Cocksaw, Hexham. 2, G. Fendress, Martin, Kirbywastell. 3, W. Hedley, Yarm. *he*, I. Backwell, Seaton Carew; T. M. Derry. *c*, R. E. Walker, Graydon. *Any other variety*.—1, T. P. Carver, Langthorpe, Boroughbridge. 2, J. Stokesley. 3, T. Stansfield, Sunderland. *Any other variety*.—1 and *he*, W. Bums, Paisley (Kassarkas). 2, H. Beldon. 3, J. White, Warlaby, Northallerton.

ANY OTHER VARIETY.—1, H. Beldon. 2, R. Hawkins, Seaham (Malays). 3, Pallister & Hawkins, Topcliffe, Thrusk (Spanish).

SELLING CLASS.—1, M. M. Cashmore. 2, J. Watts, King's Heath, Birmingham. 3, C. Carr, Wilden, Bingley. *he*, W. G. Purdon, Driffield. *he*, B. J. G. Milner, Bamberley, Bishop Auckland (Duckwing); Pallister & Hawkins (Spanish). *c*, T. P. Carver, Langthorpe, Boroughbridge (Aylesbury); Wells & Sherwin, Ripon (Japanese Bantams); H. H. Staveley, Driffield (Duckwing); H. Beldon; W. Ormerod, jun, Walsden, Todmorden.

PIGEONS.

TUMBLERS—Short faced.—1, E. Horner, Harewood, Leeds. 2, J. Gardner, Preston. 3, H. Yardley, Bingley. *he*, W. Brydson, Dunst; J. Guthrie, Hexham. *he*, H. Blackburn. *Long-faced*.—1, W. Harvey, Sheffield. 2, J. Carver, Leeds. *he*, G. Thompson, Newcastle-on-Tyne. *c*, G. Thompson, W. Mapplebeck, jun, Sparkbrook, Birmingham; R. Blackock, Sunderland; J. Watts; E. C. Stretch, Ormskirk; W. Selton; J. Edge, Tyburn, Elington, Birmingham.

CARRIERS.—1, P. R. Spencer, Hereford. 2, S. D. Baddeley, Hereford. 3, E. Horner. *he*, R. Blackock. *c*, F. Stretch. 2, E. Horner. *c*, H. A. Ayrton, Saltburn-by-the-Sea; E. Leckwith, Monkwearmouth; P. R. Spencer.

POULTERS.—Cup, 1, and 3, T. Rule, Durham. 2, E. Horner. *hc*, J. F. Loversidge, Newark; R. Blacklock; F. Beckwith; T. Rule.
FARMS—1 and 2, E. Horner. 3, H. Yardley. *c*, J. Mauld, Newcastle.
TRUMPETERS.—1 and *hc*, T. Rule. 2, W. Harvey. 3, E. Horner.
FANTAILS.—1 and 2, T. Rule. 3 and *hc*, L. Walker, Newark. *hc*, C. N. Lythe, Cottingham.
JACOBIANS.—1, T. Rule. 2, R. Helliwell, Halifax. 3, W. Dugdale, jun. Brunley. *hc*, R. Helliwell, Halifax; T. Rule. *c*, W. Bulmer, Stockton-on-Tees.
TRUMPETS.—1, H. G. Peole, Bradford. 2 and 3, W. Croft. *hc*, H. Bolton; C. N. Lythe, Cottingham. *c*, J. Young, Bishop Auckland; J. W. Edge; F. Horner.
OWLS.—English—1, J. Gardner, Preston. 2, H. P. Hoyle, Bradford. 3, E. Lee, Norwich. *hc*, E. Lee; R. Blacklock. *c*, S. B. Baddley, Hereford; G. W. Dutton, Chester.
MAGPIES.—1, H. Beldon. 2, E. Horner. 3, J. Watts. *hc*, M. Ord, Sands, Sedgefield (2); E. Horner.
DRAGONS.—1, E. E. Stretch, Ormskirk. 2, W. Sefton. 3, H. Yardley. *hc*, J. Watts. *hc*, J. Watts; E. E. Stretch; W. Bulmer, Stockton-on-Tees.
ANY OTHER VARIETY.—1, E. Horner. 2, W. Harvey. 3, M. Ord (Lace). *hc*, W. Dugdale, jun. Brunley. *hc*, H. Bolton.
SELLING CLASS.—1 and 3, J. Guthrie (Punter and Tumbler). 2, H. Beldon. *hc*, W. Sefton. *hc*, P. R. Spence, Hereford. *c*, G. W. Sivewright, Hartlepool.

CAGE BIRDS.

BELGIANS.—Clear or Ticked Yellow—1, J. N. Harrison, Belter. Clear or Ticked Buff—1, R. Hawman, Middlesborough. 2, J. N. Harrison. *hc*, W. Bulmer, Stockton-on-Tees; W. Hutton, Northgate, Baildon, Leeds.
NEWCASTLE.—Clear Yellow—1 and 2, Bemrose & Orme, Derby. *hc*, R. Simpson, Whiby; Bemrose & Orme. Clear Buff—1, 2, and 3, Bemrose & Orme. *hc*, F. Goodwill, Free Whiby.
NEWCASTLE.—Variegated Yellow—1 and 2, Bemrose & Orme. *hc*, T. Armstrong, Great Broughton, Northallerton. *c*, F. Goodwill; S. Tomes, Northampton; J. Rowland, Skelton, Marske; J. Clemmison, Darlington; Ellerton & Mounsey, Darlington. Variegated Buff—1 and 2, Bemrose & Orme. *hc*, Bemrose and Orme; J. Goode, Leicester. *hc*, R. Simpson.
NEWCASTLE.—Crested—1, R. Hawman. 2, J. Goode. 3, Bemrose & Orme. *hc*, S. Tomes, Northampton. *hc*, B. F. Tullit, York. *c*, Hedley & Wignatson.
YORKSHIRE.—Clear Yellow—1, J. Rowland. 2, L. Bell, Dewsbury. 3, W. Hutton. *hc*, W. H. Bateelor, Whiby; J. Stevens, Middlesborough. *hc*, J. Clemmison; T. Tenniswood, North Aclam, Middlesborough. *c*, M. Holroyd, Great Horton, Bradford; W. Hutton; J. Whittaker, Great Horton, Bradford. Clear Buff—1, J. Whittaker. 2, L. Bell. 3, W. Bulmer. *hc*,—Holroyd (2); J. Stevens. *c*, W. Thornton, Darlington.
YORKSHIRE.—Variegated Yellow—1, J. Stevens. 2, J. Whittaker. *hc*, L. Bell; J. Clemmison; J. Rowland. Variegated Buff—1, —Holroyd. 2, J. Whittaker. *hc*, J. Garbutt, Great Froughton, Stokesley; L. Bell (2).
CINNAMON.—Yellow—1, Bemrose & Orme. 2, Bemrose & Orme. *hc*, J. Taylor, Middlesborough (2). *hc*, W. W. Johnson, Carlton, Northallerton. Buff—1 and 2, Bemrose & Orme. *hc*, J. Taylor. *hc*, W. W. Johnson, Carlton, Northallerton. *c*, T. Clemmison, Darlington. Variegated—1, Bemrose and Orme. 2, L. Bell. *hc*, T. Armstrong, Great Broughton, Northallerton. *hc*, T. Tenniswood.
LEZARD.—Golden-spangled—1 and 2, R. Ritche, Darlington. Extra 2, W. Watson, Darlington. Silver-spangled—1, R. Ritche. *hc*, J. Stevens; R. Ritche; W. Watson, jun. (2). *hc*, J. Clemmison, Darlington. Gold or Silver-spangled, with broken cap—1 and *hc*, W. Watson, jun. 2 and *hc*, R. Ritche.
ANY OTHER VARIETY OF CANARY.—1, J. Baxter, Newcastle. 2, J. Rowland. 3, W. Hutton. *hc*, W. Bulmer. *c*, J. Spence, South Shields; S. Tomes.
GOLDFINCH.—Yellow—1, R. Hawman. 2, J. Goode. Buff—1, R. Hawman. 2, M. Holroyd. *hc*, J. Whittaker; J. Stevens. Dark—1, C. Holt, South Stockton. 2, J. Stevens. *hc*, T. Tenniswood.
BLEP.—Any other variety—1, J. Goode. 2, J. Jobling, Middlesborough. 3, J. Spence, South Shields. Extra 2, J. Baxter, Newcastle.
GOLDFINCH.—1, R. Pearson, Whiby. 2, R. Addison, West Hartlepool.
LINNET.—1 and 2, W. Carrick, Middlesborough. 3, J. T. Harrison, Darlington. *hc*, W. H. Bateelor, Whiby; W. & C. Burmiston, Middlesborough; W. Gibson, Hartlepool.
EUROPEAN BIRD.—Any other variety—1 and *hc*, R. Pearson. 2, W. & C. Burmiston. *hc*, W. Carrick.
SELLING CLASS.—1, Master R. L. Gaine, Sandhutt. 2, J. Rowland, Skelton, Marske. 3, J. Garbutt. *c*, R. Simpson; J. Garbutt; R. & J. Burrows, Whiby; W. Henderson, Whiby; W. Harland; T. Clemmison.
PARROTS.—1, W. Boden. 2, G. Alderson.

RABBITS.

LOP-EARED.—Buck—1, F. Banks, London. 2, T. Myton, Hungate, York. *hc*, F. J. Smith, East Dorrham; W. N. Jackson, Hartlepool; T. Myton; J. Boyle, jun. Blackburn; J. Hallas, Huddersfield; W. B. Boden, West Hartlepool. *c*, J. C. Crosley, Halifax; I. Lynn, Middlesborough. Doe—1 and Gold Medal, F. J. Smith. 2, F. Banks. *hc*, J. Hume, York. *hc*, W. B. Boden; J. C. & H. Elwis, Doncaster; J. Mason, Hull; W. Donkin, Driffield; J. Hallas, Huddersfield. *c*, T. Myton; J. Boyle, jun.; W. B. Boden.
SILVER-GRAY.—1 and Gold Medal, S. Ball, Bradford. 2, F. Peters, Hull. *hc*, J. Boyle, jun. *c*, J. Stevens. *hc*, T. Tenniswood.
HIMALAYAN.—1, J. Hallas. 2, Miss H. O. Powell, Bedale. *c*, W. N. Jackson, Hartlepool; S. Ball.
ANY OTHER VARIETY.—1, W. Donkin. 2, W. Bowes, Darlington. 3, J. Boyle, jun. *hc*, F. J. Smith; S. Ball. *hc*, J. Mason. *c*, W. Bowes; J. Mason; J. Hallas.
JUDGES.—Poultry: Mr. E. Hutton, Pudsey; Mr. J. Lawson, Hollycarse House, Ryhope. *Canaries*: Mr. W. A. Blakston, Sunderland.

CANARIES AT THE NOTTINGHAM SHOW.

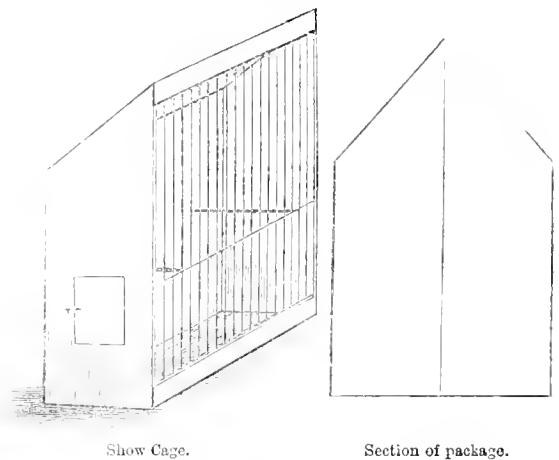
As to the birds disqualified in Clear Yellow, and which were published in our local papers, I beg to state one was exhibited by Messrs. Enoch & Atkins, of Coventry. These two gentlemen came over and were surprised to find that one of their birds was disqualified for having been coloured. I now beg to call the attention of the fancy at large, that the owners of this bird insisted on having their birds detained for proof, that they are left with me, and that I shall give a full and correct account in due course. Will you also allow me to state, that five birds were disqualified and had the white chalk cross on their cages, through the Derby feeding, the secret of which Mr. Orme told me he had sold? I will leave those to judge who saw them at the Show, whether they are fit for exhibition or not, saying nothing about their breeding qualities.—W. HOLMES, *Secretary*.

CRYSTAL PALACE POULTRY SHOW.—The entries for this Show close on Monday, October 20th. The schedule is a most comprehensive one; the value of the sixty-four cups and money prizes

which are offered for competition approaching nearly £1000. In some cases we notice as many as eight prizes.

PACKING CANARIES FOR TRAVELLING.

The best cage for general purposes is the ordinary show cage, and its shape, a section of which is shown underneath, suggests the best way of packing for travelling. Place the cages face to face, with a sheet of stout paper between, and tie each pair securely with strong string; then place the pairs end to end, and enclose in a canvas wrapper, which sew with a packing-needle and sail twine. Cord well, so as to render the whole



firm and secure. Label the package, in letters as conspicuous as possible, "Live Birds," and despatch by night mail. If the journey be one which occupies a night and a great portion of a day, despatch by mid-day train. Always endeavour in such case to finish with the night journey. Feed well before packing, and put a supply of seed in the cages. Some persons give sopped bread, but I think that before many miles have been got over the sopped bread will be rolled into a sort of pastry-cook's hedgehog. Birds can be sent in this way to any part of England, and I have sent them in perfect condition to Dublin. I should have said that the drinking vessels must be made into a separate parcel and attached, or each tin may be placed on the front cross-bar inside, and pinched tight to prevent its being dislodged. The above is the ordinary method of sending birds to shows, but the ingenuity of exhibitors leads them to adopt various modes of packing. Among such the best is a skeleton box like a hatter's packing-case, only it must be made ridge-shaped to admit of the cages being packed face to face. Such a shape effectually secures attention to "This Side Up," and prevents other packages being placed on the cages.—W. A. BLAKSTON.

HARTLEPOOL CANARY SHOW—THE "BEMROSE AND ORME" CANARIES.

I AM glad to find that at last the question of the "grand secret" of obtaining colour in Canaries is attracting attention. Some time back "FRINGILLA CANARIA," in a well-written paper, endeavoured to elicit an expression of opinion as to whether the colour in the feather could be affected by any process of feeding. I know "FRINGILLA" well. Like old Sol. Gills, he is "chock full of science," and anticipated that his paper would be the precursor of a series of articles on this interesting physiological problem from one or another of the scientific contributors to the Journal. Failing a reply, he rushed to his library, and buried himself deep in other studies; put his "Fownes" on the shelf, locked away his chemicals, and, in company with his microscope, relieved his mind of its perplexity by sorting and classifying the contents of a tiny phial of dreggings, which had been fished up from—I am afraid to say how many thousand fathoms in the middle of the broad Atlantic. Messrs. Bemrose & Orme have, however, solved the problem, though, as in the solution of the automaton chess-player mystery at the Crystal Palace, lookers-on are as much as ever in the dark. But the fact remains, and in the face of protests from exhibitors who find themselves literally "nowhere" with their best birds; in the face of a time-serving policy in such committees as listen to these protests, and allow themselves to be coerced and become the mere tools of those for whose benefit they cater; in the face of openly-avowed disbelief which, though based on defective knowledge, is honest and manly; and in the face of covert attacks, whispered insinuations, furtive winks, expressive shrugs

of the shoulders, "we-shall-see" sort of elevations of the eyebrows, the pointed weapons of little minds and ignorant; in the face of this, and much more, of which deponent saith nothing, the "Bemrose and Orme" Canaries are rapidly and surely commending themselves to the fancy as the grandest specimens ever seen.

Mr. Bemrose's reply to Mr. Troake last week seems to leave me little to say on the general question of the honesty of the birds. Nor do I think Mr. Troake, in the remotest way, intended to cast any reflection on Mr. Bemrose's integrity. Indeed, it will be no breach of confidence when I say that Mr. Troake wrote me immediately on reading my notes on Whitby Show, telling me the history of his purchase, and the great disappointment he experienced at what he considered such an unsatisfactory moult; and said, in as many words, that his desire was to ventilate the subject whether, what we will call for distinction, "artificially"-fed birds were suitable for competition, and further said he should endeavour to vindicate the Judges' decision. I think I am putting Mr. Troake's proposition fairly.

As regards the genuineness of the birds, apart from the evidences they bear about them of the impossibility of their being otherwise, I have only to ask those with whom the word of a gentleman goes for something, whether Mr. Bemrose's unqualified assertion of the fact is to be accepted or not? When a gentleman stands up, as Mr. Bemrose did, at the banquet at Hartlepool, at which the Judges were entertained by the Committee of the Show, and says, "I pledge you my word of honour as a gentleman that every bird I and Mr. Orme have exhibited here to-day is a genuine honest Canary; that their extraordinary colour is attributable to no other cause than my method of feeding; and further, that there is no possibility of their having been daubed or smeared by any solution given as a drink, since they drink nothing but pure water,"—are we to believe him, or are we not? And if we don't believe him, what are we to believe? Are we to weigh against such statements as these the unsupported assertions of persons who can give no reason whatever for their disbelief, or who, after every facility has been granted for investigation, have tried all they knew and utterly failed to demonstrate anything except that the birds are genuine? Or, worse still, are we to accept the innuendoes of any who, when opportunity has been presented, and every inquiry and examination courted, have simply refused even to look at the birds, and, never having seen them, yet persistently preach up their spurious character?

In the name of common sense what should such a sifting of evidence result in? and in the name of common honesty and fair play is such opposition as I have indicated right? And mark, it exists not in my imagination, but in fact.

The appearance of this long string of birds this season is inseparably connected with the two which appeared at the last Crystal Palace Show, and vindicating the Judges in their action then would be to vindicate any similar procedure in the future. My argument was that those two birds, if honest, should have been first in their respective classes. To pass them in silence was to proclaim one of two things—either the incapacity of the Judges to determine what is and what is not a painted Canary, or else to proclaim Mr. Bemrose a knave. If I can show that a knowledge of the fact that what we will call artificial feeding will induce colour was known to the Judges, my contention is that it was wrong to pass them by simply because a superior method of feeding had induced a superior colour, inasmuch as artificial feeding is a universal practice, its varied action prized as a great secret, a knowledge of it coveted by all, and searched for as diligently as for the philosopher's stone.

I shall not do wrong, then, if I quote from Mr. Barnesby's own recipe for obtaining colour, which is as follows:—

"During the moult supply no other but canary seed, and no green food whatever, or you will counteract the food they will have to partake of—viz., canary seed, marigold flowers, and saffron cake, and solution. . . . During moulting, when beetroot or carrot is sufficiently grown, you may cut slices, and after scoring them both ways with a knife, give them to your birds in the raw state. . . . Give your birds during moulting strong saffron solution, and a solution of cochineal only to drink. . . . They are both harmless, but necessary in assisting to improve, and striking out well the rich orange-tinted feathers so desired and satisfactory to the eye of a breeder and exhibitor of Norwich birds."

I shall also not do wrong if I quote from a letter I received from Mr. Barnesby aent the Cheltenham scandal. I may say that Mr. Troake was present at Cheltenham when the bird referred to below was tested. "I must caudally say, from what I have seen since the return of the birds, that there is want of convincing grounds to prove that the bird has been treated otherwise than they are treated here by the fanciers in having stuff to take inwardly, which adds so much in bringing them out to such perfection as the breeders in the town have been noted for for years. If such a bird is coloured, so have they been for years, not only those shown by the fanciers here generally, but birds which were shown by — at your own town years gone

by, and by many others. I have always found — an ardent honest fancier, and in such light I am in duty bound to support him, which is my intention towards any man whom I find as such." And I may add that Mr. Barnesby told me with reference to a very "hot" bird I saw in his own house, that it had had "as much solution and cayenne pepper as would kill a Christian."

I said above that artificial feeding was general; and *appos* to this, I will just mention that at Hartlepool there was quite a scene in the committee-room while Mr. Bemrose was exposing his scarcely half-moulted birds for examination. A gentleman from Darlington who was very sceptical, at last expressed himself perfectly satisfied, and shook hands on the public expression of his faith. "But," he said, "Mr. Bemrose, this won't improve breed. I show for breed; that's what I show for!" Mr. Bemrose replied, "Now, just answer me one or two questions. Do you use marigolds?" "I do." "Do you use saffron?" "I do." "Do you use cochineal?" "I do." "Do you use iron?" "You have me there!" "Well, what do you use marigolds, and saffron, and cochineal for? Is it not to give colour?" "Why, yes." "Well then, I am only a little in advance of you."

I did not intend to refer to Mr. Troake's statement about the bird moulting up an inferior colour, as any tyro knows that, as a rule, without hardly any exception, Norwich birds are at their best the first season, and not one per cent. of them ever see the show stage the second year. Reference to any catalogue will show this. This does not apply to marked or crested birds. Their marking or their crest is as valuable the second year as the first. Nor does it apply to Mules or to position birds.

There is one feature in the case which deserves attention, but it is a feature which Mr. Bemrose has only brought out more prominently than before. It is this: It is useless for purchasers to buy extraordinarily high-coloured birds under the impression they will produce the like to a certainty. This has always been the case, and it has always been a cause of complaint among the uninitiated, that the colour was not perpetuated. It only goes to prove a universal system of artificial feeding, which each breeder has hugged to his bosom like a masonic secret, and which Mr. Ashton referred to years ago as existing in Derby and other towns, and which could not be bought with money. But this is true (and I am not telling tales out of school when I say it), that you must have high-bred birds to get high colour. The same results cannot be got from a lemon-coloured Yorkshire as from a Jonque Norwich. Each, when it is turned out of the moulting cage, will preserve its distinctive shade, but much intensified.

But I am forgetting Hartlepool. It was a great Show, notwithstanding the usual pressure had been brought to bear in the way of promises of withdrawal of support if the obnoxious "Bemrose & Orme" birds were allowed to compete. But Hartlepool has a way of doing as it likes, and any who thought to dictate to Hartlepool found, as they say in the classics, that they had "got the wrong sow by the lug!" Perhaps in these days of controversy as to the respective values of capital and labour, it might interest some to calculate which holds the more independent position, the competitors or the givers of the prizes? There was an excellent entry, considering the extent of the schedule, and the display must have been most gratifying to the Committee. The Belgians were not numerous, but there were two or three good birds among them. Among the Norwich there were some birds of nice quality. Mr. Simpson, of Whitby, appears to have a wrinkle or two somewhere; he showed a nice Jonque. Mr. Cleminson, of Darlington, too, had some fine quality of feather, though the great desideratum was wanting. Of "breed" there was no lack, and when he learns the "grand secret" his birds are bound to run forward. In crests Mr. Hawman was first with his Whitby purchase, a grandly-topped bird, but if the schedule had not been general in its classification, Mr. Goode's bird (Leicester) must have been first. As a simply crested Norwich bird, Mr. Hawman's bird won on the crest alone, though even in that respect there was not much to choose between the two, Mr. Goode's having exquisite finish of crest, grand style, good quality and clearly-marked wings. The Yorkshire birds were well represented, but in the race for size there is a manifest departure from the old standard. A plain-headed Cobby is not a Yorkshire bird proper, and if the Cobby be introduced to obtain size, all traces of coarse feather should be bred out. Cinnamons were fine, the admixture of Norwich blood affording grand scope for the development of colour. Those behind "Bemrose & Orme" were, as at Whitby, unusually good. Mr. Ritchie and Mr. Watson had it all their own way among the Lizards. Silvers were a show in themselves, and a more level lot it would be difficult to find. They were all quality, and formed a lovely group of birds, attracting deservedly a lion's share of attention. The Mules were, most of them, old friends, and one looks anxiously for some new faces among them. Mr. Goode's Jonque, though much blemished, is one of those richly-coloured lusty birds not seen every day.

The Show, as a whole, was of great merit and, judging from the influx of visitors, bid fair to be a great financial success. Hartlepool seemed to be *en fete*. The very cars were covered with posters as on election-days, and large bills on all sides

called on the sight-seeing public to "go and see the wonderful Bemrose & Orme Canaries!" It richly merited all the success it achieved.—W. A. BLAKSTON.

In quoting from my letter, Mr. Bemrose omitted to mention one of a few weeks' later date, wherein I stated that I had tried Nature, the best of all possible tests in such a case, and that I found the bird to be a perfect failure. Thus in a little over two months after the exhibition the colour could not be sustained, the chemical test being to all appearance useless in this case. To this I did not receive a reply.

I think Mr. Bemrose may as well attempt to maintain that a good Belgian would moult-off all the best points, as that the colour would entirely fail in the second moult of a true-bred Norwich. I believe that to maintain the colour over the moult would be a portion of the best evidence of the genuine character of the bird, and to fail to do so would be likewise evidence to the contrary. If Mr. Bemrose's birds are genuine, why do they so utterly fail to maintain or reproduce the colour when this can be fairly accomplished by the birds of other exhibitors? By Mr. Bemrose's own showing, the colour on the birds is brought about by a peculiar mode of feeding, and I believe I am correct in stating that Mr. Bemrose can take an ordinary bird, and if the treatment be commenced previous to the moult, he can produce on this colour equal to the birds shown at the Palace. This being purely artificial, they have no power to produce or maintain it, and in the next moult the feather would be restored to the original colour. Consequently, I contend it becomes merely a matter of process for colouring, and that a bird coloured by hand would be equally valuable and eligible for all purposes with those by feeding; the difference is simply the means employed, the result being the same. I beg to thank Mr. Bemrose for the information afforded me, and to call his attention to the eighth rule in the regulations for exhibitors at the Palace Show.—R. J. TROAKE, *Clifton, Bristol.*

THE HONEY SEASON.

A PREJUDICE against the use of supers and improved hives of modern invention will, I am afraid, be engendered in consequence of the unproductive yield of honey this season; therefore, perhaps, the record of the result in this neighbourhood, where the straw cottage hive is the only one in vogue, may be beneficial. With most persons there was not an ounce of honey in the hives, and the wax was not of much use, as it was crisp and brittle, and unless active steps are taken immediately to commence feeding liberally and systematically, most bee-keepers will lose their stocks altogether. Although I fed my bees last winter regularly, I have had a very few pounds from three hives, only about an inch in the uppermost part of the comb containing any. The present honey season has been the worst one within the memory of "the oldest inhabitant." The general opinion is, that in whatever description of hives, in whatever part of the country, with but a few exceptions, the result of the season may be summed-up in one little word—none.—A. T. W., *Carmarthenshire.*

OUR LETTER BOX.

FOWLS MOULTING (*Jack*).—Birds are late moulting this year, and as they get older they moult more slowly. With them, as with some other bipeds, the reparative process or power decreases with age. Stimulating food will retard rather than accelerate the operation; it causes a hot fevered skin, wherein the stub of the feather, instead of being courished, is dried up. The best food you can give is ground oats mixed with milk, and lettuces.

SALE OF TABLE POULTRY (*H. H. C.*).—You cannot do better than write to Mr. Howard, Leadenhall Market, Gracechurch Street, London, E.C.

FOWL'S FOOT SOLE SWOLLEN (*Frenchman*).—If there is matter forming you will do well to open it, and after the bag is thoroughly cleaned out bind the foot up in soft linen on which citron ointment has been spread. Wrap the whole in wash-leather to keep out the dirt, and confine him to a run where he will be always on grass. He must not walk on anything hard till the foot is healed. It is a tiresome disorder, and difficult of cure.

TUMOUR ON FOWL'S BREAST (*M. S.*).—You must open the swelling. The tumour will easily come out. You can then sew up the opening, and rub the suture well with grease. In sewing up you will find you have two skins, an inner and an outer. You must be careful not to sew them together. It is not an uncommon case in a large bird. It would be a disqualification at a show if it were seen.

VARIETIES RUNNING TOGETHER (*Perplexed*).—If the birds are separated six weeks you may depend on the eggs. We believe a month is sufficient, but advise six weeks in order to be safe.

BRAHMA UNABLE TO STAND (*H. F. H.*).—The bird is in a hopeless state either from atrophy, or stoppage, or from injury to the back. A hen sits in the position you describe (on the tail and legs wide apart) when she is egg-bound, but the moment she is relieved of the egg she resumes her proper position. A young awkward cockerel that has overgrown his strength sits on his knees, but as growth ceases power returns, and he recovers his proper carriage. But when an old or adult bird makes himself into a three-legged stool with the help of his tail, we consider the case a very bad, if not a hopeless one. With regard to the seller replacing him, much depends on the time you have had him. You should have returned him at once. As, however, the seller admits he was so sickly (whether from moult or otherwise), that the journey was too much for him, we think he is bound to send you another at a considerable reduction in price.

ALTRINCHAM SHOW (*J. H. T.*).—If a committee does not advertise a show, we conclude it is a mere local one.

PIGEONS DISEASED (*Timepiece*).—Your Pouter cock is scrofulous. Dress the wound when healed with iodine paint once a-day to absorb the moisture and prevent a recurrence of the boil. At the same time give a tea-spoonful of cod-liver oil daily, or some capsules of the same. These remedies may do good, but absolute cure there is none for scrofula in any being or bird. Dress the Carrier's eye with alum and water, or only warm water, or lotion of lunar caustic, according as you see which suits.

SCOURING IN PIGEONS (*N.L.*).—Give a piece or two of old mortar as pills each day, and feed on old beans.

CRESTED CANARIES (*J. C.*).—A crested Canary has a tuft of feathers on the top of its head, and is not called Crested from merely raising its feathers at times. They are very beautiful birds, especially when the body of the bird is a clear yellow or buff, and the crest a dark green.—W. A. B.

CANARY WITH THIRTEEN TAIL FEATHERS (*C. K.*).—The modern Canary is a remarkable bird. He ought to have twelve feathers in his tail, but he occasionally has more. This seldom happens: seldom enough to be called uncommon, but not so seldom as to be worth more than a passing notice. He more frequently has less. That is decidedly common; but that is generally to be attributed to the caprice of the exhibitor. Some men have such a keen eye for mathematical exactness, that when they see a black feather on one side of a bird's tail and not one on the other, they pull the black one out, and so equalise matters. But inasmuch as there is still an unequally balanced tail, and the obnoxious black feather will persist in growing to the great discomfort of the honest soul, he improves the bird and removes all cause of offence by inserting a white feather in the hollow stump of the black one. There is no accounting for the pranks birds play with their tails. Two years in succession I discovered that a lovely Goldfinch Mule had had a black feather cut out of its tail. Last Crystal Palace Show that same Mule (or its ghost) stood first, and in the anonymous notice of the Show it was stated that the Mules were exceptionally good, "tail feathers all told." So that Mule must have taken into its head to grow a white feather for the occasion, or else there was a white one put in, or else the tail feathers were not all told. I incline to the latter opinion.—W. A. BLAKSTON.

BELGIAN CANARIES (*H. T. H.*).—Write to W. A. Blakston, Esq., 5, Douro Terrace, Sunderland.

CRYSTAL PALACES OF HONEYCOMB AT MANCHESTER (*Sussex*).—These large supers were filled by single swarms, which doubtless had special and extra attention from their owners. Next week Mr. Pettigrew will commence in our columns a series of articles on the best modes of supering, and of inducing the bees to fill supers, large and small, with honeycomb.

MOTH IN HONEYCOMB (*Idem*).—Remove the moth's nest from the combs of your super by the use of a knife or strong knitting-needle. If the combs are broken a little by the operation, they will be repaired next spring when you place it on the hive again.

METEOROLOGICAL OBSERVATIONS,

CAMDEN SQUARE, LONDON.

Lat. 51° 32' 40" N.; Long. 0° 8' 0" W.; Altitude 111 feet.

DATE.	9 A.M.				IN THE DAY.				Rain.	
	Baromet. at 32° and Sea level.	Hygrometer.		Direction of Wind.	Temp. of Soil at 1 ft.	Shade Temperature.		Radiation Temperature.		
		Dry.	Wet.			Max.	Min.	In sun.		On grass.
1873.										
Sept.										
Wa. 8	29.702	43.8	43.5	W.	53.7	49.8	39.1	61.4	56.9	0.010
Th. 9	29.936	39.7	39.2	W.	50.8	55.7	33.5	52.7	29.4	0.018
Fri. 10	29.751	60.0	57.9	S.W.	52.1	65.8	36.7	61.1	39.0	—
Sat. 11	29.837	59.9	57.3	S.W.	54.7	63.0	38.5	62.7	51.1	0.370
Sun 12	29.804	49.0	48.7	N.	55.3	59.7	49.0	59.0	49.3	1.043
Mo. 13	29.624	47.3	47.2	N.W.	53.7	54.0	46.6	79.4	46.2	—
Tu. 14	29.898	43.7	42.8	N.W.	51.8	51.4	37.1	97.0	31.0	0.011
Means	29.892	49.1	48.1		53.2	57.5	42.9	80.5	49.8	1.451

REMARKS.

- 8th.—Wet morning; fine afternoon and evening; but much colder.
 - 9th.—Fine morning, clouding over by noon; rain at 4 P.M.; rather disagreeable though warm.
 - 10th.—Dull all the morning, fine at noon; cloudy afternoon; high wind at night.
 - 11th.—Dull morning; fine in the middle of the day, but wet evening and night.
 - 12th.—Rain from early morning to 9 P.M. without intermission, at times heavy.
 - 13th.—Dull early; fine soon after 10 A.M.; dull afternoon; a little rain in the evening.
 - 14th.—A bright clear day throughout.
- Mean temperature about 6 lower than last week, caused by frequent rain and absence of sunshine. The fall of rain on the 12th was very large, its amount being the more striking as it had nothing of the thunder-storm character; though occasionally heavy, it was rather its persistence than its violence that produced so large a total.—G. J. SYMONS.

COVENT GARDEN MARKET.—OCTOBER 15.

We have not anything fresh to report, the markets being well supplied with fruit and vegetables both home-grown and continental.

FRUIT.

	s.	d.	a. d.		s.	d.	a. d.		
Apples.....	4	0	1	6	Mulberries.....	1	0	0	
Apples.....	doz.	0	0	0	Nectarines.....	doz.	0	0	
Cherries.....	1	0	0	0	Oranges.....	100	10	0	
Chestnuts.....	bushel	0	0	0	Peaches.....	doz.	8	0	
Currants.....	1	0	0	0	Pears, kitchen.....	doz.	1	0	
Black.....	do.	0	0	0	dessert.....	doz.	2	0	
Figs.....	doz.	0	6	2	0	Pine Apples.....	lb.	3	0
Figs.....	lb.	1	0	1	6	Plums.....	1	0	0
Gooseberries.....	lb.	1	0	0	0	Quinces.....	doz.	2	0
Grapes, foreign.....	quart	0	0	0	0	Raspberries.....	lb.	0	0
Grapes, homegrown.....	lb.	1	0	5	0	Strawberries.....	1	0	0
Lemons.....	100	10	0	15	0	Walnuts.....	bushel	10	16
Melons.....	each	2	0	5	0	ditto.....	100	2	0

WEEKLY CALENDAR.

Day of Month	Day of Week	OCTOBER 23—29, 1873.		Average Temperature near London.			Rain in 49 years.		Sun Rises		Sun Sets.		Moon Rises.		Moon Sets.		Moon's Age.		Clock after Sun.		Day of Year.
		Day.	Night.	Mean.	Days.	m.	h.	m.	h.	m.	h.	m.	h.	m.	h.	Days.	m.	a.			
23	Th	58.2	39.8	49.0	23	40	af 6	49	af 4	53	8	32	5	2	15	37	296				
24	F	56.3	39.6	47.9	29	42	6	47	4	10	10	56	5	3	15	44	297				
25	S	55.9	38.5	47.2	21	44	6	45	4	26	11	30	6	4	15	51	298				
26	SUN	55.6	36.5	46.1	18	45	6	43	4	after.	19	7		5	15	57	299				
27	M	55.1	38.4	46.7	27	47	6	41	4	31	1	23	8	6	16	2	300				
28	Tr	54.5	35.9	45.2	27	49	6	39	4	14	2	41	9	7	16	7	301				
29	W	54.0	35.7	44.8	29	51	6	37	4	44	2	7	11	9	16	11	302				

From observations taken near London during forty-three years, the average day temperature of the week is 55.7°; and its night temperature 37.8°. The greatest heat was 67°, on the 25th and 29th, 1833, and 26th, 1853; and the lowest cold 17°, on the 23rd, 1859. The greatest fall of rain was 1.03 inch.

FRENCH GARDENING.



FOR some time I have been intending to send you a few notes on the subject of French gardening, arising from my recent trip to Paris, but I have been so much occupied since my return home that I have not been able to find time. I now, however, venture to forward these few notes, and hope your readers will pardon their being very hastily put together.

In the first place, I must remark that I had heard and read so much lately of the good taste of the French in gardening, and of the bad taste of the English, that I had my expectations much raised, and expected to learn a good deal from the French parks and gardens. I certainly did learn much, but it was chiefly what to avoid, and not what to imitate. I am aware that, when I was in Paris in the second week in September, the gardens were somewhat past their best, but when I returned to England, English gardens were still so good that it was not difficult to make allowances; and, though I should have seen them to better advantage in August, still there was no difficulty in judging what they had been.

I do not wish to enter into lengthened details, but will premise that the parks and gardens I especially took notice of were the Parc Monceaux, Jardin des Tuileries, Luxembourg, Versailles, and the beds, &c., along the Avenue de l'Imperatrice, &c. The best taste was displayed in the Parc Monceaux, which, for a small park, is tastefully laid out with good variety, but the whole much marred by some very bad planting. For instance, one large bed, from 70 to 80 feet long, was entirely filled in the centre with *Acer Negundo variegatum* edged with a purplish Phlox, and in front of that a line of scarlet Geranium, either *Stella* or *Tom Thumb*, I forget which. There was also another large bed of *Acer Negundo variegatum* quite unrelieved by other evergreens or foliage. Now, if these beds had happened to have been white-leaved Geraniums, as *Alma* or *Bijou*, everyone would have said it was bad taste to have had such a mass of white foliage, but because it was a hardy deciduous tree, of course, in the opinion of many, it was quite correct. This is not the first time, however, I have seen the *Acer* much overdone; it is pretty in small plants, and fine for isolated and individual specimens, but when planted *en masse* it becomes heavy and lumpy; besides, it is so free and quick a grower that it very easily overpowers other things. Then, again, in another bed were plants of *Begonia Rex* on a groundwork of white *Alyssum*, not the white-leaved *Koniga maritima*, which might have been effective, but the white-flowered Sweet *Alyssum*, which looked very poor and insignificant when overpowered with the *Begonia*. Another bed was much more effective—a centre of *Begonia nitens* I think it was, but as none of the beds was labelled either here or anywhere else where I went, which is a great oversight in public gardens, I cannot be quite sure. This *Begonia* was mixed

with *Coleus Queen Victoria*, edged with *Coleus Verschaffelti*, and the whole margined with blue *Lobelia*. The contrast of the two *Coleuses* was good, and the green leaves of the *Begonia* with pink flowers and crimson buds stood out well from the *Coleus Queen Victoria*. This on the whole was the most effective bed I noted. Another bed of *Coleus*, planted in divisions and edged with *Alternanthera*, was very badly arranged, some of the *Coleuses* being much too tall for the others, and the contrasts of colouring were anything but effective, *Coleus Beauty of Widmore* making hardly any growth, having to balance a strong-growing variety of the *Hendersoni* type. Some of the double scarlet *Hibiscus* and also the large single *Hibiscus* looked well, as also did some single specimens of *Musa Ensete*.

In the Parc Monceaux were almost the only attempts I saw at producing effects either by harmony or contrast of colours, planting geometrically; nearly everywhere the mixed system of planting was adopted, except with regard to foliage plants, such as *Cannas*, *Caladium esculentum*, *Wigandia caracasana*, &c. These were generally massed together in large beds, and though often effective in the distance, yet wanting relief when seen nearer. Such plants as *Cannas* and *Wigandias*, *Ricinus*, &c., are much handsomer when planted more as individual specimens, so as to show their form, than massed together in round or oval beds. I noticed this especially in the Avenue de l'Imperatrice, where large beds of the kinds I have named were planted unrelieved by any flowers at all, except in one instance, where there was a background of *Tamarix gallica* with beautifully feathering pink racemes of flowers, and also in the Luxembourg gardens, where the only self beds I noticed were made of large ornamental-foliaged plants; while almost every bed in the principal gardens was planted with mixed plants, shrubs, herbaceous and perennial plants, *Dallias*, &c., in the centre, and the sides chiefly with different kinds of *Geraniums*, interspersed with *Ageratum*, *Calceolarias*, *Asters*, *Pyrethrums*, &c. The greatest part of the flowers were what we usually call in England bedding-out flowers, but the effect was monotonous in the extreme, because there was an endless repetition of the same sort of mixtures in long lines of beds.

What I here noticed of the Luxembourg gardens is equally true of the Versailles and Tuileries gardens. Those who like mixed borders might have a surfeit of it here, and I think would have their propensities cured. I know many will regard me as prejudiced; they think that it is a weakness of mine always to stand up for bedded-out gardens arranged geometrically, &c. Now, I am far from admiring the taste so commonly displayed by many of repeating the same plants and same colours *ad infinitum*. And I think there is a place both for perennial gardens, mixed borders, alpine rockeries, roseries, geometrical gardens, &c. In fact, if anyone with space and appliances to boot should throw all his energy into any one thing only in gardening, whether it be in summer bedding-out, or perennial borders, or spring flowers, or whatever it may be, he by so doing will deprive himself of many

pleasures which he might otherwise enjoy. But because many persons have ridden the bedding-out mania too far, it is no reason why we should go to the opposite extreme and have perpetual monotony with the repetition of the same sort of flowers, mixed without any reference to harmony of colour or contrast of form. And at the risk of repeating what I have, I think, before said in your columns, I do not see why a formal geometrical spring garden made of Daisies, and Violas, Polyanthus, &c., should be admired, while the same garden filled with much choicer and much more lasting summer bedding-out plants should be considered as meretricious.

This, however, is somewhat of a digression called forth by the want of design and skill manifested by the French gardeners both at the Tuileries, Luxembourg, Versailles, and elsewhere. It is well known that a good lawn is a thing almost unknown in France, and its absence is generally ascribed to the climate; but when they have the means of irrigating, if only they would use an American machine and cut offener, scattering the grass instead of collecting it, I am convinced that their lawns would soon improve. If we were to leave an English lawn for ten days, or even three weeks, as is sometimes the case abroad, uncut, we should not have much to boast of about our English lawns.

There is one thing the Parisians certainly beat us in—the selection of their trees for the Boulevards, &c., and their manner of pruning them, nearly every tree having a clean straight stem, properly trained and judiciously pruned, and the Boulevards in Paris are certainly a great feature. But the manner in which the trees are planted in some places is uninteresting in the extreme, representing a forest of bare poles with foliage only on the top. Take, for instance, the trees on the north-east side of the Luxembourg gardens, or on each side of the wide avenue from the Place de l'Étoile to the Tuileries; they are planted in rows so near together and so closely in the row that there is no room for them ever to grow to make good trees, nor can anything in the shape of grass or shrub grow underneath; the consequence is, there is nothing but bare earth or gravel under the trees, and uninteresting lines of bare poles, with shade overhead. If the central avenues were left, more than half the other trees cut down, and the remainder left in groups, fenced round for a time with shrubs, and a number of evergreens planted among them, much of this painful monotony of bare earth might be done away with.

Another thing I may also allude to. I was under an impression from what I had heard that I should find fruit remarkably cheap and good. This certainly was not my experience. Peaches were to be had in tolerable abundance, but the best at the fruiterers were a franc a-piece. Inferior ones might be had at the Halles Centrales at prices varying from 15 to 35 centimes. Good Pears were very little, if any, cheaper than in England, and I saw no Pears under 15 centimes, or 1½d.; there were hardly any Nectarines; the best fruit, and cheapest on the whole, were the Figs. Grapes were beginning to be plentiful, but they were not inviting to look at, and I did not try them; but such a thing as a good bunch of hot-house Grapes, as Hamburgs or Muscats, was scarcely to be seen.

With regard to the vegetables in the Halles Centrales, perhaps the most noticeable feature was the Endives, which seem to take the place of our Lettuces, and in which the French certainly succeed better than we do. Their Onions were also fine and their common Melons; but in no other respects could I find that their vegetables were superior to ours, and certainly not their manner of cooking them.

On the whole, I am afraid your readers will think that I have looked on Paris gardening with a rather John Bull's eye, and I certainly must confess I came back very sure of one thing—that our English public parks, as Hyde Park, Regent's Park, and Battersea Park, were decidedly far superior to anything that I saw in Paris; and as far as I can see, our English and Scotch gardeners have not much to learn either from the taste or skill displayed by French gardeners. I should like some of our best gardeners to have free scope given them in the Bois de Boulogne, the gardens of the Tuileries, and elsewhere, and I should be surprised if there were not very soon a manifest alteration for the better. There are several plants, indeed, used by the French, as the Cosmos, both white and yellow, the Tamarisk, Ailanthus, Robinia, Stenactis speciosa, and others which might be tried, I think, with advantage with us; and if we were also to take a leaf out of their book with respect to the management of trees in avenues, and

the proper sorts to plant in the streets, we should be the gainers.—C. P. PEACH.

WINTER FLOWER GARDENING.—No. 3.

In addition to the shrubs named in my last paper as suitable for town gardens, there are others available for the ornamentation of flower beds in the winter months, but which do not succeed in town gardens. All those previously named, as well as those to follow, will flourish in the country, or where they are not exposed to the smoke and dust of our manufacturing towns.

Cryptomeria elegans.—Of graceful pendant habit, and yet pyramidal or cone-shaped, wide at the base and rounded at the top, owing to its drooping habit. The foliage in autumn and through the winter is of a chocolate hue, brighter, deeper, and far more decided in colour than any shrub I know, not excepting the *Retinosporas*. A bed of this may be margined with *Euonymus radicans variegatus*, or if the plants are over 2 feet high, then margin the *Cryptomeria* with *Osmanthus ilicifolius variegatus nanus*. The plants lift very well if annual removal is practised, so as to induce the formation of roots near the stem, and fibres to keep the soil in a ball. If not lifted annually the roots spread out considerably, and there is then risk in removing them; therefore, it is necessary to commence transplanting these and other plants at an early age. Plants 1 foot high and well furnished are suitable for small beds, and for margins to beds of the Silver tree Ivy, and Silver-variegated Holly.

Buxus aurea pendula.—Yellow-margined leaves with the centre green. This is the golden-variegated, branching, or pendant-habited tree Box, which is useful for lines and margins, as also small beds, though not very bright in colour.

Buxus nova argentea marginata has silver-margined leaves, and is also desirable for margins, lines, and small beds.

The Boxes lift with excellent balls, and in spring, after they have done service in the flower garden, should be cut-in to the form and height required, but owing to the frequent removal they will not grow very luxuriantly.

Juniperus tamariscifolia clothes the ground with the finest possible green covering, forming an admirable edging to every kind of shrub with bolder foliage and brighter hues of colour. It moves well if the plants are annually transplanted.

Thuja aurea.—This is of very close and compact growth, forming very ornamental globular heads of a bright green tipped with brown, which early in spring assume a bright golden hue. It is useful in many ways for winter gardening, forming fine lines and bands. In beds it may be edged with any of the Hepaticas, Winter Aeonite, *Scilla sibirica*, Snowdrops, or Crocuses of the blue, purple, and white shades of colour, and is the best possible shrub from its symmetry of form for associating with low-growing, spring-flowering plants, breaking the angles of flat surfaces, and otherwise relieving and freeing them of a fatiguing monotony. Plants only a few inches in height are quite as effective for lines or margins as larger plants are for centres and masses.

Thuja pygmaea.—A very dwarf subject, as its name implies, bright green tipped with brown, and one of the finest of shrubs for a permanent second line to a border or bed, the outer line or margin being *Arabis alpina variegata argentea*, or *Cerastium tomentosum*. For small beds by itself it is also admirably adapted, as well as for surrounding the Silver Yew, the margin being blue, red, and white Hepaticas, a line of each in the order named.

Thuja elegantissima.—An upright or pyramidal form of *T. aurea*, having clear golden tips not only in spring but in autumn. It is now beautiful. It may be employed in the same way as *T. aurea*, bearing in mind that it is of upright habit.

The *Thujas* remove well, but should be lifted annually.

Osmanthus ilicifolius variegatus nanus.—Bold Holly-like foliage, with broad white or silver variegation. Very effective, but will not succeed in exposed positions. It is good for sheltered spots, but in open situations the Silver-leaved Holly should be substituted for it.

Hollies.—Gold and silver-variegated or blotched, as also green-leaved kinds in various forms and degrees of colouring, are good. They can be grown as flat-topped bushes only a few inches high for margins, or with round or pyramidal heads of almost any height. The *Hollies* can be removed with as great a certainty of success as any other shrub, only for the purpose in view they must be lifted frequently from the commencement of their preparatory growth or training. The

pruning needed should be done in spring, just before or when they are beginning to grow.

Cerasus lusitanica myrtifolia, or Myrtle-leaved Portugal Laurel, has bright deep green narrow leaves, much smaller than the species, and is very useful. It is effective as a central mass margined with *Erica herbacea carnea*, it having an inner line of *E. mediterranea alba*. For a second line round a mass of Hollies, either gold or silver, it is effective, the outer line being *Euonymus radicans variegatus*, or the Silver tree Ivy.

Laurustinus.—The white flowers of this on dwarf bushy plants are very effective, and a mass margined with red, blue, and white *Hepatica* forms a pleasing group or bed. It is also very suitable for the angles and centres of extensive arrangements. It moves well, requiring to be cut-in in spring if becoming too large and growing out of shape.

Ligustrum japonicum.—Large, shining, bright green leaves. This is very effective in a mass margined with *Bellis aeneobifolia*, either with or without inner lines of *Scilla sibirica* and Snowdrops. It moves well, and may be kept of any height by pruning in spring and pinching in summer. The flowers, which are white, are produced in spring or early in summer.

Pernettya mucronata.—Shining deep green leaves; very effective as a green bed or line, especially when in berry and margined with Snowdrops. It requires peat soil.

Gaultheria Shallon.—A pretty procumbent plant with purple berries. Effective as a second line or margin to beds of bold-foliaged shrubs, as the Tree Ives, Hollies, and Aucubas, or in a bed by itself, edged with *Aubrietia purpurea variegata*.

Gaultheria procumbens.—Shining oval leaves and red berries; very effective as an edging to a mass of *Aucuba limbata*, or other masses of bold-foliaged shrubs, especially those with variegated or coloured leaves. Requires peat soil.

Retinospora pisifera is very effective by its plume-like foliage tinged with brown, and dwarf plants of it make a neat mass when margined with *Euonymus radicans variegatus*. There are others of the *Retinosporas*, but I have not had sufficient experience of them. *R. cupressoides*, *R. plumosa*, quite a gem, as are its golden and silver forms; *R. ericoides*, which in autumn has the foliage of a violet purple hue; and *R. obtusa nana* with its fine golden foliage, would be welcome additions to our self-coloured-foliage hardy trees, and very effective for winter gardens.

Taxus elegantissima.—Both the silver-striped and the gold-striped Yew are at their best in autumn and winter; plants not more than 2 feet high make fine masses margined with *Gaultheria procumbens*.

Abies Cambesiana and *A. pyramis* are very distinct and effective as margins to masses of bold-foliaged shrubs, and for dotting in carpeting, as, for instance, in a broad band of variegated *Arabis* a yard wide, disposing them that distance apart along its centre, the effect is very fine.

Other subjects might be pressed into our service, but I have selected those I am most conversant with, and shall only add a few shrubs that are useful as forming objects on flat surfaces or carpeting, and in imparting beauty to their otherwise monotonous aspect.

Cupressus Law omissana nana.—Dwarf and very compact; deep green foliage.

Cupressus Lawsoniana striata.—Of pyramidal form, dense habit.

Picea pectinata pygmaea.—A mere pigmy Silver Fir, which is superb planted pincushion fashion on a ground of *Bellis aeneobifolia*.

Thujaopsis dolabrata is the subject I will mention as the finest of all for centres. Its graceful plume-like habit and dark green foliage render it very suitable. It is, perhaps, the most beautiful of evergreens.—G. Amary.

BOCCONIA JAPONICA IN NEW ZEALAND.

We are indebted in the colonies to Messrs. Shepherd, nurserymen, of Sydney, for the introduction of this novelty, which is now pretty well spread about in our gardens; for I find it very easy of cultivation, as well as very ornamental, growing amongst other border plants. In their catalogue they state of it the following:—"This grand-foliaged herbaceous plant was discovered in Japan in 1866, and sent to Prussia, where it was an object of universal admiration. We introduced it into this colony in 1868, and succeeded in growing a splendid specimen last year, fully 8 feet in height. It has proved itself perfectly hardy, and can be grown freely in any position; but shelter is necessary to preserve its magnificent

foliage from injury."—WILLIAM SWALE, *Aronside Botanic Garden, Canterbury, N.Z.*

POT-CULTURE OF STRAWBERRIES.

ALL gardeners know that early warm localities are the best for the cultivation of Strawberry plants in pots, for in such places runners can be obtained comparatively early in the season, and be grown into strong fruiting plants. In cold and late localities it is rather difficult to secure runners early enough in such seasons as the present. Southern growers have, in this particular, a great advantage over those in the northern counties.

There are different ways adopted to obtain runners early. A very common one is to plant out in a prepared bed the plants that have been forced, as soon as they have ceased to yield fruit. These produce runners pretty early. Another mode is to plant runners of this year in a rich bed, with a view to obtain runners from them in the next year. Both ways are excellent and practised here; which is the better I cannot say. I fancy the runners of last year produce runners rather stronger than the forced plants of this year.

Where the expense of labour is not so great a consideration as excellent plants, our best gardeners layer the runners in small pots filled with soil, and hold them there by placing stones on them till the runners take root in the pots. In this way the plants receive no shock or check when cut from the mother plants. As soon as convenient afterwards they are shifted into larger pots, and placed in a sheltered open place, where they enjoy the sunshine, and grow into strong stubby healthy plants. About the middle of July they are repotted in their fruiting pots, which are generally about 6 or 7 inches in diameter. It is now of great importance to let the plants have plenty of room to develop their leaves and allow the wind to play amongst them. Every plant needs a square foot of surface for itself. Though plants treated thus require much attention, having to be watered almost every day, and the runners frequently taken from them, they will abundantly repay all the labour bestowed on them by yielding a great weight of fruit. In private garden establishments this mode of layering the runners in small pots, and repotting them twice afterwards is generally adopted and practised. Our best gardeners think it is the safest way of preparing Strawberry plants for forcing. But where time and expense of labour are taken into account—where everything is balanced in the scales of profit and loss, another mode is practised which answers very well. The runners are not layered in pots, but allowed to grow attached to the old plants till July, when, by using a clean sharp trowel, they are lifted with good balls and placed at once in their fruiting pots. Thus good plants are obtained and grown with much less work and attention than the system which calls into use three sizes of pots. I dare not say that the three-shift system is more successful in producing a better crop of fruit than the one-shift system. The end is reached by both ways; one way, however, is much shorter than the other, and all my life I have preferred the shortest and easiest road.

In confining the roots of such plants as Strawberries in pots we do them an injury—the whole thing is artificial, and so far as art can repair the injury it should be done. If less space be given to the roots of the plants richer food should be afforded as compensation. Strawberries like rich soil everywhere; in pots they require it richer still. One-third rotten sods, one-third rotten dung, one-third sand, and a little honest well mixed make an excellent compost for Strawberries in pots. If the sods are rather sandy less sand, of course, will be used. In this rich soil the plants grow strong and fast, and worms fatten when they get into the pots. It is no easy matter to keep worms out, they will go through 3 inches of clean ashes or cinders to reach the soil in the pots.

Plants, like animals, need rest—a winter as well as a summer. If Strawberries in pots are not allowed three months' rest they are more difficult to manage. Hence it is important to have their crowns ripened early, and the plants at rest in October. This is done by placing all the pots on their sides with their faces to the south. Thus they become comparatively dry and send the plants to rest. When the fruit is wanted about the end of March, plants should be placed under glass and subjected to the influence of a gentle heat three months sooner, for it takes three months of artificial treatment to force Strawberries to perfection. Those which are not put into heat till February or March generally bear

heavier crops than the first batch. Plants thus grown and forced will yield a supply of rich and luscious fruit at a season when it is much wanted.—A. PETTIGREW, *Priory Vineyard, Sale.*

HOTEIA JAPONICA.

IN answer to "W. G." (pages 291 and 292), the plants from which I took the flowers so late in the season were forced early in spring, and after blooming were placed in a cold frame, gradually hardened-off, and allowed to rest for a time by giving little or no water. They were then divided if required to increase the stock; indeed, if the plants are large I always like to do so, as I imagine they bloom better in consequence. Indeed, it is impossible to have too many plants of it, and the smallest piece makes a good plant in one season, and will throw up some spikes of bloom even before frost comes to cut it down. If the stock is not to be increased, and large plants are preferred, after resting as above just shake them out of their pots gently, prick the soil out from between the roots, and plant out at a good distance apart. They grow amazingly when placed in a situation suited to their wants, which in summer is a cold rich light soil in a moist rather shady spot. A north border is just the place for them. Such a place mine have had this summer; last year they grew in a wet bog bed, and never did they do better. They are taken up, potted, and placed in a frame when the leaves die down in autumn, if required for forcing. Perhaps "W. G." does not want them for forcing. Little they require—a window, a frame, or a greenhouse will bring them on very early in spring. If he has none of these, then an early border with a little protection may help. Get it to flower as soon as possible, then cut the leaves down to the ground. Let the plant just start into growth again; then take it up, divide if required, and plant it in very rich soil, and in a situation similar to that recommended above. I think that with this treatment "W. G." may reasonably expect plenty of this plant's beautiful graceful flowers to place with his *Gladiolus*.—J. TAYLOR, *Maesgwynne.*

FLOWERS FOR OUR BORDERS.—No. 19.

ACACIA GRANDIS.—GRAND ACACIA.

To the vast genus *Acacia* the phrase *imperium in imperio* may well be applied, for among the plants of the Leguminous family it stands pre-eminent, if not for its utility to mankind, at least for the considerable number of species included within its limits. A large proportion of them are natives of Australia, and from these we select one of the neatest and dwarfiest species, more especially adapted for window or frame culture.

The *Acacia grandis* is a native of Western Australia. It forms a shrub of moderate size, and flowers freely while small. The stems are angular, grooved, and usually, but not invariably, quite glabrous. The leaves consist of two pinnae, articulated at their base, each pinna being about an inch long, and composed of from eight to ten pairs of linear, alternate, smooth leaflets, the rachis or stalk to which they are attached being flattened, and terminated by a small leafy point.

At the junction of the pinnae with the branch, several curious appendages arise which deserve attention. First, between the two pinnae will be found a short thread-like prolongation of the petiole, terminating in a little globular head; next, a minute gland-like body, which is apparently an abortive flower bud; then either one or two small cup-like involucre, out of which the flower stalks arise; fourthly, an articulated woody spine, about half an inch long; and, lastly, at the base of the leaf are two bristly stipules, and occasionally a third, beneath the prolonged petiole first mentioned. The flower heads are generally in pairs, on smooth stalks about three-quarters of an inch in length, and are very numerous produced.

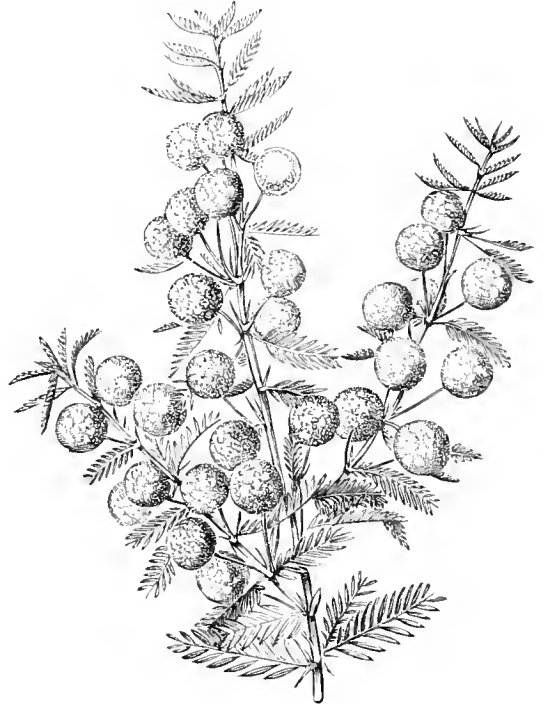
The beauty of the flowers of the *Acacias* is entirely due to the long projecting stamens, the calyx and corolla being so small as not to be easily distinguished after the full expansion of the capitule or flower head. Both the floral envelopes referred to are composed of five equal divisions, regularly arranged; and, in this respect, there is a departure from the type of the order, which, as our readers are well aware, is chiefly characterised by its papilionaceous flowers, of which those of the common Pea and Laburnum are examples.

The *Acacias*, including the species now figured, generally ripen seed; but the number of legumes bears but a very small proportion to that of the flowers, for it must be borne in mind

that most of these contain stamens only: of the twenty or thirty florets composing the capitule, but a very few contain both stamens and pistil.

In some of the *Acacias* the spiny process in the axil of the leaf is so largely developed as to be a very formidable organ, and capable of inflicting a serious wound, as in the *A. horrida* and *A. Caffra*; in others it is altogether absent, as in the species *dealbata*, *discolor*, *spectabilis*, and most of the species included in the section *Bipinnate*.

A. grandis is a most charming window-plant for spring flowering, being at that season loaded with its golden yellow balls; and at all periods of the year its elegant foliage gives it an ornamental character.



Acacia grandis.

Its propagation is effected either by seeds or cuttings, usually by the latter method; they should be inserted in white sand, or very sandy soil, and covered with a bell-glass or tumbler. As they are impatient of damp, they require a little more care during the rooting process than those of the leafless species; the inside of the glass should be wiped daily, and as soon as the cuttings are fairly struck they must be potted-off into sandy peat, and eventually into good fibrous peat containing less sand. During the summer the pot may be placed outdoors in a warm aspect, on a layer of ashes, to keep out those plagues of the gardener, the worms; but in dry weather it must be carefully watered, as the foliage of this and similar species is more delicate than that of the phyllode-bearing *Acacias*, in which the enticle is much thicker, and contains fewer stomata or exhaling pores. In this and other cases it will be found an excellent plan to place the pot containing the plant in one considerably larger, the space between the two being filled up with moss, which may be kept damp. This will prevent the roots from being injured by long exposure to the scorching rays of the sun.

As it is essential to the production of flowers the following spring that the young wood should be thoroughly ripened, it will be better to remove the plant from the influence of heavy rains about the middle of September; after which period it should receive but moderate supplies of water. In winter it will require all the air and light that can be given it, and should be kept in a cool apartment up to the month of February, after which a warmer room will hasten the development of its beautiful flower heads. In case of very severe weather, measures must be taken to secure it from frost.

Though accorded specific rank when first introduced, *Acacia grandis* is now universally regarded by botanists as but

a variety of the polymorphous *A. pulchella*, and it differs chiefly from the type in having more numerous and longer leaflets. Several other desirable forms of *A. pulchella* are in cultivation, one of which—*A. hispidissima* of catalogues—is specially deserving of mention on account of the long spreading hairs with which the branches are clothed. This variety is also cultivated under the name of *A. lasiocarpa*. As a companion plant to *A. grandis* may be recommended *A. Drummondii*, a plant of more recent introduction, and perhaps somewhat more delicate in habit. Many other desirable species occur in catalogues, but a large proportion of these flower only when the plants have attained an inconvenient size.

The *Acacia lephantha*, frequently cultivated in the subtropical garden for its elegant bipinnate foliage, is now placed in the genus *Albizzia*, which is distinguished from *Acacia* by its monadelphous stamens.—(*W. Thompson's English Flower Garden, Revised by the Author.*)

GOLDEN CHAMPION GRAPE.

I HAVE a strong impression that, if this Grape were to receive special treatment, the fatal spot which affects it would to a great extent disappear. It is a Grape that wants time to grow and ripen, and a dry atmosphere. We have it here, grafted on Black Hamburg, in two different houses. In one house, which has been subjected to a good deal of hard forcing for the last two years to get the crop in at a desired time, the Golden Champion is simply unrepresentable. In another early vinery, which is thrown open day and night as soon as the Hamburgs and others begin to get ripe, by which time the Champion is generally still green, it has always finished well. This season a bunch in this house was allowed to hang a month or five weeks after it was quite ripe, and when cut it was still plump and without a blemish. It is such a magnificent Grape when dished-up, if free from specks, that one is to be excused if they fall freshly in love with it, and resolve to keep it on and give it another trial. So far as my experience goes, I should think it is a Grape which wants no more assistance in the way of fire heat or forcing than will just enable it to ripen during the most favourable part of the season. Those who have facilities I would recommend to try what the result would be if allowed to come away naturally about April or May, keeping the ventilators always open, except in wet weather, and in fact giving it little more than the protection of glass, using fire heat chiefly to dispel damp. This plan has at least cheapness to recommend it; and no one will deny that it is a Grape well worth making an effort to grow successfully. Could it be presented at dessert in good form, it would put Muscats to one side for the time, not on account of its appearance only, but its flavour, which is so excellent and refreshing.

I have an impression that it would do better out-doors in the south, in a warm situation, than inside a vinery; and I hope these who have opportunities will try it on the hardy system.

No doubt the "spotting" is due to the very tender skin of the berries. The least thing injures it, and leaves a lasting blemish; and it is reasonable to suppose that a high and moist temperature will have the same effect upon the berries as upon the leaves of Vines—*i.e.*, to make them still more tender and susceptible of injury. Thinning the berries should also be very carefully performed: it should be done twice; and great care is necessary not to injure the berries that are left with the scissers, which should be clean and smooth.

The Golden Champion, like some others of its class, does not bear so well when pruned on the close-spur system. It is a good plan to leave a bit of young wood, and a better show of fruit will be the result, which will give a choice of bunches, for they vary much in the setting, some having a greater proportion of small berries than others.—*J. SIMPSON.*

If those who grow this noble Grape will ventilate freely, and keep it dry whenever it approaches the ripening point, they will not be troubled with spot.—*Ed. —(The Gardener.)*

THE MEETING OF THE BRITISH ASSOCIATION IN BELFAST—PROPOSED FLORAL AND HORTICULTURAL SHOW AND EXHIBITION OF LOCAL INDUSTRIES.—On the 16th a meeting of the Directors of the Belfast Royal Botanic Gardens and those gentlemen who consented to co-operate with them as a committee to carry out the arrangements for a grand floral and horticultural show and exposition of the staple and other products of the industries of Belfast and neighbour- (to) take place in the Gardens

during the meeting of the British Association in August, 1874) was held in the Chamber of Commerce, Belfast. Committees were appointed to make the arrangements desirable in the various departments. There is some misunderstanding between the Directors of the Belfast Botanic Gardens and the Directors of the North of Ireland Horticultural Society, and we earnestly recommend that harmony be at once adopted. We quite agree with Mr. B. Ewart, who, after remarking that he came there prepared to hear some spirit of a desire to sink differences and unite with the North of Ireland Horticultural Society in preparing for the meeting of the British Association, added that he thought it a great pity that there should be two shows, for one would be interfering with the other, and the interests of both might be affected.

NOTES ON MR. PEARSON'S GERANIUMS.

So much has been written on the merits of Mr. Pearson's Geraniums by many of your correspondents that it is scarcely necessary for me to say more; however, the very wise remarks of your correspondent, the Rev. C. P. Peach, in "our Journal" of October 2nd, page 248, induce me to offer a few additional notes. I think the Rev. C. P. Peach must make his beds for Geraniums very much richer than we do here, or than Mr. Pearson does at Chilwell; for those varieties which make very little progress here, grow and bloom abundantly with the Rev. C. P. Peach. Then those which grow moderately strong and bloom freely here, with Mr. Peach run so much into leaves and branches.

I have made a few notes during the late summer respecting the Geraniums sent out by Mr. Pearson during the last year or two, and on comparing them with my notes of last year, in some cases I have to retract a little, and in others confirm my previous statements.

I will begin with the various shades of scarlet, and first take the orange scarlets. Here Corsair comes to the front. Last year it was only moderate as a bedder in the latter part of the summer, this season it has excelled anything I ever saw before. I also saw it at Chilwell after a downpour of rain, and it stood nearly as perfect after the rain as it was before the storm. Besides, the flowers are so perfect in shape, and the plants so prolific in bloom and so fine in habit, that it must become the most popular plant of its time. Mrs. Hetley, rather stronger than Corsair, is also good; it is a fine, bold, orange scarlet, with a large truss, and I place it next in order of merit to Corsair in this shade of colour. In very dark scarlets the Rev. T. F. Fenn has certainly been magnificent; the habit of the plant is so dwarf and free, the trusses so bold and grand, rising stately above the foliage, that I feel surprised that it has not come up to Mr. Peach's expectations.

Then come five others in the rosy-crimson section all of sterling worth. I will put them down in the order of merit. Mrs. Vincent, a free bloomer, with strong footstalks; this, Mr. Pearson thinks, will prove one of the very best he has sent out. Shakespeare, dwarf in habit, and of free-blooming properties, of the style and habit of the celebrated Violet Hill Nosegay, though much superior in all respects. Colonel Holden, a great favourite with Mr. Pearson, though rather more robust than Shakespeare, but very good. Dr. Tait, very fine, but not so good as last year; and F. Bradley. These have all been conspicuous for their fine large trusses and free-blooming properties. As a pot plant Colonel Holden is supremely beautiful, and nearly as good as the Rev. C. P. Peach.

Of very dark crimson, Edward Sutton and General Outram were the best; the trusses were large and the flowers bold. We have also a great improvement in the magenta section. Mrs. Reynolds Hole, bright magenta, with immense trusses freely produced, very dwarf in habit, and when better known likely to become very popular. Frank Miles, magenta rose, more robust than Mrs. Hole, and an improvement on that useful variety Arthur Pearson. Metcalf, salmon rose, is good either in pots under glass or in the flower garden. Robert Evans, much of the colour of the old Trentham Rose, but as much superior to it as Bayard is to the old Tom Thumb.

We now come to the pink section, and here the improvement made during the last three or four years is very striking. I cannot speak so favourably about Mrs. Lowe as Mr. Peach does. I have had it growing on a warm border with such sorts as Lady Louisa Egerton, Amaranth, Maid of Kent, and others, but it has not promised to be a useful variety. In a pot in the conservatory it has been most beautiful. In looking over my note-book I do not find any mention made of it during my

late visit to Chilwell. Those that have stood the best here, and which were also good in Mr. Pearson's trial-grounds, are Mrs. Holden, Mrs. Augusta Miles, Mrs. Fyfe, and Mrs. Tait; these are all first-class for out-door embellishment. I saw a bed of Mrs. Holden at Thoresby early in the summer, and it was like Mr. W. Paul's Roses—"Something to see once and dream of for ever." I do not think that Mrs. Musters, Mrs. Young, and Contessa Quarto are going to come out as useful bedders, but they are pre-eminent as pot plants. Mrs. Musters I consider the finest yet in commerce for conservatory decoration. Miss Rose Peach makes a handsome pot plant; it is dwarf and compact, and the colour distinct, but my opinion respecting it as a bedding variety is not altered.

In the lilac pinks we have Amaranth and Florence Durand, both plants of undoubted merit, but your correspondent has said so much in their behalf, and said it so well, that there is nothing more for me to add in their favour.

The above are the cream of Mr. Pearson's new sorts; and if I must make a selection from the above for bedding purposes, I should choose the following:—Amaranth, Mrs. Hetley, Florence Durand, Mrs. Holden, Mrs. Augusta Miles, General Outram, Mrs. Vincent, Shakespeare, Rev. T. F. Fenn, Colonel Holden, Mrs. Reynolds Hole, and Metcalf. In making a selection for pot-culture I should take the following:—The Rev. C. P. Peach, Miss Rose Peach, Mrs. Fyfe, Mrs. Musters, Mrs. Young, Contessa Quarto, Corsair, Rose Bradwardine, Amaranth, Mrs. Vincent, Frank Miles, Florence Durand, Amy Robart, Col. Holden, Mrs. F. Burnaby, and E. Sutton.

I cannot close these desultory remarks without saying a few words respecting the sorts which Mr. Pearson intends to send out early in 1874. Mrs. Gibbons, an improved amaranth, flowers deep lilac, and the trusses large. Colonel Wright, red, immense truss, plain leaf, without any zone; habit fine. Miss Laura Walker was very remarkable in colour, between a plum and a cherry. H. R. Clifton, cherry colour; large bold truss. Hon. Mrs. Sugden, scarlet crimson, with a light eye. Lady Emily Pierpoint, the most beautiful delicate pink I ever saw. This I consider the sweetest Geranium Mr. Pearson has yet raised. Caxton, fine large truss, cerise, suffused with plum. Arthur Rogers, cerise, much like the preceding, but not so dark. Lucy, bright rosy pink, large and fine, extra good. Percy Cooper, bright scarlet, with white eye. John Watson, fiery crimson, large petals, each flower 2 inches across. Sibylla, red pink, trusses as large as an ordinary boy's lilly-hat. Miss Mand Holden, rich brilliant scarlet, with light centre. Mrs. Turner, pink, shaded with lilac, light centre; trusses immense size, the largest I ever saw. My friend Mr. Parks, of Mansfield, who is no mean judge respecting the merits of Geraniums, was so delighted with Mrs. Turner that he came home with a truss in his button-hole, and was frequently stopped on the way to see how many trusses he had tied together. Miss Blanche Storey, delicate pink, with light eye. Cruger, scarlet, suffused with pink, quite remarkable in colour. Nelly May, salmon, shaded with scarlet. The above are all in advance of anything that has preceded them, and only require to be in the hands of the public to be appreciated.—*QUINTIN READ, Pleasant Val. Gardens, Mansfield.*

THE ROSE ELECTION.

I FIND there is some misunderstanding as to the age of the new Roses. The catalogues by no means agree, and I have received several replies that throw the whole poll into confusion; I therefore must simplify matters. It appears that by a rule, I believe of the Royal Horticultural Society, Roses date from the autumn they were sent out, though probably they appear in the catalogues of the following year as the new Roses for that year. Now, as the Roses sent from abroad to us last autumn can hardly yet be said to be acclimatised, and as any positive opinion of their merits may give a fictitious value to them before they are otherwise fully proved, it is proposed to leave out these Roses altogether; and the question therefore will stand thus:—Name the best twelve Roses introduced during the years 1869 (the year of Castellane) to 1871 (the year of Lukens' Levet) inclusive. Underline the best six of these.—*JOSEPH HINTON, Warmminster.*

[Mr. Hinton sent me and the Rev. C. N. Poehlin the above previous to forwarding it to the Journal for insertion. There is no doubt a difference of opinion between nurserymen and amateurs as to what constitutes an 1869 or 1870 Rose. A nurseryman, according to the Royal Horticultural Society's rule, reckons his Rose from the autumn he gets them; an

amateur from the following year, when he in turn gets them from the nurserymen. Mistakes easily occur, and this year I had to disqualify at Bath two or three stands of new Roses, because some were shown of too old a standing. Amateurs will consequently, I think, understand that Mr. Hinton wants to elicit opinions on Roses sent into nurserymen's hands in the autumns of 1869, 1870, and 1871.—*C. P. PEACH.*]

TOXTETH PARK AND AIGBURTH GARDENERS' SOCIETY, LIVERPOOL.

THE meetings of this Society are held in the Schoolroom, Lark Lane, on the first and third Fridays in each month. The following is the annual Report:—

At the commencement of the year now closed some important alterations in the constitution of the Society were determined on, and have since been carried out. The chief of these alterations was the forming of a fund for the purpose of aiding afflicted or distressed members, and the widows or children of deceased members. The fund for this purpose has, since its formation, been steadily increasing, and it is hoped that in a short time this part of the Society's organisation will be ready for operation.

During the past year the following papers were read at our meetings:—"The Importance of giving Plants a Season of Rest," by the President, Mr. Thomas White; "Manures, their Use and Abuse," Mr. J. R. Pocock; "The Sowing and Germination of Seeds," Mr. W. H. Waddington; "The Camellia," Mr. James Webster; "Horticultural Exhibitions," Mr. George Thomson; "A Hint to Gardeners on Cleanliness and Order," Mr. G. H. Galloway; "On some of our Spring-flowering Bulbous Plants," Mr. T. White; "Tropical Scenery," Mr. W. Odle; "Gardening as I Found it in America," Mr. J. Thompson; "Lilium," Mr. T. White; "Advantages of Mental Improvement," Mr. J. McElwee. The papers were full of excellent practical observations, and frequently produced discussions of a most interesting and beneficial character. The resolution to devote each alternate meeting to the inspection of, and remarks upon, specimens of flowers, fruits, and vegetables, secured a series of most interesting evenings, a large number of specimens having been brought forward and commented upon. Among them were many varieties possessing great merit but not generally known; the growth of these deserving varieties has no doubt been thereby promoted to the advantage of employers as well as of the employed. There can be no doubt that this is a most excellent method of spreading desirable information as to the comparative values of varieties, the best modes of treatment, and other matters.

The usual *soirée* of the Society took place in the school, Lark Lane, on the evening of Friday, November 22nd, 1872, on which occasion an unusually large number attended, considerably over two hundred having been present. Songs, recitations, &c., enlivened the meeting, which passed most pleasantly. We are happy to add that a balance resulted in favour of the Society.

In regard to numbers the Society is in a satisfactory state, while under the altered rules, a number of honorary members have been added to the Society. These have been increasing up to the present time, and will, it is confidently hoped, continue to do so as the Society is more known and appreciated.

The financial report shows that the funds of the Society have been most carefully economised; no heavy expenditure has been incurred, the augmentation of the fund for benevolent purposes having been kept steadily in view.

In conclusion, we would urge upon members the importance of making the existence and advantages of the Society widely known, especially its value to the young men growing up in the profession; and we would again ask for the hearty co-operation of all in endeavouring to promote its usefulness both as a means of mutual improvement, and in every way to advance its interests and prosperity.

NEW BOOK.

How to Grow Asparagus. By W. EARLEY, &c. Bradbury and Co., London.

"ASPARAGUS is known to have been cultivated as a culinary vegetable for nearly two thousand years. This cultivation originated, probably, in Greece, and has thence been diffused to the rest of Europe; for its name is uncorrupted Greek, signifying a bud before it has fully opened, clearly pointing to the state in which it is used for culinary purposes; and every nation in Europe knows it by no other names than such as are derived and corrupted from the Grecian. In German it is *Spargel*; in Dutch, *Aspergie*; in Danish, *Aspergje*; in Swedish, *Sparris*; in French, *Asperge*; in Italian, *Spaspario*; in Spanish, *Asparago*; in Portuguese, *Esparra*; and in Russian, *Sparsch*.

"Asparagus officinalis, or Wild Asparagus, is found native in Japan, and on the sea coasts of the parts of Europe; and from this, there is no doubt, our London Asparagus has been raised.

High cultivation—the abundant supply of rich appropriate manure—will work strange changes in all plants; and we have no doubt upon our minds that, as in many similar instances, 'the muck heap' has elevated the Asparagus of the beach into the Asparagus of the garden. It is quite true that some gardeners have failed in effecting this change; but, on the other hand, Miller and some more practitioners equally trustworthy succeeded in their experiments directed to the same point; and, in cases like these, one affirmative testimony is unshaken by a thousand negatives. (Even Cato was aware that the wild Asparagus (Corrada), planted in rich moist soils, becomes that which is cultivated.—*De Re Rustica*, 6.)

"Cato flourished about 150 years before the Christian era, and in his work just quoted we have a full detail of the mode of cultivating the Asparagus pursued by the Romans. These directions are an epitome of those which occur in Abercrombie, Miller, or any other standard work on horticulture. They are as follows:—"You must well work a spot," says Cato, "that is moist, or which has richness and depth of soil. Make the beds so that you may be able to clean and weed them on each side; let there be a distance of half a foot between the plants. Set in the seed, two or three in a place, in straight line; cover with mould; then scatter some compost over the beds. At the vernal equinox, when the plants come up, weed often, and take care that the Asparagus is not plucked up with the weeds. The year you plant them, cover them with straw during the winter, that they may not be killed. In the beginning of the spring after, dress and weed them. The third year after you have sown them, burn the haulm in the beginning of the spring. Do not weed them before the plants come up, that you may not hurt the stools. The third or fourth year you may pluck them close by the root; if you break them off they yield side shoots, and some will die. You may take them until they run to seed. The seed is ripe in autumn. When you have gathered the seed, burn the haulm; and when the plants begin to shoot, weed and manure. After eight or nine years, when the beds are old, lay out a spot, work and manure it well, then make drills where you may plant some roots; set them well apart, that you may dig between them. Take care that the roots may not be injured. Carry as much sheep dung as you can on the beds; it is best for this purpose; other manures produce weeds."

We have extracted the foregoing from a volume we published some years ago, to correct what Mr. Earley says upon the derivation of the name of the plant and its early history. On the more important subject, its successful cultivation, he is more correct. We will make one extract and recommend the little treatise to those who need information on Asparagus culture.

"In instances where produce of the finest possible character is the aim of the grower, irrespective of the time or trouble necessary to obtain it, I strongly recommend the following system as the right one to follow:—Select a piece of ground, in size according to the number of plants required, clear out the soil to the depth of 6 or 8 inches, and make the bottom level and hard with cinder ashes or any other substance that the roots do not like. Upon this make a provisional bed of the richest and best materials procurable, from 15 to 20 inches in depth. Upon this bed sow the Asparagus seeds, about the 1st of May, in rows about 3 feet apart, and at about 1 inch below the surface. The seeds will soon germinate, and as soon as the plants are observed to be growing freely, water them copiously with well-diluted liquid manure during all dry or moderately dry periods throughout that summer. By these means a fine vigorous growth will be assured. At as early a date as possible the plants should be thinned-out, the strongest ones only being retained, and these if possible at about 12 inches apart.

"Having the permanent beds prepared as previously advised, freshly forked over and made ready for the reception of the young plants by an early date in the month of May of the following year, proceed as follows with the transplanting:—Chop-out a line between the rows in the seed bed, and then between the plants in the rows. Then remove each plant with as much soil as possible, by passing the shovel along the surface of the hard cinder bottom, to a previously prepared shallow trench in their new quarters. Such trenches, as I have before stated, should be 3 feet apart, and the plants put in them at about 20 inches from each other.

"It will readily be seen that, by following this plan, a race of young, robust plants will be formed, and which, so treated, will be well able to carry a vigorous growth up to old age. Plants indifferently grown when young, and otherwise stunted and impoverished, cannot, and never will, produce fine Asparagus."

Mr. JOHN EDLINGTON was of the celebrated Thomson school. He had many years' training at Wrotham, and subsequently, after a worthy term in charge of Croft Castle Gardens, he was called to the chief charge of Wrotham. He eventually succeeded to the interesting and quaint old garden at Eaten--

Sir Montague Cholmeley, M.P.'s, and there died in harness. He was a contributor to the Gardeners' Benevolent Institution, and I believe was on the committee of that excellent institution. His contributions have also enriched this Journal. The following is from his daughter—"My dear father departed this life for a better on the 9th inst. He only kept his bed a fortnight. His end was peace."—J. WIGNER.

THE MOVEMENTS OF THE GLANDS OF DROSERA.

The peculiar movement of the glands which cover the margin and the upper side of the leaf of the Sundew has often attracted the attention of botanists; and having had the opportunity of observing it somewhat minutely during the past autumn in Westmoreland, the following notes may interest the members of the Association. The observations were all made on the commonest species—*Drosera rotundifolia*. It should be noted in the first place that the glands of *Drosera* are in no sense hairs—that is, cellular expansions of the epidermis of the leaf. They have been shown by Greenland and Trécul to be an integral part of the leaf itself, penetrated by a fibro-vascular bundle with spiral threads (in other words, by a vein or nerve of the leaf) from one end to the other, and even furnished with stomata on their surface. They terminate in a pellucid knob, within which is formed their peculiar viscid secretion. Under a low magnifying power this secretion may be seen collected about the knobs, and stretching in glutinous strings from one to another. The secretion has probably an attraction for flies and other small insects, as, if the plant is examined in its native bogs, scarcely a leaf will be found in which an insect is not imprisoned, and one leaf will very often show as many as three or four. The experiment was made of placing a very small insect—a species of thrips—on a leaf at that time quite unencumbered, beneath a low power of the microscope. Immediately on coming into contact with the viscid secretion, it made vigorous efforts to escape, but these efforts only seemed to entangle it all the more deeply. The contact of the insect appeared to excite a stronger flow of the secretion, which soon enveloped the body of the animal in a dense and almost transparent slime, firmly glueing down the wings, and rendering escape hopeless. It still, however, continued its struggles, a motion of the legs being still clearly perceptible after the lapse of three hours. During all this time the insect was sinking lower and lower down among the glands towards the surface of the leaf, but only a slight change had taken place in the position of the glands themselves, which had slightly converged so as to imprison it more completely. But after the struggles of the prisoner had practically ceased, a remarkable change took place in the leaf. Almost the whole of the glands on its surface to its margin, even those removed from the body of the insect by a distance of at least double its own length, began to bend over and point the knobs at their extremities towards it, though it was not observed that this was accompanied by an increased flow of the secretion from them.

The experiment was made in the evening, and by the next morning almost every gland on the leaf was pointing towards the object in the centre, forming a dense mass over it. The sides of the leaf had also slightly curved forwards so as to render the leaf itself more concave. The nearly allied *Venus's Fly-trap*, or *Diomea muscipula* of North America, which imprisons flies by a much more sudden motion of the sides of the leaf, collapsing when irritated on the upper surface, is said to digest and absolutely consume the insects thus entrapped. What it becomes eventually of the prisoners of the Sundew my experiments have not yet been carried sufficiently far to ascertain. It will be seen that the most singular feature in the phenomena described is that the motion of the greater number of the glands did not begin till after the insect had become comparatively motionless; and, therefore, it is very difficult to attribute it to the excitement caused by the struggles on any "contractile tissue" at the base of the glands, an explanation which has been offered for the sudden and rapid motions of the stamens of *Berberis* on the leaves of *Mimosa*. It is also quite certain that the impinging of rain drops on the surface of the leaf causes no similar motion—a peculiarity similar to that which Darwin has observed in the case of the motions of tendrils and climbing stems. In order to determine what share in these motions of the glands was due to the organic nature of the substance imprisoned, and to its power of motion, the following experiments were also made:—A small piece of

raw meat was placed on another leaf similar to the first. No immediate change was observable, and no increased flow of the secretion; but after the lapse of a few hours a perceptible inclination towards the subject of the more distant glands took place. The next morning the piece of meat was found, like the fly, sunk down to the surface of the leaf, with almost the whole of the glands converging towards it and above it in just the same manner. The changes here were, therefore, perfectly of the same kind as in the case of the fly, though apparently somewhat slower. After the lapse of twenty-four hours the piece of meat appeared decidedly lighter in colour; but an accident prevented the process of digestion being further traced. On other leaves were placed a minute piece of wood and a small piece of worsted; and in neither of these cases was the least change perceptible, after the lapse of a considerable time, in the position of the object, nor in that of any of the glands—either those in contact with it or the more remote ones. It would appear, therefore, as if the organised structure of the fly and of the piece of raw meat had some power of exciting this motion which is not possessed by matter of a different description. There may be but little that is novel in what I have just stated, but I hope to be able at some future time to carry out a more complete series of observations on this curious subject.

[Many foreign Heaths have their corolla and sepals covered with an intensely glutinous secretion, elaborated by a system of glands at the base of the corolla and sepals, and numbers of insects in an apparently exhausted condition (*i.e.* bloodless) may be seen adherent to them. The pitchers of *Nepenthes*, as I have shown in this journal, almost invariably contain numbers of flies attracted by the semi-sweet fluid secreted. The ascidia of *Sarracenia* and *Darlingtonia* also are furnished with *chevaux de frise* admirably adapted, I do not say intentionally, to permit an insect to enter freely, but entirely prevent its exit. It is perhaps worth notice that some *Drosera* sent me two or three years since by my brother, were found to have adherent to their glands and the hollows of their leaves vast numbers of diatoms and desmids. So that it would appear the plant cared little whether its proteinaceous food were animal or vegetable.—H. P. H.]—(*Abstract of a Paper read by Mr. A. W. Bennett before the British Association.—English Mechanic and World of Science.*)

A CENTURY OF ORCHIDS FOR AMATEUR GROWERS.—No. 13.

The first half of my task being completed, I feel that I must pause awhile and ponder for a few moments over the numerous reminiscences which have flashed through my memory as the descriptions of the various plants briefly referred to in my former articles have run off my pen. Several of these incidents were extremely amusing, whilst a few of the plants described have awakened sad remembrances of friends who have passed away, some under peculiar circumstances, in foreign climes. *Coleogyne cristata* brought up the ghost of a broken vow; and do not be horrified, fair readers, when I say, instead of finding me humbly penitent it provoked a hearty laugh. The vow, truly, was a rash one, but the provocation was great at the time, as all who read the facts of the case must allow, and I feel sure they will grant me full absolution. Some twenty years ago two ladies came into the garden in which I was employed and asked to be shown through the hothouses; one of them was very stout and middle-aged, but the slender figure and sharp features of the second completely prevented me from forming an estimate of her age. I conducted them through the houses, and endeavoured to interest them in the various plants by pointing out any peculiarities I knew, without, however, meeting with any response. As we passed through the Orchid houses I thought my visitors lingered more than usual, and thinking these plants were the ladies' pets, I enlarged upon their beauties, and pointed out the rarities of the collection, when the elderly lady remarked, "I think them excessively ugly, notwithstanding the strong advocate they appear to have in you; but I must say that several of them, and that one in particular (*Coleogyne cristata*), appear to me as if they might make a very handsome pickle, though I cannot say what the flavour would be." Readers, can you imagine my feelings? Perhaps you may, but I do not think you could picture the elongation of countenance and the look of contempt which I cast at them. "Pickles, indeed!" said I to myself; "had I only known how much you appreciated the beauties

of Nature I would not have wasted so much time and breath upon you, and I declare I will never attempt to interest anyone with plants again." How I have kept this vow the Editors as well as the readers are able to judge to some extent.

To resume my subject, however, without further digression. I must now ask you to bid adieu to the cool Orchids, as those I am about to recommend require more fire heat than those already enumerated, although I entirely repudiate the stewing heat in which some amateurs, aye, and professionals, will persist in keeping their plants, which, however, instead of being a source of pleasure and enjoyment, when thus treated disgust their owners, and their culture is relinquished. The species which I intend enumerating in this the second portion of my subject thrive admirably and bloom freely under medium treatment. I do not object to the thermometer running up considerably with sun heat during summer, providing they are well supplied with air and moisture; but in the winter months the night temperature may be allowed to fall as low as 55° or 60° with advantage to both plants and pocket, and this in times of dear coal is of considerable importance.

SECTION II.

For which the mean temperature should be about 75°, but which thrive during winter in a night temperature of 58° or 60°.

ÆRIDES.

This is a genus of Indian plants, for the most part producing large, showy, and deliciously-fragrant flowers; indeed, they may be considered to rank amongst the most beautiful of the whole tribe. When out of flower they are very ornamental, having erect stems and broad channelled leaves set in two ranks, or distichous. In general appearance their habit of growth resembles that of many species of *Vanda*, but the flowers are very distinct, and, moreover, although in the latter genus we have several examples of blue, or partially blue flowers, I am not aware that this colour has been observed in any species of the genus now under consideration. *Ærides* are all found in a state of nature clinging to the branches of forest trees, and under cultivation may be grown upon blocks of wood if the fancy of the amateur inclines that way; but independent of their requiring more attention under this system, it is not possible to have such well-furnished plants as when grown in pots or baskets, and surrounded with living sphagnum moss. They are by no means difficult to cultivate, but the fact must be borne in mind that, unlike *Cattleya*, *Epidendrum*, *Coleogyne*, and many other genera, they have no thick fleshy pseudobulbs from which to draw support during the resting season; and drought must be tempered with mercy, for if the leaves begin to shrivel it is a sure sign that the plants are in distress. I know the argument has been raised that in a state of nature there is no help for them, and that they have a drying such as we have no conception of. This I would not dispute by any means, but then there are no registers of births and deaths amongst Orchids in a state of nature such as exist at home. For instance, a gentleman purchases an *Ærides*, say for five or ten guineas, with a given number of leaves, and if this plant is subjected to an overdrying during the winter, the probability will be that two or three parts wither, turn yellow, and have to be cut off, which not only disfigures the plant, but actually lowers its value. Thus every plant under cultivation is under strict surveillance, but no one ever keeps a record of the number of plants, especially young ones, which never survive a dry season, and in all probability are never missed, for when the rains come everything bursts into growth, and losses are seldom noticed; whilst those which survive no doubt bloom profusely, and thus, as it were, compensate for those which have perished. Such compensation, however, is not accepted amongst Orchid-growers at home, and therefore I say, Do not dry your plants in the winter season to such an extent as to cause them to lose or shrivel their leaves, for there is more enjoyment to be derived from a handsome well-furnished plant with, say, two or three spikes of bloom, than from a partially naked one, however well it may be flowered.

Ærides thrive well in wooden baskets or pots. The former have a very neat appearance, and the roots will adhere to the wood, and push out between the interstices. The great objection to their use, however, is that just when the plant has become thoroughly established it is found that through decay it requires renewing; to obviate this I would advise the use of perforated pots, which have a light appearance and admit air to the roots. I am quite aware some of my readers will say they admit cockroaches as well as air. This is undeniable if

they infest the house, but these pests should not be allowed to exist, for if a continual war is waged against them they may soon be exterminated, and upon the introduction of any new specimen to the collection it should be immersed in a pail of tepid water, which will not injure the plant, but which will cause any of these marauders to issue from their lurking places. Orchids do not breed these insects, and if a little extra vigilance be displayed in searching for them, I see no reason why Orchid houses should be more infested with these tropical pests than an ordinary plant stove.

To resume, however. I would advise the use of perforated pots for the cultivation of *Acrides*, and, instead of loading them with large quantities of potsherds, prefer at any rate the greater portion of the drainage material to be composed of lumps of charcoal. This remark, indeed, will apply with equal force to any and every Orchid grown in a pot. In potting, use clean, sweet, and living sphagnum moss, and press it down tolerably firm. I have found that *Acrides* sometimes shrivel and die in a most unaccountable manner. When this symptom of bad health sets in, turn the plant out and cut the base of the stem through. In all probability it will be found that the centre is decayed; this must be followed up until sound growth is reached. The plant should be placed upon a block of wood, and receive extra attention until it recovers. My first knowledge of this disease was in the case of the original plant of *A. Schröderi*, which died under my hands, but I have always been able to arrest its progress whenever it has occurred to me since, because I have taken it in time.

The various members of this genus are also liable to become infested with a small brown scale; if it make its appearance, wash it off carefully with hot water and soft soap. From the manner in which many plants are imported into this country, it would seem to be the normal condition of some plants to be clothed with a goodly number of these pests. Another kind of insect also sadly disfigures the plants if not exterminated as soon as seen; it causes the bases of the leaves to turn to a dull copper colour, and they ultimately fall off. Washing with Abyssinian mixture I have found an effectual cure for this worst of pests, but it must be well followed up, or it will allow some to escape and perpetuate their work of disfigurement and destruction. I much prefer washing to fumigating any plants of this order; indeed, from observation I am inclined to the belief that whenever *Acrides* or *Vandas* are fumigated they lose some of their lower leaves soon afterwards. I should like to know if any of my readers have observed the same occur with their plants.

A. OBOURATUM MAJUS.—This is at once the commonest and most fragrant species of the whole genus, and is an old inhabitant of our plant houses. It is erect in growth, bearing broad bright green leaves, which are arranged in a distichous or two-ranked manner, and unequally truncate at the ends. The spikes of bloom issue from the sides of the stem, near the axils of the sheathing leaves; they are drooping, many-flowered, and about a foot long. The flowers are large and fleshy, waxy-white, the tips of the sepals and petals being stained with pink; they are very fragrant, usually produced during May and June, and last several weeks in full beauty. No collection of Orchids should lack this free-blooming sweet-scented plant. It seems to be widely distributed throughout the cooler parts of the mainland of India.

A. OBOURATUM PURPURASCENS.—The name of the preceding kind at once implies that it is a superior form of the original species, and this again is another, but so entirely distinct from the last that both may be grown with propriety even in very small collections. In growth this variety is erect and very vigorous; the leaves are two-ranked, broader and longer than the preceding variety, truncate at the ends, and deep green in colour; spikes of bloom very long and many-flowered, sepals and petals waxy-white stained with purplish pink. It blooms at the same time as the preceding. Native of the East Indies.

A. CUSPIDIUM.—A bold-growing plant, having an erect blackish-purple stem and broad distichous leaves, which stand straight out, varying from 6 to 10 inches in length, and are very deep green in colour; the spikes are long, many-flowered, and stand out horizontally; the individual flowers are large, white, the sepals and petals being stained with rose pink at the ends; lip large, and of the same soft yet rich rosy pink colour. It blooms during June and July, and lasts about a fortnight in full beauty. Native of Bombay.

A. AFFINE.—This is a more compact-growing plant than the last-named species; the leaves are two-ranked, slightly re-

curved, channelled above, about a foot long, fleshy in texture, and light green in colour; spikes longer than the leaves, branched, many-flowered, and pendulous. Flowers soft rose, or pink and white, sometimes slightly spotted with rose. It is an abundant bloomer, coming in about May and June, and lasts several weeks in full beauty. Native of the East Indies.—**EXPERTO CREBE.**

HAVE APHIDES BEEN UNUSUALLY ABUNDANT DURING 1873?

A CORRESPONDENT of "Science Gossip" has recently asserted that aphides have appeared more plentifully than usual this season. It may be so within the range of his observation, but I am in doubt as to this being the case generally. Indeed, so far as I have noticed, I tend to just the opposite conclusion, as far as gardens are concerned. These insects have not been in profusion on several plants, the Rose for instance, which often swarm with them. Some trees, such as the Sycamore and Beech, have had a good many on them, yet not much beyond the average, and these aphides do not transfer themselves to other plants to the gardener's injury. Other persons, in the vicinity of London and in North Kent, think with me that the "blight," as they call it, has not given much cause for complaint in 1873, and some attribute this, rightly or wrongly, to the amount of rain we have had.—**J. R. S. C.**

LAMBTON CASTLE.—No. 2.

THE SEAT OF THE EARL OF DURHAM.

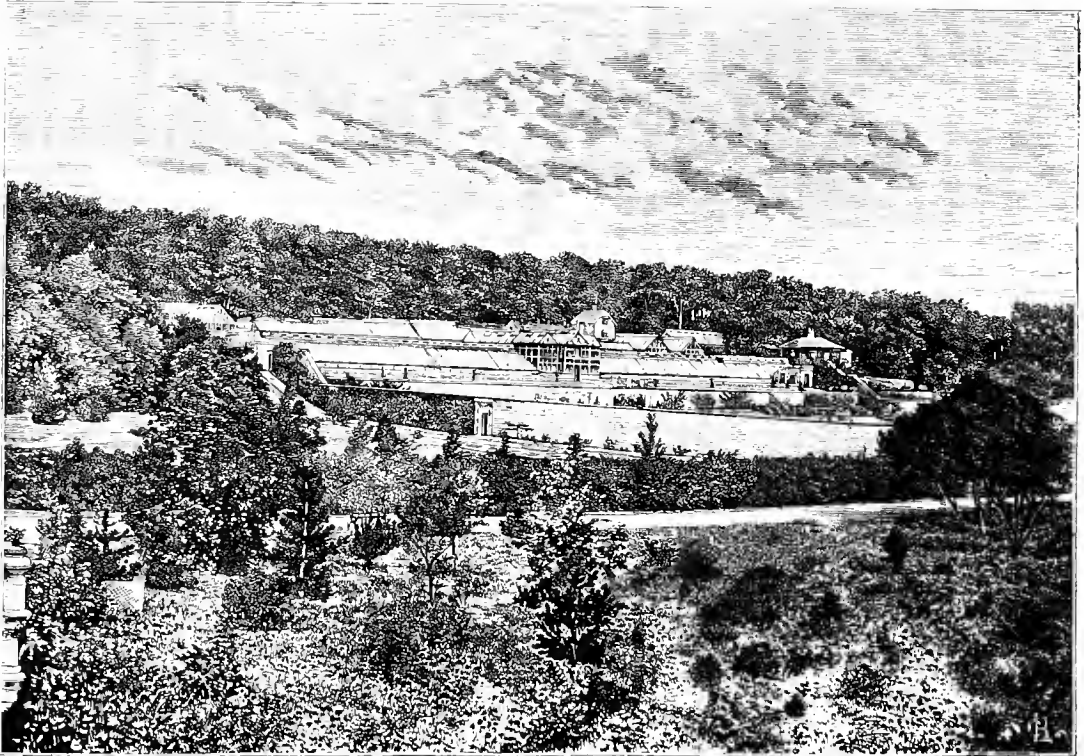
WE now come to another feature in fruit-growing, which has attracted quite as much attention as the large bunches of grapes referred to last week, and that is the fruiting of seedling Pine Apples that had been raised some time ago from seed grown on the spot. I believe the variety from which the seed was taken was Black Jamaica, and that the fruit was not large of its kind. As the rearing of Pine Apple plants from seed is not often thought of by gardeners, and many are not aware that an English-ripened Pine contains perfect seed, I was curious to ascertain its history. I was told that seed may occasionally be detected in Pines which have been in bloom at the best period of the summer, and that it is in point of size and appearance not unlike the stones of the smaller kinds of Grapes; and that it germinates I had ocular proof by seeing seedlings in various stages of growth, but I need hardly say it is some time ere they arrive at a fruiting size, before which, however, some idea may be formed of their character by observing the habit of the plant and other appearances: still, it is not until they have fruited that their real merits are evident. A large proportion of the seedlings are inferior to kinds already in cultivation, but occasionally there is one of superior excellence. Such an one was pointed out to me; and as it had been fruited before and a stock of plants obtained from it, it was not difficult to make a favourable comparison between it and varieties that are well known.

The Lambton Seedling Pine—for that is the name by which it is distinguished—is borne on a plant having rather long leaves of medium width, less mealy than those of the Enville, and not inclined to bronze on the upper side like the Jamaica and some others; spines rather wide apart, but not remarkably so. The character of the plant may be regarded as sturdy. The fruit is more conical than barrel-shaped; the pips for the most part quite flat, as much so as in the Smooth-leaved Cayenne; the crown small, resembling that of a Queen. It is, however, to its size that I would especially call attention, and still more to the rapidity of its growth, for I was told it was not unusual for a plant only twelve months old to produce a fruit from 8 to 9 lbs. weight, while much heavier fruit was produced on plants a little older. I noticed one thirteen pips in depth, which in all probability would ripen into a fruit from 10 to 12 lbs. weight; and Mr. Hunter told me he had cut a fruit of 10½ lbs. from a plant only eleven months and a half old. I also understood it was well spoken of at table, while its appearance was all that could be wished. I was glad to see that a good stock of it was being propagated, so that we may ere long hear of this fine Pine being grown elsewhere, as it must take its place amongst the large ones of the day, of which at the present time Charlotte Rothschild and now and then Smooth-leaved Cayenne seem to be the greatest favourites in most places. No special treatment was given to these seedlings that was not accorded to the rest. The bed, the pots, and the position were alike in all cases. The pots were medium-

sized—not at all large for Pines, and yet not so small as some that I have met with, where the merit of growing Pines in small pots was more considered than growing them well. Here they were of fair average size, evidently well filled with roots, and plunged in a tan bed with, I believe, hot-water pipes underneath. The house was span-roofed, or rather a sort of half-span on the north side. Other varieties were also grown, the best kind (for there are evidently two) of Smooth-leaved Cayenne being well represented, as were also Queen and Charlotte Rothschild, and all alike good. In one of the corners of a bed was a box of seedlings not larger than small cuttings of Verbenas or other plants, and I could see that stems of old cut-down favourites were also utilised with a view to induce them to produce suckers, but the process is not so rapid a one as that by which many other plants are multiplied; nevertheless, where it is necessary to propagate extensively a valuable variety like the Lambton Seedling, every means ought to be adopted, although robust suckers from plants that have borne good

fruit are undoubtedly the best—*i.e.*, they soonest produce good fruit again.

Before taking leave of the Pine houses I may remark that the whole of the plants bore the impress of the most robust health, and exhibited no sign of scale. All were in pots plunged in heating material, or otherwise supplied with bottom heat. A very wise plan was here adopted, which in all cases ought to be followed where Pines are grown, and that is to isolate the pineries from the houses containing stove or greenhouse plants. A glass partition, however close-fitting, is not enough to shut out scale or mealy bug where there is a chance of its reaching such tempting food, and there are comparatively few establishments exempt from these pests if any great number of exotic plants are cultivated. It appears to be almost impossible to keep some plants free from these unwelcome intruders. At Linton we make it a rule to raise seedling plants only in one Pine house, and when it is necessary to remove them elsewhere they are never returned to it.



LINTON CASTLE FORCING HOUSES AND KITCHEN GARDEN.

For accompaniment to the other fruits sent to the table of the noble proprietor two small houses were devoted to fruits not often cultivated for such a purpose, although not unknown perhaps a century ago, and occasionally met with fifty years ago—namely, two kinds of *Passiflora*, one being *P. edulis*, and the other what Mr. Hunter called *P. quadrangularis* (*Granadilla*), or *P. alata*. The fruits of the two species bear little resemblance to each other, for those of the first are not larger than a full-sized Plum and purple, while those of the second are like a fair-sized Melon and yellow. It would be difficult to find two houses presenting better crops of fruit of any kind. The plants were trained immediately under the glass, and the fruit hung down as thickly as in a well-managed Cucumber house, looking rich and good. More novel, because more rare, in another house was the Vanilla fruiting in tolerable abundance, but to the ordinary looker-on it seemed less inviting than the *Passifloras*. Bananas there were, of course, in plenty.

In a place where tender fruits are cultivated with so much care and success, hardy ones are not likely to be neglected. Peaches and Nectarines were abundant, but the crops in the earliest houses had been gathered long before my visit. I noticed some very useful-looking Plums on trees in pots in an

Orchard house, but the healthiest trees, and those that had borne or were carrying the best crop of fruit, had been planted out, and were trained in the bush fashion, as it was demonstrated years ago that trees in pots seldom finish-off their fruit well, so that it is only as objects of novelty that they are much cultivated in places where fruit in large quantities is grown in the ordinary way. Here, however, the crop was promising both on trees in pots and those planted out.

I will here notice the fruit room which I was shown into, and an excellent roomy place it was, differing from the too-common backshed makeshifts so often met with; in fact, with the exception of one I had previously seen at Knowsley (Lord Derby's), it was the most complete in its way I had ever known. There were tiers of shelves round the outside, with a broad one in the centre having drawers for putting away some of the choicer specimens, while an ample path was carried all round, and light and ventilation were alike at command. This house occupied a position behind the upper tier of glass structures, and adjoining it were some other offices and necessary accompaniments to a large place.

The flower garden, like the other features noticed above, was in the immediate neighbourhood of the kitchen garden, for owing to the character and position of the mansion it

would have been out of place near it; but a large space to the west of the kitchen garden was devoted to flowers, and this being on the line of route between the Castle and the kitchen garden is, in consequence, first met with. It was gay with the choicest gems in flower and foliage that wealth and skill could supply. The main series of beds in this garden consisted of a number of circles and alternate curved beds surrounding them, in shape something like a portion of the letter S, forming, in fact, what gardeners term the Florentine chain. On each side of a broad walk of considerable length there were a number of these beds, edged with Box, with paths of coloured gravel between, and a band of turf separating them from the broad walk. The whole was on so large a scale as to require a great many thousand plants to fill the beds, and their position being on a level space which could be seen from the heights above, nothing could well look richer. I did not attempt to particularise the contents of the beds, but I was pleased to see that hardy plants were not altogether omitted, one or two excellent examples of Pansies being grown, as was also a much better variety of *Viola cornuta* than is usually met with. There were *Sedums* and *Semprevivums* in great abundance, while stove plants, such as *Coleuses* and *Alternantheras*, were in their best garb. In other places the more robust kinds of ornamental-foliaged plants were grown. I was told that winter, or rather spring gardening, was also carried on to as great an extent as the summer decoration, and an immense breadth of double Daisies was in reserve to do duty when the tender plants were over. Ribbon flower-borders also existed in front of the plant and forcing houses. I was especially pleased with one by the side of a wall, and consisting of a groundwork of *Cerastium* about 4 or 5 feet wide, with a bordering of Beet and a few small circles about 12 or 15 feet apart in its centre. I forget the precise plant composing these circles, but it was all one kind. Other beds on the turf banks which occupied the space between the two tiers of glass structures were also filled with bedding plants, all being in the best possible condition.

I could not but notice that two of the plants used were more robust in health and altogether presented a different aspect from that which they usually do in the south, and these were hardy plants—*Arabis albida variegata*, and *Dactylis glomerata variegata*. The latter I have never been able to do much with in Kent, although I have had it since 1856. The *Arabis* succeeds better, yet it never assumes that robust character it has in the moister climate of the north, for I saw it at other places as well as at Lambton, and in all cases it was good. I may further remark that it is in much repute there, being grown in abundance in most gardens, as is also the variegated *Dactylis*. On the other hand, it was apparent that the *Calecocalaria* is losing ground, and the same may be said of the *Verbena*; neither does it appear that tricolor *Geraniums* occupy the high position they did a few years ago, but silver-edged ones are more sought after. The increasing demand for ornamental-foliaged plants threatens to throw many flowering ones out of cultivation; nevertheless, in all probability there are more flowering plants cultivated now than at any former time, but the cultivation of ornamental-leaved subjects has advanced in much greater proportion, and in many respects they do duty for a longer period than their more showy neighbours, not being injured by the drenching rains we occasionally experience.

I may, perhaps, be excused for not going further into details on the merits of the various long and well-arranged ribbon borders and the innumerable beds which are introduced at every favourable turn, leaving the reader to judge for himself of the magnitude of the bedding-out department, when it is stated that about 100,000 plants are every season required for the work.

Leaving the forcing department and flower garden alluded to, of which we have an excellent view from the high ground to the north of it, we cross a sort of ravine by an ornamental bridge, where a spacious gravel walk of easy curves and gradients takes us through a wood that clothes the left bank of the river above the garden; and amongst the noble Oaks and other trees we see that *Rhododendrons*, &c., have been planted in abundance. Ever and anon we come to spaces neatly turfed over, where specimen Conifers of the choicest kinds are thriving almost as well as the native trees, but of course smaller. The positions chosen for these are in every way favourable, surrounded as they are with high trees and other shelter. Amongst noticeable trees were some good *Beodars* and *Wellingtonias*, and not a few *Araucarias* in a promising condition. I was told the memorable winter of 1860-61 had done much damage

here, but other trees had been planted and were flourishing. As there were several of these openings in the wood through which the path wound, and choice shrubs and trees planted in each, the interest was well kept up till we reached the noble mansion, of which a view was given last week, standing on the summit of a steep on the left bank of the Wear, one of its principal fronts facing that river. A rather confined terrace, sustained by a retaining wall of considerable height with a balustraded top, overlooks the steep slope and the view at the bottom, while a bridge across it a little way higher up affords access to the carriage way that runs along the opposite bank and approaches the mansion by a curve on the north side.

The park and grounds, which cover an area upwards of five miles in circumference, have escaped the intrusion of the railways which intersect the country all around, and have done so many long years before railways were thought of in other parts of England. It was not known that coals had been worked in the immediate neighbourhood of the Castle until many years after it was built and occupied, when it began to sink in places to the great alarm of its inmates, as a sudden fracture in the walls accompanied with an alarming noise would occur occasionally at night. This, of course, led to the examination of the ground below, and it was found that the coal had all been worked-out underneath it. Means were therefore adopted to remedy the evil, and a long and careful process of undersetting, with the necessary repairs to the damaged walls, has made the whole structure like one built within the last twenty years. It contains many splendid apartments. The hall is, I believe, 90 feet long and 60 feet high, with stained glass windows and other embellishments.

I cannot conclude these notes, long as they are, without thanking Mr. Hunter for his courtesy in giving me all the information on which the above description of Lambton is based, and apologies are due on my part for many omissions. The contents of the kitchen garden, for instance, have scarcely been alluded to, and these were both good and judiciously arranged; but time compelled a separation from one whose merits as a Grape-grower are only on a par with his frankness and hospitality as a man.—J. ROBINSON.

SOIL FOR VINES.

MR. BLACKBURN (see page 287) writes on the compensating system; in asking for information he gives it, and this of a practical kind. Let us hope to hear next of his little house of Grapes, as by the good start he has made, and the thoughtful attention he gives, he is sure to have fruit—useful, handy, enjoyable fruit. His "new border site has been excavated half a yard deep, and filled (possibly a foot above the level), with a good, kindly, but rather light loam without a particle of manure or dressing of any kind. The roots were spread out carefully fan-fashion, as near the surface as possible, lightly covered, and not trodden. A good coating of stable manure was spread over the surface. The border never to be dug, but to be fed by successions of top-dressings." These remarks are so good and sound as to be worthy of reproduction. He then asks for a first-rate border. Well, that is a first-rate border for a little house intended for useful Grapes for home table use. It may not be quite first-rate in the sense of producing sensational bunches for exhibition purposes, but nevertheless many a prize has been taken for Grapes from borders not better than this, including the good supplemental attention it is sure to receive.

I may just add, in proof of my confidence in it, that I last year renewed a Vine border and lifted the roots. I did not, however, go so boldly to work as Mr. Blackburn, because I could not afford to sacrifice a season's Grapes. The soil used was a "good, kindly, but rather light loam, without a particle of manure;" but—and in this respect my border may be the better of the two—I mixed in a portion of charred vegetable refuse. A foraging expedition landed me at the "stick yard." The foundations of old stacks, the accumulation of years, were cleared out and purified in the fire. Every particle was charred—not an inch, I believe, being missed—for fear of fungus. This proved also a compensating system, as I did the yard people a kindness in clearing away the rubbish, and myself one in getting some valuable mixing stuff for the Vine border. New roots commenced to form into it at once, bristling out of the old, straight, fibreless stems, and the Vines carried a heavier crop of Grapes than they had ever done before, although every particle of the old border was taken away.

There are so many contingent circumstances to be considered in Vine-border making and renovation, such as special end in view, money at disposal, site, subsoil, position, rainfall, &c., that the subject is a large one, and cannot at present be entered on fully. In the meantime Mr. Blackburn's receipt with this supplement is reliable, simple, easy, and useful, and may be adopted without fear of failure, other conditions being rightly carried out. But may I suggest that Mr. Blackburn look again and "make assurance doubly sure" in the matter of complete maturation of the wood? The Vines were cut down as late as June and have large leaves. Wood-ripening is a vital point in good and certain Grape-production, and autumn fire heat is frequently of immense value. My late Hamburg house is now being treated to a little fire for the first time since last October. It is a practice regularly adopted, and nothing could answer better, a houseful of Grapes being annually produced by a fortnight's firing in October. Sometimes, however, we must fire in winter to keep frost out, but the mildness of last winter did not require it. I am certain a little fire heat now, if the house is heated, could do no harm to Mr. Blackburn's or anyone else's late Vines, and am almost as certain that it would do them good. Heat with air and without moisture is the prime agent in wood-ripening, and this in turn is a prime condition for fruit-producing and perfecting.

My namesake of Rusholme alluded to Grapes in a wash-house. I enclose you half a dozen berries grown by a journeyman joiner in a glass lean-to covering his back door and also wash-house door, but the steam from the last-named place fostered mildew last year. It was diverted, and this year all is well. The glazed structure faces east with a point south, but is sheltered from the north by buildings. It has no artificial heat whatever. The border is formed of a load or two of rather light turfy loam mixed in the garden soil and covered with manure each autumn. He is selling his Grapes at 2s. per lb.; and I am sanguine you will consider them worth the money, and that Grapes can be fairly grown by simple means.—J. WRIGHT.

WINTER GARDENS AND PAVILION AT SOUTHPORT, LANCASHIRE.

(From a Correspondent.)

THE progress made with these important works under the direction of Messrs. Maxwell & Tooke has been very considerable during the past few months. Since the spring about eight acres of land have been cleared of old buildings, sand hills, and gardens, and the whole almost fenced-in on three sides. The outside work, under the immediate superintendence of Mr. Thomas, is now being fast pushed on, and in a few weeks a large portion will be laid out in lawns, walks, and shrubberies. Temporary greenhouses are being erected, so that the horticultural portions of the building and grounds may be opened with a good display. Mr. Reed has been appointed curator, and has already commenced his duties, and hopes before the time of opening is fixed to have a sufficient number of the inhabitants of the deep sea collected together to stock the whole of the tanks in the aquarium. When complete there will be no place of resort either inland or on the coast that can boast of such an undertaking, providing the various sources of enjoyment on anything like the scale that the directors intend to provide here. Nor could we easily find any other place where such an undertaking could be commenced with any hope of financial success.

For those of our readers who are not aware of the exact nature of these buildings, we will make an imaginary visit, supposing the place to be complete. Turning from Lord Street under the shade of the old trees now in Mansion House Lane, we see an avenue 80 feet wide, with broad footpaths on each side leading to two handsome lodges at the entrance of the grounds. Having paid our fee we are admitted at once into the grounds, and find the space in front of the buildings laid out in beautiful flower-beds. This portion of the grounds, being sheltered from the sea breeze, forms a beautiful retreat in stormy weather, and is properly designated the Winter Gardens. In front of us stands a magnificent pile of buildings 350 feet long. In the centre is the principal entrance-hall and staircase, flanked on each side with spacious cloak-rooms; behind those are the central promenade with two heights of terraces 160 feet long, and flanked on the north by the band pavilion, a splendid building 80 feet high, and on the south by a conservatory of equal height. The cloak-rooms and central hall have both flat roofs coupled with the verandahs outside,

and forming promenades. Entering the central hall under a beautiful carriage porch, we face a splendid staircase 15 feet broad, leading by easy gradients to the central promenade, and on each side of this staircase another 8 feet broad leading down to the aquarium. We take one of these side staircases, and after descending a few steps we are in the vestibule of the aquarium, a room some 30 feet by 20 feet. Hearing the splashing of water we turn round and see a beautiful little fernery, in the centre of which is playing a diminutive fountain. On each side are the turnstiles inviting us to the great hall of the aquarium, a fine room 170 feet long and 30 feet broad, the ceiling of which is supported by thirty massive columns with carved and enriched caps, from which spring the arches and groins of the ceiling; in the centre of each groin is a cut coloured ring of glass, sending down through the hall a subdued light of yellow, green, and blue tints. On each side of this hall are the fish-tanks, twenty-three in number, each tank having a large plate-glass front 8 feet long. Passing down to the left we come to another hall 180 feet long and 24 feet broad, running at right angles to the first. In this are a great number of small tanks containing all those minute inhabitants of the sea, both vegetable and animal, that from their size would be invisible in the larger tanks. Here also we see small cascades of fresh water trickling and dropping from rock to rock, whilst in every crevice grow specimens of our hardy Ferns, Lycopodiums, Mosses, and Lichens. Passing by this fernery we enter again the great hall of the aquarium, and regain the main staircase, ascending which we find ourselves at once in the central promenade. This portion of the building is by no means the least attractive part of the works, a promenade 33 feet broad and nearly 200 feet long, with a raised platform on each side for loungers, galleries, and verandahs, giving accommodation to hundreds of visitors, and from which can be had most extensive views of the grounds, looking on one side over terraces, lawns, and shrubberies, right upon the sea, and commanding views of the Welsh hills on one hand, and the Cumberland hills on the other, with the pier and promenade immediately in front, and on the other a complete panorama of the town of Southport, with Scarisbrick and Ormskirk in the distance.

Ascending one of these galleries we take a view of the interior. The centre portion of the ceiling is plastered and divided into panels, with neatly moulded wood framework, whilst the side roofs are of glass. This arrangement secures a more uniform temperature with greater shade than an entire glass roof would, whilst the glass at the sides enables the place to be embellished with large ornamental baskets containing flowers and climbers.

Passing along this gallery to the opposite end of the promenade we come to what is termed the reading gallery, a room about 33 feet square, open on two sides, and from which we get a perspective of the entire building; looking one way we survey the length of the promenade, and right across the conservatory, whilst from the other side we command a perfect view of the band pavilion. From this gallery we pass into another that surrounds the entire pavilion, and from which we get an ever-varying view of this magnificent room capable of seating comfortably two thousand people, and always arranged that eight hundred people may sit and listen to the music, whilst a stream of promenaders 16 feet broad can pass round both the audience and orchestra without either incommoding the performers or the listeners. On the side near to Coronation Walk we have another lounge some 40 feet by 33 feet, with projecting windows commanding all Coronation Walk to Lord Street, and a considerable portion of the promenade. From the windows of the band pavilion, which are large and occupy most of the wall space, we get beautiful views of the grounds.

Passing now along the central promenade we enter the large conservatory, one of the largest and certainly one of the handsomest in the country. Here we ramble under the shade of Camellias, Azaleas, Palms, gigantic Ferns, and all manner of magnificent foliage plants, in what appears to be a never-ending path, at one moment shut-up and buried amongst the fragrance and beauty of the vegetable world, and at another obtaining most extensive views of the whole house, embracing trees 60 feet high, creeping plants of every description hanging in festoons high above the head, and beds of flowers of every colour and form. Nor is the eye the only organ gratified, for here we have the feathered songsters piping out their melodious strains, and holding high carnival. Nor is art forgotten, for here and there amongst the shrubs stand graceful groups of

stagnary, whilst in the centre springs a noble fountain sending up its crystal stream high into the roof that rises 70 feet above the floor. Passing from here upon the terrace facing the sea, we get at once a view commanding the entire garden. Stretching down to Duke Street, are winding paths hid in shrubberies, and here and there stand shelter houses, whilst in front are extensive croquet lawns, flanked on one side by the grand terrace, and protected from the sea on the other by high banks of rock and shrub, whilst round the whole are carried walks and flower-beds carefully sheltered from the cutting blast.

Coming to the lodge in Coronation Walk, we pause and ask, Have we seen all? We are told No; there are rooms as large as any in the place we have not yet entered—vineries, and green-houses hid from view, grottos and nooks we have not dreamt of, nor have we seen the half of all that here can be seen. But our time is gone. Into those tanks containing the wonders of the deep we must look another time, and defer to a more convenient season our more minute inspection of all that has been so carefully and judiciously provided here for our enjoyment.

THE GRAPE LOUSE.

THE recent reception of leaves of the Clinton Grape Vine affected with the minute galls or excrescences, with which every Grape-grower is familiar, from Mr. P. C. Rhea, of Neponset, Bureau county, in this State, again invites our attention to this insect. This matter assumes a particular importance at this time from the intelligence just given by the newspaper press, of the arrival in this country (Chicago), from France, of a distinguished horticulturist and practical entomologist, M. Planchon, for the express purpose of investigating the diseases of the Grape Vine in America, and especially, we may presume, the insect now under consideration, which is considered to be identical with a similar species which has been much more destructive in Europe than in this country.

It is a remarkable fact that in Europe the insect works mostly upon the roots of the Vines, and has rarely been known to form galls upon the leaves, whilst in this country they are more generally known as producing galls upon the leaves, which do not very materially affect the health of the plant. This remarkable difference in the habits of the insects in the two countries naturally led to the supposition that they were different species of the same genus. But Mr. Riley, who has made a special study of this insect, and who has had opportunities to compare specimens from the two continents, in all their stages, believes them to be identical beyond all doubt; and he has also shown that they damage the roots of several varieties of Grape in this country, though to a comparatively small extent. It was estimated that the Grape-root louse of Europe damaged the Vines in the single province of Vaucluse, in France, in the course of three years, to the value of five millions of dollars. The apparent identity of the American with the European insect has caused it to be viewed with much apprehension, especially since the publication of Mr. Riley's articles upon the subject, and since he has given us reason to believe that the languishing condition of certain varieties of our Grape Vines, from invisible and unknown causes, may be referred with considerable probability to the insidious operations of these insects upon the roots.

No very satisfactory treatment of this insect has been suggested. In France various washes have been experimented with, but with imperfect results. The most important direction is to guard against the dissemination of the pest by examining the roots of all Vines before transplanting, and if they exhibit the little knots which these insects produce, either discard them altogether, or trim-off the damaged roots and immerse the remainder in hot soapsuds or tobacco water. Everyone who has paid any attention to this subject has been struck with the remarkable partiality which these insects exhibit for the Clinton Grape Vine; so great, indeed, that we believe it may be safely said that ten-fold more galls are formed on the leaves of this Vine than upon all the other varieties combined. This notorious fact naturally induced Mr. Riley in his earlier writings to advise the extermination of the Clinton Vines, and we copied and endorsed that advice in our former article, conditioned, however, upon an evident increase and spread of the disease. In his fourth report Mr. Riley was induced by subsequent observations to modify this opinion. We will quote his own remarks upon the subject.

"Last year, from the knowledge we then had of this insect in this country, I recommended the destruction of the Clinton Vine where other and better varieties succeeded as well. This

advice was given in order to get rid of the galls, and wherever it has been followed it has had the desired effect. It was given, however, under the impression that the lice would not attack the roots except where the leaves were covered with galls; whereas, in truth, the roots would appear to be less affected (at least during the growing season), where the leaf galls are abundant than where they are scarce; while they may be absolutely ruined where no signs of galls exist. Consequently there is no longer any urgent need of, or good reasons for, destroying our Clinton Vines."

Nevertheless, inasmuch as it is a notorious fact that a greater number of Grape lice originate upon the Clinton Vines than upon all the other varieties combined, if we assume that the leaf lice and the root lice are identical, and that the *Phylloxera vitifolia* of America is the same species as the *P. vastatrix* of Europe, then, in case these insects should ever show a tendency to become as destructive to the Vine in this country as they have been in Europe, it would evidently be one of the first dictates of prudence to exterminate the Clinton Vines, and thus remove from our vineyards this most prolific hotbed of the *Phylloxera*.—(*Prairie Farmer*.)

WORK FOR THE WEEK.

KITCHEN GARDEN.

MANURES should now be wheeled out of the framing ground to the vacant spaces in the kitchen garden, and immediately afterwards dug-in. Every portion of the ground should now be free from weeds. Cut down any remaining flower-stalks on *Artichokes*, remove a few of the large outer leaves, and cover the roots with litter or old tan; it is a common practice to earth-up with soil between the plants, but one which we entirely disapprove of. Take up *Beet*, and having cleared it of leaves preserve it in sand. The Cape varieties of *Broccoli* which are now heading must be secured from frost after they are formed. Keep *Cucumbers* securely tied to the trellis, and the shoots stopped as before recommended; slightly syringe every fine clear day, and give air at every favourable opportunity. Another sowing of *Dwarf Kidney Beans* should now be made. Keep the first crop duly supplied with water; this must be particularly attended to when they are in flower; if allowed to get dry at that time the whole of the blossom will fall off without setting. Give air to *Lettuce* at every favourable opportunity, more particularly to the young plants; the Cabbage varieties intended for winter use will not need it so freely. When the means of heating a *Mushroom house* is flues, maintain a moist atmosphere by frequently sprinkling them; pans of water should also be placed on them. It is generally more convenient to have *Parsnips* taken up and stored in the root cellar than to dig them up as wanted. Taking them up should therefore be immediately attended to. In mild and favourable situations a few *Potatoes* may be planted to come in for early use, but there are but few places to which this will apply. Clear away the decayed leaves of *Rhubarb*, and cover the crowns of the roots with old tan or any sort of loose litter. *Scorzonera* and *Salsify* may now be taken up and preserved like other culinary roots.

FRUIT GARDEN.

Pay every attention to getting the wood of Peach and Apricot trees well ripened by exposure, shortening, &c. Prepare for planting all kinds of fruit trees by getting the ground in good order and suitably prepared for the different kinds. The sooner the trees are planted the better, as they will then make fresh roots before winter. In all cases, but more especially on cold stiff soils, it is advisable to plant on hillocks a foot or 18 inches higher than the surrounding surface. The trees will not grow so fast in consequence, and will require more attention in summer for mulching, but they will form short-jointed, well-ripened, fruitful wood, which is the best preventive of canker, gum, &c., and will save the labour of resorting much to root-pruning. When planting fruit trees spread the roots out carefully, and close the soil about them with the hand; never shake the tree up and down, as is sometimes done, for it disarranges the roots very materially. Root-prune fruit trees where they are growing very luxuriantly, or take them entirely up and replant them. Gather any remaining fruits, such as Quinces, Medlars, and Walnuts.

FLOWER GARDEN.

The beauty of most of the plants which enlivened the flower beds and borders with gay blossoms in summer is now nearly over; all that remain to cheer us at this season are some late-flowering *Phloxes* and the varieties of the Chinese *Chrysanthemum*, which in its autumnal like the present are very ornamental when tied-up so as to show their flowers to advantage. Cut down the stems of all plants that have done blooming. The tubers of *Dahlias* will survive moderately severe winters in the open ground if protected by a covering of dry litter or fern; but it is the best practice to take them up as soon as the leaves and flowers have become blackened by frost, as they will

flower better than if left in the ground; they may be preserved over winter in any dry cool place where they will be free from frost. If there is one thing more than another which contributes to the high keeping of this department of a gentleman's establishment, it is finely-kept and perfectly smooth turf. This is unquestionably the best season to lay turf, except under large trees, and in such situations it is better to delay until spring, otherwise the constant dripping of the rains in winter would do material injury. Level to a uniform height the edgings which surround the walks and borders. These two things, combined with good walks, will give a garden a highly-finished appearance. Herbaceous borders may now be regulated, reducing the large plants considerably, and preferring rather to leave the outside than the centre of the plants. Where the plants have not been regulated for some years it will be best to take them up, manure and trench the ground, and replant them properly. It will soon be necessary to put Auriculas in their winter quarters. Nine-tenths of the collections grown in the country are wintered in glazed frames, or sheltered by boards linged to the wall; the great point, however, is to keep them from drenching rains when the plant is in a dormant state. Polyanthus may still be planted, the sooner the better. All offsets, seedlings, or unhealthy bulbs of Tulips should now be in the ground; and as the main bed ought to be planted between the middle of October and the first week in November, everything must now be in readiness, and the first favourable opportunity should be taken to put them in the ground. In consequence of the late fine weather the beds ought to be in a good state for planting, and it would be a wise precaution to cover them with mats during the night or on the appearance of rain, as it is advisable not to plant when the bed is too much saturated.

FORCING PIT.

The forcing pit should now be in full operation to keep up a stock of flowering plants for the rooms and conservatory through the winter. All hardy and half-hardy plants brought in for forcing should have a temperature at first of from 50° to 60°, to be increased up to 75° when more advanced; but as many plants will not bear such heat, and others will not do much good without a high temperature, there should be two distinct pits or at least divisions for this purpose. In large establishments many are forced in stoves and early vineries, but to allow the management of these houses to be altered in any degree to suit forced flowers is no economy. However, there are many plants that may easily be forced in this way. With a large stock of Chinese Azaleas some of them may be had from Christmas till the end of May. The first lot should now be brought into a heat of 50°, or even 60° if they were forced last April, and if their flower-buds are prominent. The double Roman Narcissus is the first of the forced bulbs, and where they have been potted early in August they will now stand 60° of heat, and will be in flower by the end of next month. Hyacinths that have been potted before the middle of August will now endure a good heat and bloom early without at all injuring the bulbs, whereas late-potted bulbs are ruined if forced early; not but that they will flower well enough, but the bulbs are of no use afterwards.

PITS AND FRAMES.

Every plant that is liable to be injured by wet or cold should be taken in. Give air freely every mild day. The greatest care should be taken that the soil in which the plants are growing do not become sodden by heavy rains. The lights should always be on during wet weather, but tilted up at the back. — W. KEANE.

DOINGS OF THE LAST WEEK.

KITCHEN GARDEN.

We have taken advantage of fine weather to get some trenching done. A week or two ago we alluded to the disadvantage of trenching the ground when it is not in good order, either soaking wet or frozen hard; but it is not possible to do all such work in fine weather where a large quantity has to be done. In this case the most particular work must be chosen for the most fitting time. Ground might be trenched or worked in any way for the commoner description of kitchen-garden crops, when it would not be desirable to do so for the choicest descriptions of florists' flowers, such as the Gladiolus, Pink, and Carnation.

All the Apples were gathered more than a week ago, except the Nonparcels. These have also been taken into the fruit-room. We have, until this season, managed to keep Strawberries in beds clear of weeds by the hoe, but through using loam that contained a quantity of grass seeds, when the plants were put out the ground became foul with weeds. In such a case hand-picking is the best remedy. It is not desirable to dig amongst the plants, otherwise the weeds might be buried in the ground. We cut off the runners, for they are not allowed to remain to exhaust the plants.

We have gathered a small dish of Peas, but they have not done so well as was expected, and the frosts have destroyed the Kidney Beans, so that for vegetables we are confined to Coleworts, Brussels Sprouts, and Savoys, which are very good this

year. We envy those who are enabled, from having a suitable soil, to obtain good Cauliflowers at this season. Those who are fortunate in having a good supply should be careful to protect them from frost. It is a good plan to cut the leaves back considerably when the Cauliflower is nearly ready for cutting, then pull the plant up and place the roots in boxes of sand in a back shed or other cool place.

FRUIT AND FORCING HOUSES.

We are making ready the early *vineries* for forcing; the outside borders have been covered over to protect them from rain. Various appliances have been recommended for this purpose, such as covering with glass lights, thatching with straw, &c. Ours are covered with wooden shutters, which are fitted under the wall-plate and slope gently to the front of the border, the water being carried into a drain by spouting. Inside we have been cleaning the glass and woodwork, using a very little soft soap with the water on the woodwork, but none on the glass. The Vines, after being pruned, are washed with soap and water, and then painted over with a solution of Gishurst compound, or sulphur is added to water in which soft soap has been dissolved, until it is of the consistency of paint. The inside borders next claim attention, the object being to entice the roots to the surface of the border; this is accomplished by removing the surface soil to the depth of about 3 inches, and replacing it with a compost of equal parts of loam and rotten manure, pressing it in rather firmly.

This is a critical time for late-keeping Grapes; a quick eye is essential to notice the first appearance of mildew on the berries, and to have those affected removed at once.

Strawberries in pots for forcing have been removed under glass. All the varieties are looking well for fruit, and are almost free from any appearance of spot on the leaves. This season has not been entirely favourable for them, the weather being cold and wet at the time the crowns were being formed. Our plants are always placed in an open position, and each pot is elevated on a brick, which causes the air to circulate more freely underneath the foliage than it otherwise would. The plants are plunged in cocoa-nut fibre refuse in cold frames, and the lights are entirely removed in fine weather, and are only kept on to preserve the plants from heavy rains and frosts. Instead of removing them to the frames, they might have been advantageously placed on the shelves near the glass in the houses where they ripen their fruit, but Chrysanthemums and other flowering plants are in the house, and watering Strawberries on shelves causes much damp.

A few *Orange trees* are cultivated in pots in the Cucumber and Pine houses. A large plant of the Tangierine variety is bending under the weight of its fruit, and is the earliest to ripen, followed by the Maltese Blood and St. Michael's. If the plants are free from scale and other insect pests they do not require much attention, and the fruit is very useful for dessert between now and Christmas. The fruit ought to be cut with part of the branch and a leaf or two, so that it may readily be distinguished from foreign fruit.

ORCHARD HOUSE.

We have now repotted all the fruit trees. The bulk of them were shifted by the end of September, but some of the Apple trees, such as Calville Blanche, Melon, and Northern Spy, and the Salway Peach, could not be moved until the fruit was gathered. All the trees have been taken outside, and the house filled with Chrysanthemums. The trees are placed on hard ground close together, and the pots covered over with cocoa-nut fibre refuse to protect them from frost. Some of the best cultivators of orchard-house trees have protested against removing Peaches and Nectarines out of doors at this season, alleging as a reason that the trees suffer from frosts and rains. We have followed the practice for more than six years, and have found no harm result from it.

PLANT STOVE AND CONSERVATORY.

In the plant stove we do not find much to do, except to keep the plants clean. Our house has been infested with mealy bug from the first, and we find the only way to get rid of this is to wash for it and immediately wash the plants when it appears. Now is a good time to follow it up, and by scrupulous cleanliness eradicate it entirely.

Polystichum pulcherrimum, which has been growing in a cool greenhouse during the summer months, has been removed to a stove temperature. This plant is indispensable for decorative purposes about Christmas; its glowing crimson-scarlet floral bracts light up the stove at the dulllest season of the year. We do not always see it grown as it ought to be. Some cultivators fancy that it requires to be kept in the stove all the year. If they are grown so the plants will run-up shoots like a grass-growing Willow, and nearly all the leaves will fall off before the bracts appear; whereas plants grown in an airy house, or even in the open air, will be dwarf, and the leaves are retained to the last.

There is a paucity of flower in the stove just now, but *Stephanotis floribunda* is in bloom, also *Calanthe vestita rubra* and *lobata*. These two charming Orchids are the easiest grown of

plants; they may be grown as large specimens, twenty bulbs in a pot, or what is a more useful and desirable size, three bulbs in a 5-inch pot. The compost in which they luxuriate is turfy loam and sand, with a little manure added, and a liberal proportion of pot-herbs for drainage; the loam should be broken in pieces by the hand, and have the finer portion sifted out of it. The pseudo-bulbs should be potted in February before they start into growth, and should not be watered until they start into growth at the base. Water cautiously until the plants are in free growth, when they may have an abundant supply.

The red and white varieties of *Lapageria rosea* are now in splendid bloom; nothing can at all equal these beautiful plants for training to a trellis overhead in the conservatory, or to an umbrella trellis in a pot, and those who have not seen the charming effect produced by training the two varieties together should see them in all their glory. At the Messrs. Veitch's nursery, Chelsea, where they are trained to form a covered walk over the corridor leading from the offices to the plant department, they are now in magnificent bloom. They are also the easiest grown of plants. Pot or plant out in turfy peat and sand, supply liberally with water during the summer months, and do not pinch the plants for pot-room. We recently saw a good-sized plant of *L. alba* in a celebrated private garden dragging out a miserable existence from being potted in unsuitable loam. The compost, as is usually the case when the largest proportion of loam is used, had become too compact, and the thick fleshy roots could not penetrate it.

We also recently wrote of the value of *Tree or Perpetual-flowering Carnations*, and of these we would especially note Miss Jolliffe, a double-flowered variety. It is of a dwarf growing character and flowers abundantly, the flowers being very sweet. Buyers intending to purchase should note this fine and distinct sort, it is just the thing for Covent Garden.

Decaying flowers have been removed from all plants as soon as perceived. At this season the damp mould which hangs to them is offensive and soon destroys the other flowers.

FLOWER GARDEN.

Cleared-off the summer occupants of the beds, and put in the *Calceolaria* cuttings; we generally put them in boxes in a cold frame under a north wall. Much time has been taken up in sweeping the lawn, walks, &c. Cleanliness is all-important.—J. DOUGLAS.

TRADE CATALOGUES RECEIVED.

Downie, Laird, & Laing, Stanstead Park, Forest Hill, London, S.E., and Edinburgh.—*Descriptive Catalogue of Roses.*

W. Knight, Hailsham, Sussex.—*General Catalogue of Nursery Stock.*

T. Bunyard & Sons, Ashford and Maidstone.—*Descriptive Catalogue of Roses.*

J. R. Pearson, Chillwell Nurseries, near Nottingham.—*List of Bedding Geraniums for the Spring of 1874.*

B. L. Pierpont & Co., 16, Great Charlotte Street, Liverpool.—*Multum in Parvo. Pocket List of Dutch Flower Books.*

Isaac Brunning & Co., 1 Market Place, Great Yarmouth.—*Catalogue of Flower Books, D. and F. series.*

TO CORRESPONDENTS.

We request that no one will write privately to any of the correspondents of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to *The Editors of the Journal of Horticulture, &c.*, 171, Fleet Street, London, E.C.

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

N.B.—Many questions must remain unanswered until next week.

BOOKS. (35.) *How to Grow the "Fruit of Plants"* gives the information you will find in *The Fruit of the Tree* of the Supplement to the "Cottage Gardener." It is a very useful volume, and there is no other of the kind.

SEEDS. *See J. Douglass's "List of Seeds," p. 14, The Gleaner.*—It is well to understand the value of seeds, and the best to use.

YOUR PINE TREES. *See Douglass's "List of Seeds," p. 14, The Gleaner.*—You had better get the seeds of the pine trees, and get them to describe to you, and get them to the best of the seeds, and get them a few drops of oil of turpentine.

PEAS AND BEANS. *See Douglass's "List of Seeds," p. 14, The Gleaner.*—Get them out with a little water, two or three days, and get them out of the water, and get them to the best of the seeds.

LETTUCE. *See Douglass's "List of Seeds," p. 14, The Gleaner.*—Get them out with a moderate amount of water, and get them to the best of the seeds, and get them a rather long, and get them to the best of the seeds, and get them to the best of the seeds.

raised in the centre of the pot. For the 10-in. pots use 12-inch ones, and for the 9-inch pots employ those 11 inches in diameter, or pots 2 inches larger than those in which the plants are at present.

HYACINTHS AND TULIPS IN HEAVY SOIL (*Beck*).—Could you not lighten the soil by well mixing ashes with it, or old mortar rubbish and sharp sand? This would alter the soil, and you might safely plant in November. It will not answer to keep them out of the ground until spring. If you cannot plant, owing to the wet state of the ground in winter, we fear the plants would not succeed even in spring, otherwise you might pot the bulbs now, and plunge in ashes out-doors in an open yet sheltered position. Let the ashes come abt 2 inches above the rims of the pots, and in spring turn the plants into the beds; or you might plunge the pots in the latter.

COMPOST FOR ADAMANTUM FALCIFORMIS (*Trunkist*).—Three parts sandy fibrous brown peat, and one part sandy very fibrous loam, and a fifth of silver sand; the peat and loam broken up rather small, but not sifted, and in potting just cover the creeping stems. Avoid good drainage.

DA TULYS GLOMERATA FALCIFORMIS (*Idem*).—It is quite hardy, and will live out of doors with you if the soil is not very wet and heavy.

PETERIS FROMIS CRISTATA (*R. P. Beck*).—The front you sent us is very beautiful, and appears to be a finely crista-form of *Pteris mibrosa*. The plant must be very graceful as a specimen.

VARIETIES (Flora).—*Camellia africana* flowers in spring, and requires a light well-drained soil, loam with a third part of peat. It should be grown in a cool greenhouse, or in a south wall with protection during severe weather in winter and spring. The flowers are pale yellow, and very fine. You are quite right in your "fancy" that *Viole cornuta* planted in a bed of Hyacinth keeps the latter from blooming properly. The Viberts fruitful up to this year will probably produce well another season. We should not prune them, as they have not hitherto been pruned, and they would therefore go all to wood. The most we should do would be to thin the branches out where too close together, but not to any great extent. The Apricot from a stone, nearly four years old, will probably require as long again to fruit, unless you load it on the Plum stock. Thomas Methven Rose is a free grower, in colour a brilliant carmine, a Hybrid Perpetual, but it has not the pendant habit of *Gloire de Dijon*. *Gloire de Boucaux*, bright rose, Tea-scented, is a more fitting companion.

SOIL FOR ROSES (*H. J.*).—The soil sent will do without manuring before planting. Mutch the surface in the spring and summer, and keep the soil moist by watering during dry weather.

STRAWBERRIES REPLANTING (*R. E. M. P.*).—Take them and replant at once. Virgin cork will do for out-door reeology, but is not so durable as rough stones. You may fit your Broccoli to promote heating.

MANURING HARDY PLANT BORDER (*R. J.*).—We should next month dress the border with the manure which you say is too rough to dig-in now, let it lie over the winter, and point it over in spring. In planting hardy plants now, by all means place a few handfuls of leaf sod around each plant, mixing it, however, a little with the soil.

GATHERING LATE PEARS (*Idem*).—None of the late Pears should be removed from the trees when great force is required to separate them from the stalks. If the branch be reversed, or the fruit's position be reversed, and it do not part, the fruit is not fit to gather. They ought to be left on until they part readily.

IRON STOVE CLEANING (*H. A. L.*).—Not wishing to put on anything that will give off fumes, we should have the stove black-leaded.

MARSHAL NIEL ROSE PRUNING (*Idem*).—We should not cut-back the shoots until spring, and only then remove any parts that may not break freely, or the unripe points of the shoots, bending the shoots down so as to induce the breaking of the eyes from the base upwards. Probably you will have a fine bloom next season. After the shoots have broken, secure them to the wall.

MELONS SUDDENLY FALLING (*R. H.*).—The leaf sent shows that the plants died from the disease, for which there is no remedy known. It is very similar to that attacking the Potato, and equally distressing. We think it arises from the plants becoming over-ripened owing to being grown in a most rich soil, and hence full of sap, which is not elaborated in our dull autumns, and consequently decomposes in the tissues, and generates or ulceration causes. The best means of prevention are a change of soil and seed, and keeping as dry both at the root, and the top as the state of the plant will allow.

HEATING A PIT IN A STOVE (*R. T. Dublin*).—A 4-inch flow-and-return pipe will give sufficient bottom heat for a pit 3 feet wide, and the same in depth. The pipes should be 18 inches from the top of the pit, and the pit should be filled up to their level with rough rubble, and over this 6 inches of finer, and some fine at top, and this will leave you a foot space for plunging. We should have prepared to have had the pipes in a chamber covered with slats or flags, the joints open, and about a foot from the top. This would give you a more uniform temperature for plunging in, the space over the flags forming the chamber for the pipes beneath, being filled with coarset refuse, which answers as a plunging material.

WINTERING GERANIUMS IN A BOX (*H. C. BA.*).—There is no reason why you should not succeed in wintering them in a room from which frost is excluded. You cannot give them too much air when the temperature is above 50, yet take care to avoid draughts. Give no more water than sufficient to keep the shoots from shrivelling, and remove the leaves as they turn yellow. It is well to err on the side of too little rather than too heavy waterings. Keep the plants as near the light as possible, especially after they commence growing in spring, and water more liberally as growth progresses.

STEAM PIPE FOR GAS BOLLER (*R. H. J.*).—If it is a hot-water boiler it will not need any steam pipe, a 1/2-inch iron will be good, and if the boiler and pipes be duly supplied with water. If they require no supply of steam we are at a loss to know how the boiler is fed. Surely there are means of supplying the boiler with water? It must have such means, which will all of us serve for an air pipe, and for the expansion of the water when heated. We have no experience of the boiler you mention. The manufacturer would apply the information you need.

PLANTING A VASE WITH TULIPS (*H. H.*).—We do not know how to plant a vase with Hyacinths, from our own experience, to have them in flower at the same time with a certainty. You must make sure that the vase is drained, or has a hole in the bottom all at the same time, and use three parts, and a fourth part of charcoal in place of the peat, and then put in the Hyacinths in the centre, the tops of the dwarf early kinds all round, and the Queen of spurs just within the circle, planting them so that they shall be about three-quarters of a

inch deep, raising the compost well in the centre and making firm. Plunge the vase in water, stand on a sink to drain, place in a dark closet for a month, and afterwards in a window, turning the vase daily. The plants should have water as required. The blooming may not be simultaneous, but it will not be very far from being so unless you use late kinds of Tulips and Hyacinths.

GRAPES SPOTTED (*H. Crails*).—The root-action of the Vines, the Grapes of which are so affected, is deficient. If planted within the house let them be well watered, and occasionally with weak tepid liquid manure. If the roots are outside the house, let them be well mulched through the spring and summer. We speak of future treatment, for nothing can be done now, as the mischief is completed.

VINES UNDER THICK FLUTED GLASS (*C. B.*).—We have seen Vines grown under such glass in Scotland, but they were not satisfactory. In the south of England they might have done better. Black Hamburgh would be the best sort to grow. Probably, as you suggest, Lady Downe's would succeed, and the berries would not be liable to become scalded; but this can always be prevented by giving plenty of air at the time of colouring. White Grapes would not do well. It would be useless to plant such a variety as Luckland Sweetwater or the Muscats.

LADY DOWNE'S GRAPE IN COOL VINERY (*A. B. C.*).—If you can give a little heat when the berries are setting—from 65° to 70° at night—this Grape will do without artificial heat at any other time, and will colour and ripen well.

SYRINGING FRUIT TREES (*C. S.*).—It is very beneficial to thoroughly wash trees with the garden engine after the fruit is gathered.

PLANTING STRAWBERRY BEDS (*Idem*).—The end of July or beginning of August is the best time to plant. It is not too late now; do it at once. We do not know Prizetaker.

GRAPES FOR GROUND VINERY (*F. J.*).—As you are desirous of obtaining a few bunches next year, it is the best time to plant now. There is none so good as Black Hamburgh. Place some rotted manure over the roots after they are planted; no other protection will be required, except to throw a mat over them should severe frost set in before the lights are ready.

FRUIT TREE DIARY (*T. C.*).—No such publication exists. A small ledger index ready lettered can be had of any stationer, and the names of the trees entered in it alphabetically.

VARIEGATED LAUREL (*Chester*).—We presume you mean the *Aucuba japonica*, sometimes called "the Variegated Laurel." You can obtain it of any nurseryman for a few pence.

NAMES OF FRUITS (*M. Saintfield*).—Your noble Apple is the *Gloria Mundi*. (*G. H. R.*)—The Apple is Winter Hawthorned, and the Grape Royal Muscadine. (*Janius*).—Golden Requette. (*S.*)—No. 1 is not Coppauhorpe Crab, and we do not recognise it; 2, Unknown; 3, Pennington's Seedling; 4, Deceased; 5, Swan's Egg. (*R. W.*)—Stamford Pippin. (*Mrs. Henderson*).—Hampden's Berranot. (*L.*)—Hall Door. (*H. H. H.*, *Coventry*).—1, Yellow Bellefleur; 2, Golden Streak. (*L. L. McCulmont*).—1, Ravelston Pippin; 2, Hampshire Yellow. (*Rus*).—Pears—1, Williams's Bon Chrétien; 2, Brown Beurre; 3, Thompson's Apples—1, Cellini; 2, Ord's; 3, Scarlet Nonpareil. (*R. L. E.*)—The three Pears are entirely rotten. Apples—5, Baxter's Pearmain; 6, Beauty of Kent; 7, Duncow's Seedling. (*Q.*)—Beurre d'Orléans. (*H. Harris*).—1, Pearson's Plate; 12, Comte de Lamy; 10, Golden Knap; 23, Susette de Bayay; 37, Autumn Colmar; 43, Josephine de Malines. (*Dr. Jones*).—1, Durandean; 2, Beurre Giffard; 3, Brown Beurre. The Apple is Warner's King. (*T. Paton*).—Apples—1, Golden Requette; 2, Wormsley Pippin. Pears—1, Duchesse d'Orléans; 2, Vicar of Winkfield. (*E. S. H.*)—4, Noneseuch; 12, King of the Pippins; 17, Requette du Canada; 19, Comt. of Wick; 20, Golden Noble; 24, Adams' Pearmain. The Pear was rotten. (*L. J. B.*)—7, Wormsley Pippin; 8, Selwood's Requette; 9, Lamb Abbey Pearmain; 11, Emperor Alexander; 12, London Pippin. (*G. Ditch*).—1, Beauty of Kent; 2, Braddick's Nonpareil; 3, Dutch Mignonne; 4, Northern Greening. (*Centurion*).—12, Wyken Pippin; 9, Gravenstein; 11, Ribston Pippin; 8, Cockle Pippin. Pears—1, Rotten; 2, Jersey Gratioli; 3, Gansel's Bergamot; 4, Marie Louise; 5, Bergamotte Cadette; 6, Van Mons Leon le Clerc. (*C. T. Wilson*). 1, Urbaniste; 2, Old Colmar; 3, Chamontel; 4, Beurre Sterckmans. (*H. K.*, *Shadwell*).—1, Winter Quoining; 2, Carlisle Codlin; 3, Norfolk Colmar; 5, Lord Duncan; 6, Golden Pippin.

NAMES OF PLANTS (*J. R., Hartlebury*).—We cannot name any plants unless their flowers are sent. Florists' varieties we cannot attempt to name under any circumstances, and your Begonias are all such varieties. (*Jurcault*).—The Guernsey Moor-plant is *Lyrola media*, or Intermediate Winter Green. The "Hortus Britannicus" includes all plants known in Britain, not merely the native plants.

POULTRY, BEE, AND PIGEON CHRONICLE.

PUBLISHING JUDGES' NAMES. &c.

TAKING all circumstances into consideration, it is both difficult and doubtful to secure a judge long before the time of competition; consequently, if a change were unavoidable, endless disputes would evidently be the result, if not cases for litigation. Societies are generally formed, with the view of improving the various breeds, by enthusiastic fanciers, who, at a considerable expenditure to themselves both of time and money, give their brother fanciers an opportunity of showing their stock, and, as an extra incitement, offer premiums to be competed for in an honourable way. Notwithstanding, it is a merry meeting and unbegrudged expense on their side; therefore, all who take advantage of these opportunities without the trouble and expense, should not be so ready dictating what ought to be done to secure exhibitors a better chance of gain. There is no writer on poultry subjects more in favour with the fancy than Mr. Wright, and I doubt not he would lend his able support to establish the only system that would cure every disease attendant hitherto on poultry shows, and thereafter purge from our periodical competitions the very objectionable and systematic practice of making them a source for mercantile speculation, and

this can only be done by establishing a uniform standard, as urged by "SPECTATOR." Until this be done, and judges appointed who thoroughly understand their duty, we shall never be in want of grievances, hitherto too frequently justly complained of by honest competitors. Judges should be well paid, and it may now be worth the attention of a number of gentlemen to devote enough time to study the various properties of each breed, to enable them to judge correctly according to the standard laid down by a ruling committee, and when by them considered proficient they could obtain a diploma, entitling each to a fee—say £5, with expenses, for officiating at any competition. Such shows as could not afford that should not be considered of much importance, and we would not so frequently hear of advertisers taking several hundred prizes in the course of a season; no doubt true, but which, having been obtained at petty local shows, are of no great account. Under such a proposed system it would be sufficient for a society to advertise that their show would be judged by one qualified by the committee regulating the standard properties.

Having been connected with competitions as secretary for many years, I candidly state the difficulty the committee have always had in obtaining first-class judges, and frequently after the judges had been fixed we received apologies, and were left in an awkward position up to the last hour.

I think, upon very little reflection, great danger and many difficulties would arise to the standing of a society were they tied down to name judges beforehand, as I fancy exhibitors would be entitled to have their entry money returned if the particular judge named did not officiate—nay, would they not be entitled with some degree of justice to compensation to cover the expense in forwarding their birds under a false notice? A standard judge would prevent this, and give satisfaction to all. In reference to professional dealers exhibiting, many object from the same mercenary motives, but under the present rules we must be content to see the best birds win without partaking of the gain. The only professional dealers of any note we observe carry off so many prizes are Mr. Falton and Mr. Yardley. No one who knows these gentlemen personally can say aught else than that they are honourable in all their dealings, and have done a great deal to stimulate the fancy; at the same time I must admit it is very sickening to all beginners who join in a competition, their chance of a prize being so very small when these great exhibitors are known to have birds in every class. It stimulates all young fanciers to get a prize now and then, as from all we know a twenty-shilling prize obtained by a young enthusiast is almost certain to be followed by a ten-pound expenditure in extra stock.

I will suggest a remedy without laying any restrictions on our respected dealers; it is simply that all birds entered for competition should have the breeder's name attached when known, and when not, say "Breeder unknown." This would prevent not only false fame, but would be a sufficient reward to a successful breeder if not the exhibitor, besides being an assistance to trace the pedigree of certain birds, thereby securing in a great measure proper crosses when required.—DEEDS SHOW.

STANDARD CHARACTERISTICS.

I AFFIRM again, "judging at poultry shows will never give anything like general satisfaction until there be a recognised standard of excellence," because at present scarcely one in a hundred exhibitors knows exactly what are the requisite points, and I regret to say that one does his best, or rather his worst, to keep the ninety and nine in the dark or to mislead them. That is my experience and observation.

I quite agree with Mr. Wright when he says that there would be less dissatisfaction "if the grounds of judgment were fully understood." That is exactly it—the general dissatisfaction has its origin in the general ignorance of amateurs, but for whom poultry shows would cease to exist. Is it not worth while to instruct them?

Thanks to Mr. Wright for all he has done towards perfecting the standard, but I think he might have done more by making more points where possible, and not balking "head and comb," "tail and its carriage," "colour and marking," &c.; for if ten points are better than five, twenty ought to be better than ten.

As to the judges, I believe they are thoroughly conscientious and capable, but why should they, any more than breeders and exhibitors, have crotchets, and "force others to agree" with them? and above all, why should they differ from each other?

It appears to me to be of small consequence whether a Brahma should be vulture-hooked or not, but it is of much importance to a breeder to know which it should be, and therefore I say the point should be fixed, and similarly with every other point. Let there be no question about the point, nor about its relative value; fix everything that can be fixed; and still there are some points which, as they cannot be accurately defined, must be left to the taste and discernment of the judges. A "fixed" standard may assume "finality," but for how many generations of men will there be bred before the fixity of the standard

will be a bar to improvement? and in what year of grace may we expect to have any strain of any variety of fowl bred to such perfection, that all their produce will be so entirely perfect, and so exactly alike, that it will not require the most watchful care to keep it from degenerating? Mr. Wright's last paragraph touches the point which must be left to the judges—viz., "ideal beauty." This is the undefinable point, which may be felt but cannot be described, and is truly "the deepest and most mysterious charm;" but surely we may strive after perfection, although we cannot attain it.

Mr. Wright has taken much trouble to make a standard, so that it is reasonable to assume that he approves of one, provided it is not "fixed;" but beyond giving a general idea, of what use is a standard if not fixed and recognised by the judges?

It is just possible that the art of man might attain nearly to a "fixed" standard, but the art of man will never attain to such a Protean one as Mr. Wright advocates; and as to any breed of fancy fowl ever attaining to such a "dead uniformity" that it will be as "simply intolerable" as, let me say, Guinea-fowl, I, at least, do not expect to live to see it, and so such a contingency does not disturb my rest.

With reference to "T. W. D.'s" suggestion I, too, am ready to contribute towards defraying the expenses.—O. P. H. Z.

Is common, I doubt not, with many more, I read Mr. Wright's remarks with pleasure in your number of October 9th. I fully admit their truth, but there is one point bearing on the question of judging which should be noticed. If the standards be unknown, and the awards so various and inexplicable, how is it that at every show certain names are always noticed at or near the head of the classes in which they exhibit? In many instances it has been so for years, and remains so, notwithstanding the changes of judges.

There will always be difficulties in fixing a standard. It would be necessary not only to add the points awarded for merit, but also to deduct for faults. From the moment the points are published and their value settled there is nothing to hinder a bird with some glaring fault from taking a first prize. All discretionary power will be taken from the judges, and the owner of a Spanish cock with drooping comb, or Dorking with faulty toe, may, if other points be perfect, become the distinguished of a class by virtue of the numbers represented by them. Under the present system shows have increased and birds have improved. Spite of all that is said and written, exhibitors know perfectly well what to show and how to show it. As a body, the judges have done their duty well. That they have done so may be attributed to the liberty and independence they have enjoyed in the execution of their office; but it seems to me that their occupation is gone if awards are to be made by calculation. Exhibitors may then enter birds, and declare on the entry paper they send pen No. —, counting so many points. In the matter of judges, let well alone.—X. Y. Z.

We agree with our correspondent, for there is one consideration which outweighs other merits—high condition. This must be left to the judge's decision.—Eus.]

A VARIED DIET FOR FOWLS.

THERE are no animals more omnivorous than fowls; fish, flesh herbs, and grain being devoured by them with equal relish. We say equal, for though they commonly pounce upon meat with greater avidity than upon grain, this is generally because it affords a rarity, and a flock kept for awhile almost entirely on animal food will show the same greed for a few handfuls of corn.

Now, those animals accustomed to use a varied diet should not be confined to an unvarying one. There are, indeed, some species which are naturally limited to one or a few kinds of food. Thus, cattle do well enough although kept month after month on grass alone, and a tiger will thrive with nothing but lean meat upon his bill of fare. But with other animals, as with the human race, for instance, the case is different, for no person can maintain the highest efficiency when confined to one article of food. No matter how fond we may be of a particular dish, we loose relish for it when allowed nothing else for a number of consecutive meals, and the intense craving for variety indicates as its source something more than mere appetite. It gives evidence of real necessities of the system which are constantly varying with the changing circumstances of weather, employment, and other conditions.

The fondness for variety shown by fowls is as significant of real needs as we have found it to be in ourselves. In purveying for them, a judicious variety selected from the three general divisions—fresh vegetables, grain, and animal food—is at all seasons absolutely necessary for young and old, in order to make them perfectly thrifty. True, they will not starve on hard corn and water, neither will they pay a profit so kept.—*The Poultry World.*

THE MIDDLESEX SHOW of poultry, held at Palace, N. H. held at Middlesex on the 27th of November. The schedule

of prizes offered (though the amounts are not large), are sufficiently numerous to deserve attention. In each class three prizes are offered, the classes for poultry being eighteen, and those for Pigeons thirty-one. We hope the young and spirited Committee will receive such encouragement in entries as will ensure the permanency of the Association.

BUCKWHEAT FOR FOWLS.

I QUITE concur with Mr. Wright in his remarks upon this article of food for fowls, and believe his observations do not arise from any vague theory, but are founded upon and reduced to a familiar practical application. Among the French authors are Baron Peers, Espanet, and Mariot Didioux, who write much in its favour, and it cannot be denied but that they are (in their own sorts) well advanced in fowl-culture. My own experience in using it satisfies me that it is very nutritious, constituting a necessary part of a good dietary. I have it ground in proportion—one part buckwheat, three of other grain.—SARRASIN.

IPSWICH AND SUFFOLK POULTRY SHOW.

THIS was held on the 14th and 15th inst. in the Provision Market. There were upwards of four hundred entries of poultry, Pigeons, Rabbits, and Cats. Subjoined is the prize list:—

- COCHIN-CHINA.—Cinnamon or Buff.—Cockerel.—1 and Cup, Lady Gwydyr, Ipswich. 2, Mrs. A. Tindal, Aylesbury. *hc*, Capt. F. G. Coleridge.
- COCHIN-CHINA.—Any other colour.—Cockerel.—1, R. S. S. Woodgate, Pembury, Tonbridge Wells. 2, Rev. R. L. Story, Lockington, Derby. *c*, Capt. F. G. Coleridge; J. K. Fowler, Aylesbury. *Pullet*—1 and 2, Mrs. A. Tindal, E. Lady Gwydyr; Rev. C. H. Croose. *hc*, Capt. F. G. Coleridge; J. K. Fowler.
- BRAMA POOTRA.—Dark.—Cockerel.—1, Horace Lingwood, Cressing. 2, O. E. Cresswell, Bagshot. *Pullet*—1, Horace Lingwood. 2, H. Mariott, Skirbeck, Boston. *hc*, Rev. J. G. B. Knight; J. Hill. *c*, Col. Cockburn.
- BRAMA POOTRA.—Light.—Cockerel.—1 and Cup, Horace Lingwood. 2, H. Chynder, jun., Uttoxeter. *Pullet*—1, Horace Lingwood. 2, H. M. Mynard, Ryde, Isle of Wight. *hc*, Lady Gwydyr. *c*, Mrs. T. Turner; Mrs. F. Cheshire, Acton; Mrs. A. W. Bachan; Lady Gwydyr.
- DORKING.—Cockerel.—1, T. C. Burnell, Micheldever. 2, F. Parlett, Chelmsford. *Pullet*—1 and Medal, F. Parlett. 2, T. C. Burnell. *c*, T. C. Burnell; Viscount Turnour.
- GAME.—Black or Brown Red.—Cockerel.—1, H. E. Martin, Sculthorpe, Fakenham. 2, E. Bell, Burton-on-Trent.
- GAME.—Any other colour.—Cockerel.—1, E. Bell. 2, W. H. L. Clare, Twycross, Atherstone. *c*, Mrs. A. Tindal. *Pullet*—1 and Cup, *c*, W. Laxton, Nantwich. 2, T. J. Goddard, Ipswich. *hc*, G. C. Barnett; E. Bell. *c*, Mrs. A. Tindal; J. W. Fitch, W. Adams.
- CREVE-COEUR.—1 and Extra, J. J. Malten, Biggleswade.
- HOUDAN, OR LA FLECHE.—Cockerel.—1, J. K. Fowler. 2, W. Cutlack, jun., Littleport. *hc*, W. Ding.
- CREVE-COEUR, HOUDAN, OR LA FLECHE.—*Pullet*—1, J. J. Malten. 2 and *hic*, Mrs. A. Tindal. *c*, A. Pizer, jun.; W. Cutlack, jun.; J. K. Fowler.
- HAMBURGH.—Gold or Silver-pencilled.—Cockerel.—1, A. Silver, Melford. 2, M. M. Cashmore, Sharneshed, Loughborough. *c*, W. K. Tickner.
- HAMBURGH.—Gold or Silver-spangled.—Cockerel.—1, T. F. Jones, Wolverhampton. 2, W. K. Tickner.
- HAMBURGH.—Any colour.—*Pullet*—1 and Extra, W. Speakman, Nantwich. 2, M. M. Cashmore. *hc*, A. F. Faulkner. *c*, J. P. Case.
- ANY OTHER VARIETY.—1, M. M. Cashmore. 2, R. S. S. Woodgate (Black Hamburgs) *hc*, T. L. Nash (Silkies); Capt. F. G. Coleridge (Golden Polands); G. W. Boothby (Golden Polands); J. P. Case (Black Hamburgs); J. K. Fowler. *c*, W. Cutlack, jun. (Black Hamburgs); Rev. J. G. B. Knight (Black Hamburgs).
- SELLING CLASS.—Hen, *Pullet*, or Duck.—1 and 2, Lady Gwydyr. *hc*, T. C. Burnell; T. L. Nash (Buff Cochins); Rev. J. G. B. Knight (Dark Brahma); Rev. F. Tearle (Silver-spangled Hamburgs). *Cock*, *Cockerel*, or *Drake*.—1 and Extra, Lady Gwydyr. 2, W. H. L. Clare (Game). *hc*, J. A. Mudd (Bouen Drake); Rev. F. Tearle (White Dorking); Lady Gwydyr; W. F. Dixon. *c*, E. Smith (Dark Brahma).
- BANTAMS.—*Game*.—1 and Cup, W. J. Jeffries, Ipswich. 2, W. Rayner, Ipswich. *hc*, W. J. Jeffries; W. Rayner; W. Adams; Capt. T. Wetherall. *Black or White*.—1, J. S. Pearson. 2, R. H. Ashton, Mottam, Manchester. *hc*, Mrs. Taylor; R. H. Ashton; W. Adams.
- BANTAMS.—*Selling Class*—1 and 2, W. J. Jeffries (Black Red). *hc*, Capt. T. Wetherall (Black Red); A. Ashley (Game). *c*, S. N. Brewster (Duckwing).
- DUCKS.—1 and 2, J. K. Fowler. *hc*, F. Parlett; Mrs. A. Tindal.

PIGEONS.

- CARRIER.—*Young*.—1, A. W. Alexander. 2, H. M. Mynard. *c*, W. Bulmer; C. Norman.
- POUCET.—*Young*.—1, C. Bevan, Ipswich. 2, H. Yardley, Birmingham.
- BARB.—*Young*.—1, H. M. Mynard. 2, P. H. Jones. *hc*, H. Yardley; P. H. Jones.
- WINTERB.—1 and 2, C. F. Copeman, Birmingham. *hc*, H. Yardley; A. R. Burthol, *c*, C. T. Townsend.
- FANFAH.—1, H. M. Mynard. 2, Miss E. A. Edles, Southwold. *hc*, J. F. Loverside; J. Walker. *c*, J. Walker; E. Titchmarsh.
- ANY OTHER VARIETY.—1, Medal, and 2, P. H. Jones (Trumpeter and Almond Tumbler). *hc*, S. D. Badley; F. Harwood, jun. (Dragon); Miss E. A. Edles (Penny Pottery); P. H. Jones (African Owl); F. W. Webb (English Owl). *c*, J. Dutton (Trumpeter); Col. Cockburn (Trumpeter).
- SELLING CLASS.—1, C. Norman, Westerfield, Ipswich. 2, P. H. Jones (English Owl). *hc*, J. Hutton (Trumpeter); A. W. Wren (Dragon); P. H. Jones (Yellow Dragons and Barb); C. Norman; Mrs. Green (Ice and Peas); R. Elliott (Trumpeters). *c*, E. Lee (Dragon); W. V. Louze.

RABBITS.

- LOU-REB.—1 and 2, F. Banks, London. *hc*, F. J. Smith. *c*, F. J. Smith; N. W. Kirby.
- ANGORA.—1 and 2, F. J. Smith.
- HIMALAYAN.—1 and 2, C. King, Long. *hc*, E. S. Smith.
- ANY OTHER VARIETY.—1, G. P. R. Hackett (Belgian Hare); 2, F. J. Smith (Silver-Grey). *hc*, Mrs. A. Tindal (Belgian Hare); E. S. Smith (Silver-Grey). *c*, F. W. Webb (Silver-Grey).
- SELLING CLASS.—1, C. King. 2, F. J. Smith (Lop). *hc*, J. Parker (Lop); T. W. Anns (Silver-Grey). *c*, F. Banks (Lop). *c*, S. W. Kerry (Lop).

CATS.

- TABBY OR CAPTIVE.—1, G. W. Bales, Ipswich. 2, E. Baxter. *hc*, W. Leather. *c*, W. Chalk, jun.
- PERSIAN, ANGORA, OR ANY OTHER LONG-HAIRED.—1, Hon. Mrs. Paget, Seale

2. Miss Thompson, Woodville, Gravesend. *hc*, Miss Hales, Canterbury (2); Miss S. A. Pocock, Great Brkhamstead.
BLACK, WHITE, OR BLACK-AND-WHITE.—1, J. Jackson (White).
TORTOISESHELL, TORTOISESHELL-AND-WHITE, OR OTHER VARIETY NOT CLASSED.—1, J. Hairy; 2, F. Goldsmith.
KITTENS.—1, Miss S. A. Pocock (Aigfona), 2, T. J. Coddbrook.
JUDGES.—*Poultry* (except Bantams): Mr. P. H. Jones. *Bantams, Pigeons, and Rabbits*: Mr. J. Martin. *Cats*: Mr. P. H. Jones and Mr. J. Martin.

ROSS POULTRY SHOW.

This was held on the 21st inst. The following is the list of awards:—

BRAHMAS.—*Dark*.—1, H. B. Motpoll; 2, W. Birch. *hc*, H. Feast. *Light*.—1, T. A. Dean; 2, J. Bloodworth. *hc*, Rev. N. J. Bidley.
COCHINS.—*Cinnamon or Buff*.—1, R. J. Martin; 2, H. Yardley. *hc*, H. Feast. *Any other variety*.—1, J. Bloodworth; 2, Capt. Coleridge. *hc*, Rev. R. W. Everett.
DORKINGS.—1, E. Hooper; 2, J. Martin. *hc*, H. Feast.
GAME.—1, H. Feast.
HAMBURGS.—*Gold or Silver-spangled*.—1, Mrs. G. M. Rolis; 2, J. McConnell. *Gold or Silver pencilled*.—1, Mrs. G. M. Rolis; 2, H. Feast.
SPANISH.—1, J. Martin; 2, Mrs. Tonkin.
BANTAMS.—1, R. F. Burdett; 2, H. Martin. *hc*, J. Mayo; H. Feast.
ANY OTHER VARIETY, INCLUDING CROSSBREDS.—1, J. Hinton (Silver Poland); 2, Capt. E. G. Coleridge (Golden Poland). *hc*, Mrs. R. J. Ealey (Civet-Cour). *c*, J. McConnell (Silver Polish).
ANY VARIETY.—Chickens.—1, J. Martin (Dorkings); 2, J. Bloodworth (White Cochins); 3, J. H. Pickles (Dark Brahma); 4, T. A. Dean (Brahma) *hc*, Mrs. E. Ailsop (Buff Cochins); 5, Capt. F. G. Coleridge (Buff Cochins). *hc*, Mrs. Sophie (Brahma and Hondans); J. Watts (Light Brahma); D. Lane (Buff Cochins); C. Bloodworth (Buff and White Cochins); W. Birch (White Cochins); Mrs. H. J. Bayley (Silver-Grey Dorkings); T. A. Dean (Hamburgs); E. Leake (Black Hamburgs); J. Thistle (Pile Game).
DUCKS.—*Any variety*.—1, Mrs. H. J. Bayley; 2, W. Stevens. *hc*, Mrs. G. M. Rolis; J. Loveridge; E. Penting; W. Stevens.
GEESE.—1 and 2, Mrs. H. J. Bayley. *hc*, Mrs. Stock; Mrs. G. M. Rolis.
TURKEYS.—1, A. Armitage; 2, Mrs. Rolis.
SELLING CLASS.—Cock or Cockerel.—1, E. Shaw. *hc*, Rev. R. W. Everett. *Hens or Pullets*.—1, Miss Mortimer. *hc*, T. F. Phelps; J. McConnell; *c*, C. Bloodworth.
DRAKE AND DUCK.—Any breed.—*Hens*.—1, J. Loveridge.
LOCAL CLASSES.—*Brahmas, Cochins, or Dorkings.*—*Chickens*.—1, 4, and *hc*, W. Morris; 2, Rev. R. W. Everett; 3, W. Treasure. *Any other variety.—Chickens*.—1, 2, 3, and 4, Miss Mortimer. *hc*, Mrs. Baker.

PIGEONS.

ANTWERPS.—1 and 2, J. Gardner. *hc*, A. Marston; S. D. Baddeley.
BARES.—1, H. Yardley; 2, W. P. J. Jones. *hc*, H. Yardley.
CARRIERS.—1, S. D. Baddeley; 2, P. R. Spencer.
PASTALS.—1, P. R. Spencer; 2, J. P. Lovells.
JACOBS.—1, H. Yardley; 2, J. Gardner. *hc*, H. Yardley.
PUTTERS.—1, P. R. Spencer; 2, H. Yardley. *hc*, H. Yardley; F. Wilton.
DRAGONS.—1, H. Yardley; 2, W. Lane. *hc*, J. Gardner; H. Yardley.
TRUMPETS.—1, S. D. Baddeley; 2, J. Gardner. *hc*, J. Currie; H. Yardley.
ANY OTHER VARIETY.—1 and 2, H. Yardley. *hc*, J. Gardner; Miss R. Carnac; T. F. Phelps; J. P. Mills; C. J. Hitchcock; T. F. Phelps. *c*, F. Wilton.
SPECIAL SELLING CLASS.—1, H. Yardley; 2, T. F. Phelps. *hc*, P. R. Spencer.
LOCAL CLASSES.—*Antwerps, Carriers, or Dragons.—Young*.—1 and 2, W. Morris; 3, T. F. Phelps. *Any other variety.—Young*.—1, T. F. Phelps; 2 and 3, T. Barnett.

Judge.—Mr. E. Iward Hewitt, Sparkbrook, Birmingham.

TONBRIDGE WELLS POULTRY SHOW.

This Show was held in a spacious marquee, and was certainly one of the best meetings this Society has ever enjoyed.

*Spanish, Dorkings, and Brahm*s all showed-up well in quality and quantity; *Hamburgs* made an immense class, so did the *Bantams*; in the latter class *White-booted* stood first. This was a great achievement for this breed, with Bantams of all other kinds in the field. *White Cochins* and *Buff* were well represented and good, but the *Ducks* of all kinds made the best classes. *Large Selling classes* and *Pigeons* wound up the whole. Mr. M. Hedley was the Judge. Below is the prize list.

SPANISH.—1, E. W. Stratford; 2, Major Ewen. *hc*, J. Francis.
DORKINGS.—1 and 2, T. Coke Burnell; 3, Lady A. Nevill. *hc*, E. W. Stratford; A. Arnold; C. N. Edgill.
BRAHMS.—*Dark*.—1, Rev. J. G. B. Knight; 2, W. Jacob. *hc*, E. W. Stratford; J. Long. *Light*.—1, Miss Hales; 2, J. Long. *hc*, M. Leno; E. Hayward; *c*, Capt. Sanster.
HAMBURGS.—*Any variety*.—1 and 2, R. S. S. Woodgate (Black) Extra, E. J. Lenny. *hc*, C. F. Lancaster Lucas; E. T. Foakes; *c*, J. Ware.
GAME.—1 and 2, G. H. Fitz Herbert. *hc* and *c*, A. Warde.
FRENCH.—1, J. J. Milder; 2, W. Dring. *hc*, E. W. Stratford; F. Lake; Major Ewen. *c*, F. Lake; Miss A. Sharp.
COCHINS.—Buff or Cinnamon.—1, Capt. Coleidge; 2, E. J. Lenny; *c*, C. Beard. *Any other variety*.—1 and 2, R. S. S. Woodgate (White). *hc*, C. E. Leno; Rev. A. W. Warde.
BANTAMS.—1, R. S. S. Woodgate (Booted); 2, W. S. Marsh. Extra, M. Leno. *hc*, Mrs. Taylor; J. Ware; Roberts & Radford (2); G. Woodman; *c*, J. and S. Lannack; A. Pott.
SELLING CLASS.—Cock.—1, R. S. S. Woodgate (Cochins). 2, E. W. Stratford. *hc*, E. J. Lenny; J. Francis; M. S. Martin; J. K. Lawther; R. S. S. Woodgate; M. S. Martin; *c*, R. S. S. Woodgate. *Pen Hens*.—1, H. Stead; 2, R. S. S. Woodgate. Extra, W. Dring. *hc*, Rev. A. W. Warde; R. S. S. Woodgate; *c*, B. H. Pearson; R. S. S. Woodgate.
TELEKINS.—1 and 2, A. Warde. *hc*, L. Hath. *c*, Mrs. Brassy.
GEESE.—1, E. C. Lee; 2, H. White. *c*, Marchioness Camden.
DUCKS.—Aylesbury.—1, W. Jacob; 2, F. E. Arter. *hc*, N. Edgill; *c*, M. S. Martin. *Looney*.—1, C. Edgill; 2, M. S. Martin. *hc*, Mrs. J. D. Roberts; F. E. Arter. *Any other breed*.—1, R. S. S. Woodgate; 2, M. Leno. *hc*, R. S. S. Woodgate; E. Hayward.
PIGEONS.—Any breed.—1, H. Yardley; 2, G. Ware. Extra, T. J. Lenny. *hc*, S. Hogg; E. Durant; H. Stead; F. Eates; *c*, G. Hitchcock.

OXFORD POULTRY SHOW.—The entries having closed with a total number approaching 1,000, being an increase of more than five hundred on the first show, the Committee have decided to

give a cup specially for the young Carriers, and extra prizes to the amount of nearly £20 in the other classes of poultry and Pigeons.

NORWICH CANARY SHOW.

I THINK it must be some years since Norwich held an All-England Show, for I do not recollect having seen its name in the list of fixtures for the last eight or ten years at least. At first sight this would seem strange, for one would think that surely at Norwich, of all places in the country, a large annual gathering might be expected. But, as an old salt once remarked to me, with Jack-Bunsby-like perspicuity, one night when I was on our pier, looking for my boy's return from his first voyage, and asked him how he could account for the ship being so much overdue? "There's lots of things gans to mak' up all things." With that satisfactory explanation I had to be satisfied; and possibly a similar hypothesis may account for a city which counts its Canary-breeders by the thousand confining itself to breeding only, and not agitating itself with public exhibitions. Among the lots of things which go to make up all things, in this case, is the fact that the Canary-breeding community in Norwich is split up into several sections, each revolving round some centre, and holding little or no communication with the rest. A spirit of conservatism strongly flavoured with selfishness pervades the whole of these clubs; and fencing themselves round with stringent anti-free-trade rules, of the wisdom of which they may, perhaps, after all, be the best judges, they have allowed the spirit of emulation to develop itself into a party exclusiveness, which, in keeping the various clubs dis-severed, has prevented any one of them carrying out that which, standing alone, it was difficult to do, but which united they might easily have accomplished. And then, too, they have wanted a lunatic to take upon his shoulders the huge burden of secretaryship. When I was in Norwich last year I saw that the fever was in the veins of one man at least, and I was not surprised when, some months ago, Mr. Jacob Mackley told me that he, with a mere handful of working men, had determined to take upon themselves the responsibilities of an All-England Show upon an unusually large scale. One cannot but admire the patient self-denial of these men who for many, many weeks—a whole year I believe—met and contributed their mites till the whole of their shares in the undertaking were fully paid up, and they felt justified in committing themselves to the issue of their schedule, trusting to the chance of three consecutive fine days and a large influx of visitors, such as we see only in large towns on market days, to "bring them home," as their treasurer expressed it to me. This is what the Norwich "Alliance" Club, a club consisting entirely of men who earn their bread by the labour of their hands in one or other of the many industries of the city, did; and having done it, and done it nobly and well, let them have all the honour. Still, let me say to them, such a strain on their energies is almost too much; and let me suggest the desirability of their digesting some scheme which, while it would not interfere with the independent action of each of the many clubs, would admit of their uniting for the purpose of bringing to a successful issue each year a show worthy of the city.

Such was the Exhibition held in St. Andrew's Hall on Thursday, Friday, and Saturday last week. It was a sight such as the thousands who witnessed it will not soon forget.—W. A. BLAKSTON.

[We have not space this week for the whole of Mr. Blakston's report on this great Show, but will publish the remainder in our next issue. Our readers will be interested to know that the birds in the celebrated "Bemrose & Orme" collection of Canaries were tested by a public analyst and certified to be genuine. Mr. Blakston gives a graphic description of the scene.]

CANARIES.

NORWICH.—Clear Yellow—1 and 2, Bemrose & Orme, Derby; 3, Imhoff and Smith, Coventry. *hc*, G. & J. Mackley; T. Hutchin; Bemrose & Orme; E. Shaw; A. Palmer; R. Evans; B. Howell. *hc*, F. Wilis (2); R. Johnson; G. and J. Mackley (2). *c*, W. Sparks. *Clear Buff*.—1, 2, and 3, Bemrose & Orme; G. and J. Mackley (2); Imhoff & Smith (2). *hc*, F. Wilis (2).
NORWICH.—Evenly-marked Yellow.—1 and 2, Bemrose & Orme; 3, G. Wones, Norwich. *hc*, Bemrose & Orme; H. Green; A. Punn; Imhoff & Smith. *hc*, F. Alden. *c*, G. & J. Mackley (2). *Evenly-marked Buff*.—1, 2, and 3, Bemrose & Orme. *hc*, E. Shaw; J. Good; *hc*, G. Wones; R. Evans.
NORWICH.—Ticked and Unevenly-marked Yellow.—1, 2, and 3, Bemrose & Orme. *hc*, E. Shaw; Imhoff & Smith. *hc*, T. Hutchin; F. Alden. *c*, T. Hutchin; D. Arms. *Ticked and Unevenly-marked Buff*.—1, 2, and 3, Bemrose & Orme. *hc*, F. Wilis (2). *hc*, G. & J. Mackley; Imhoff & Smith; *c*, C. Coleman (2).
NORWICH.—Marked Crested Yellow.—1 and 3, Bemrose & Orme; 2, B. Broadwater, Trowse Newton, Norwich. *hc*, F. Wilis; G. & J. Mackley (3); G. Clipson; J. Betts. *c*, G. & J. Mackley. *Marked Crested Buff*.—1, F. Alden, Norwich; 2 and 3, J. Good; Leicester. *hc*, G. & J. Mackley (3); F. Alden, Norwich; W. Drake; J. Betts. *hc*, G. & J. Mackley; Bemrose & Orme; A. Bown. *c*, Bemrose & Orme; J. Taylor.
NORWICH.—Yellow with Clear Green or Dark Crest.—1 and 2, J. Mackley; 2, B. Broadwater, Norwich. *hc*, G. & J. Mackley; Bemrose & Orme; B. Broadwater, *c*, Mery & Warren. *Buff with Clear Green or Dark Crest*.—1, W. Sparkes, Cossey, Norwich; 2, G. Wones; 3, R. Brundell, Norwich. *hc* and *c*, G. & J. Mackley; 4, Bemrose & Orme; J. Good; A. Punn. *hc*, Bemrose & Orme; H. Ayres; W. Howell.
BELGIAN.—Clear and Ticked Yellow.—2 and 3, J. N. Harrison, Belver. *Clear and Ticked Buff*.—1 and 2, J. S. Harrison; 3, G. & J. Mackley. *hc*, R. Hayman, Lizard. *Gold-spangled*.—1, 2, Rev. V. Ward; 3, J. Hickton, Sutton-in-Ash.

field. *Scoops* spangled.—2, L. Belk, Dewsbury. 3, J. Hickton. *Gold or Silver* spangled with broken cap.—2 and 3, Rev. V. Ward.

YORKSHIRE.—*Clear Yellow*—1, J. Rowland, Marske-by-the-Sea. 2, W. Johnson, Northallerton. 3, H. Waring, Bradford. *Chc.* W. Hutton (2). *hc.* M. Holroyd; L. Belk (2); J. & F. Fawcett (2); G. J. Stevens; J. Whitaker; J. M. Cooper. *Clear Buff*—1, H. Waring. 2, J. & F. Fawcett, Baildon, Leeds. 3, L. Belk. *Chc.* J. Rowland; W. Johnson; J. & F. Fawcett. *hc.* A. Dent; J. L. Belk; J. Whitaker. *Variety of Yellow or Buff, irrespective of Colour*—1, J. Stevens, Middlesborough. 2, L. Tommiswood, North Acliam, Middlesborough. 3 and *hc.* J. Whitaker, Great Horton, Bradford. *Chc.* L. Belk; G. & J. Mackley.

CINNAMON.—*Yellow*—1 and 2, Bemrose & Orme. 3, Barwell & Son. *Chc.* J. Drake; Bemrose & Orme. *hc.* R. Poole (2). 4, W. Drake & J. Drake. *Buff*—1, 3, and *hc.* Bemrose & Orme. 2, Barwell & Son. 3, S. Walker (3).

CINNAMON.—*Variety of Yellow or Buff, irrespective of Colour*—1, Bemrose & Orme. 2 and 3, L. Belk. *Chc.* M. Holroyd. *hc.* Bemrose & Orme; G. & J. Mackley; J. N. Harrison.

CANARY.—*Any other variety*—1, 2, and *c.* G. & J. Mackley. 3, J. Eowland. *Chc.* M. Holroyd. *hc.* L. Belk.

SIX NORWICH CASARIES.—*Irrespective of Colour*—1, Bemrose & Orme. 2 and *hc.* G. & J. Mackley. 3, F. Willis. *Chc.* G. & J. Mackley; J. Yallop. *c.* R. Noller.

SIX LIZARDS.—*Irrespective of Colour*, *hc.* Rev. V. Ward.

SIX NORWICH CASARIES.—*For Members of the Bath House Club*—1, — Frost, 2, — Merry. 3 and *hc.* W. Hoy II. *Chc.* A. Palmer. *c.* W. Drake.

SIX NORWICH CASARIES.—*For Members of the Norwich Alliance*—1, J. Betts, 2, W. Everett, 3, G. Wones. *Chc.* R. Brundall. *hc.* J. Brundall; R. Drake, *c.* E. Bennett; R. Broadwater; T. Ong.

MULES.

GOLDFINCH AND CANARY.—*Variety of Yellow*—1, R. Hawbian. 2, J. Goode. 3, J. Whitaker. *Chc.* G. & J. Mackley. *Variety of Buff*—1, 2, and 3, G. & J. Mackley. *Chc.* J. M. Cooper. *hc.* J. N. Harrison. *Chc.* W. Walter; T. Hopkins; R. Poole. *Dark*—2, J. Drake. 3, T. Ferdinowsky.

ANY OTHER VARIETY.—1, J. Stevens. 2, W. Hutton. 3, G. & J. Mackley. *Chc.* G. & J. Mackley; J. Goode.

BRITISH BIRDS.

BULLFINCH.—1, J. Drake. 2 and *hc.* C. Knight.

GOLDFINCH.—1, W. Hutton. 2, G. & J. Mackley. *hc.* R. Drake.

LINNET.—1, W. Carter. 2, J. N. Harrison. *Chc.* and *c.* G. & J. Mackley.

REDBLUE OR SILVER.—1 and 2, G. & J. Mackley.

SPYGLASS.—1, 2, and *hc.* G. & J. Mackley.

BLACKBIRD.—1, 2, and *hc.* G. & J. Mackley.

SONG THRUSH.—1, G. & J. Mackley. 2, E. Frost. The whole class very highly commended.

JAY.—1 and 2, G. & J. Mackley.

JACKDAW.—1, G. & J. Mackley. 2, C. Boyer. *hc.* — Godder.

ANY OTHER VARIETY.—1 and 2, G. & J. Mackley. *Chc.* 'Bo' in and White Starling. *hc.* W. & C. Bunston (Brambling). *c.* W. Walter (Crossbill).

BIRDS OF PASSAGE.

RED-HEADED CARDINAL.—1, M. S. E. A. Lees. *Chc.* W. Walter.

WABBLER.—1 and *hc.* W. Walter. *Chc.* J. Stevens; G. & J. Mackley.

JAY PARROWS.—1, J. Kirkman, M.D. 2, J. Breeze. *Chc.* G. & J. Mackley.

T. Thorpe.

PARQUETS.—*Just in Grass*—1, H. Lane. *Chc.* J. Kirkman, M.D. *hc.* T. Thorpe; J. Kirkman, M.D. *Acrobatic or Broom-tail*—1 and *hc.* Miss E. A. Eeles. *hc.* W. Walter. *King's-hol or Indian*—1, 3, 4, 1 inch. *Chc.* F. Willis.

LOVE BIRDS.—1, J. Drake. *Chc.* W. Walter. *hc.* G. & J. Mackley.

PARROTS.—*King*—1, J. Drake. *Chc.* H. Lane. *Green or any other variety of large* *c.* G. & J. Mackley. *hc.* W. Walter. 2, B. Baker. 3, R. Flaxman. *Green*—1 and 3, G. & J. Mackley. 2, W. Walter. *Chc.* J. Breeze. *hc.* J. Yallop.

COCKATOOS.—1, M. Ge. 2, J. Breeze. 3, H. Lane.

ANY OTHER VARIETY.—1 and 3, Miss E. A. Eeles (orange Bishop and Madagascar Bishop). 2, Mrs. J. Cross (American Starling). The whole class very highly commended.

JUDGES.—Mr. W. A. Blakston, Sunderland; Mr. J. Baxter, Newcastle.

SHORT-FACED TUMBLERS, AND PIGEON CLASSIFICATION.

It must at last be patent to the most obtuse observer that fanciers (unless they be willing to suffer three of the four still existing varieties of the Short-faced Tumbler to pass, as other breeds of Pigeons have passed, into oblivion, and be numbered with things that were and are no more, must at once come forward and rescue the Mottle, Bald, and Beard from their impending fate.

Birmingham, for the last time, in 1867 provided classes for each of these beautiful varieties, and this year, I am happy to say, again permits the Balds and Beards to enjoy the luxury of separate classes. The unfortunate Mottles are, however, again relegated to the society of birds that have not the slightest claim to disport themselves in a show-pen. Surely this is bad enough, but worse remains behind. The Crystal Palace Show, which in January, 1879, offered separate prizes for Mottles, Balds, and Beards, and which this year takes the high-sounding title of "National," has graciously allowed the Tumbler classes to dwindle away, and now, *in the only* actually provides no class at all save for Almonds and any other variety. To say that this conduct is disgraceful is to make use of a mild expression; for is it not a disgrace that a so-called national show should totally ignore the existence of the Mottle, Bald, and Beard—varieties which in themselves have their sub-varieties and off-colours—and should permit Arabes, Splashes, Kites, and whole-feathers, which are simply the offshoots of the Almond and Mottle, to compete against three standard varieties, for which, if justice were done, classes, not only for their separate varieties, but also for their sub-varieties, should be furnished?

This National Show again sanctions the exhibition of defect by offering prizes for off-coloured Pouters, and adopts the deplorable policy that marred the other—a perfect Pouter classification at the last Glasgow Show by classing the Red and Yellow Pouters together. Birmingham following in its wake still condemns the Yellow to associate with the one-colour Pinyon Pouter, in a way of an invariable exception, to be shown in pairs at the Crystal Palace, instead of having, as all Pouters should, classes for both a male and a female; and, instead of being

offered prizes for both Pieds and whole-colours by way of encouraging breeders to produce perfect miniatures of our beautiful English birds, are only furnished with one class.

In Dragons both Slows, after providing classes for Blues, Silvers, and Reds and Yellows in a most liberal manner, tack on to the word "White" in the fourth class "or any other colour," although it is admitted on all hands that the above five are the only colours possessed by the Dragon bred for the show pen.—TURKEY QUILL.

THE COMMON FLYING TUMBLER, OR ROLLER PIGEON.

WHITE-SIDED Tumblers are very pretty birds, but are very uncommon and scarce. The head, neck, breast, tail, and primary flights are black or coloured, all else is white. Any intermixture of white with coloured feathers is a great defect; in fact, the chief feature in these birds is the purity of colour and the distinct line of separation in the markings. This kind also should have "pearl eyes." Blacks, Reds, and Blues are the more noticeable of this variety, and really are very pretty birds. Badges, so named originally from the peculiar and diverse markings of white upon a black or coloured head, are showy birds, amongst which are some excellent workers. There are three varieties—Black, Red, and Blue. Each kind should be entirely black or coloured on head, neck, breast, belly, thigh, back, and tail; the ten primary flights and the nails should be white. What I have said with regard to the heads of the Saddles applies equally to Badges. The sprinkling of white on head is in truth a budge, but such I hold to be a most undesirable "badge," or collection of foul feathers, about which no two fanciers are agreed; and being thus, and also an eyesore to those who have a taste for the beautiful, I would urge fanciers to breed it out, and thereby settle at once this bone of contention. Now, it must be understood that of all the varieties and sub-varieties before-mentioned, there are Short-faced, Medium-faced, and Long-faced birds, Booted or Grouse-muffed, Long-muffed, and Clean-legged, any of which are exceedingly pretty. There are also amongst them Rollers, Tumblers, Tipplers, and Mad Tumblers or Rollers; these names simply denoting the different peculiarities in their performances.

Rollers, thus named from the extraordinary number of consecutive backward revolutions which they go through in mid-air. These revolutions are (in good birds) not passed through very frequently, an interval perhaps of five or ten minutes takes place between each performance, after which descent the bird will rise to pass again through a similar ordeal. Tumblers, so named from their almost perpetual habit of tumbling, for as they rise even they will tumble at pretty regular intervals, throwing a double or sometimes a treble somersault as up they go; all the flock working almost simultaneously, then collecting closely together, around again they go until the next turn, and so on, whereas the best Rollers gently soar above, reserving their energies for the descent or homeward journey. Tippler is a sort of technical term for Tumbler Pigeons that simply throw a single backward somersault; if they throw, or attempt a double turn, they are discarded from the stock. This kind are only sought for and bred by fanciers chiefly in the north of England, and they certainly have selected birds that perform with wonderful regularity and union this single action or acrobatic feat. Mad Tumblers or Rollers are those that cannot (or seem as though they cannot) rise upon the wing at all without endangering their lives by this excessive tumbling propensity; it seems, at least in their case, quite an involuntary action, which it is impossible to control, for no sooner do they lose their footing than all command is apparently gone—they are likely to strike against any surrounding object and fall lifeless victims to this remarkable habit. I attribute the peculiarity mainly to the result of matching birds, each possessing to a high degree the same peculiarities; and it is only reasonable to infer that their progeny will possess in a still stronger degree the excessive eccentricities of the parent birds, until what is real enjoyment to ordinary, and even extraordinary birds, becomes, as in Mad Tumblers, a sort of unconquerable mania. I could adduce convincing proof, I think, as to these views, but to do so here may be unnecessary and inadvisable.

The best of flyers are, as a rule, chosen from the medium or plain anti-faced birds, from which are generally selected birds, both good and good looking, fit for a visit to clubland, or good enough to worthily occupy a show-pen in short, either fit to win as match-flyers or exhibition stock. Long-muffs should be about 4 or 5 inches long, and much resembling small wings, the quills of which are strong and firmly fixed at the web-like sides of the outer toes, after the style of the muffs of a good Trumpeter. Grouse-legged are those upon which the legs and feet are neatly clothed in small feather, entirely hiding all but the toe nails; these, by some people, are called "booted." Then there are clean-legged ones of every variety; they have clear, or featherless legs; and these are by some fanciers preferred, but as it is not my wish to show a bias in favour of one beauty

over another, I refrain from giving more than simple facts in connection with each sort, and leave the choice for others to determine. One or two questions, however, are necessary. Do you simply want pretty Pigeons of the Tumbler type? If so, make your choice out of the lot of beauties I have enumerated, and suit your own taste. Do you want the happy combination of beauty and quality as flyers and workers? If so (to be candid), you are not sure to obtain them, but you will stand the best chance of meeting your wishes by selecting from Rosewings, Mottles, and Self-colours (long-muffed). Do you want high-flyers and good Rollers for, say, half an hour's flight? If so, pick again from Mottles and Rosewings, and also Saddles, medium or grouse-muffed, and you will be most likely to get what you require. Do you want a flight of high-flying Sky-scrappers, such as are good for half a day's almost constant performing up aloft? If so, you must make up your mind to set beauty aside, and by the purchase of a known one here and there, regardless of shape, colour, or markings—no matter whether long, medium, or short-faced, whether "white" or "bull" eyes, or even half-and-half; no matter whether mixed or coloured flights, clean-legged or muffed. Then you may obtain Flying Tumblers to your heart's desire; such, indeed, as would satisfy the wishes and tire the patience of the stiffest-necked fancier of the flying fraternity. But the majority of these extraordinary flyers, you must understand, look only to perfection when mounted up high in flight. They show to great advantage on a bright, clear winter's morning or autumn's eve. When young birds are fully moulted, and old ones are clear of parental cares, they fly the best, and approach nearer and nearer the cerulean canopy of heaven.

On an autumn's eve, as I have said, they look particularly pretty at a great altitude, moving about in circuitous space, their various colours being intensified and more brilliant by reason of the effulgent beams of light from the setting sun beneath them; then they flicker like a myriad of coloured insects, performing at intervals those extraordinary convolutions which have not only delighted the lower grades of society who keep them most, but have moved with admiration and astonishment the most refined and dignified of our associates. It is really a most interesting sight to witness a well-trained, regularly-flown flight of carefully-selected Tumblers, which, if regularly practised, will, on being liberated from their loft or pen, at once start voluntarily upon their circuitous upward journey, performing as they go with an almost perfect unity of action—the whole lot as they gradually mount skyward passing through their peculiar evolutions almost simultaneously—now, perhaps, a little straggling, but quickly collecting again into a compact mass at a great height above their home, they flicker, flicker as up and up they go, with probably one or two "top sawyers" of superlative merit discernible surmounting immediately above the flock as leaders, and these only descending occasionally to a few circles with the busy group, by reason of an occasional "roll" of about 15 or 20 yards; then, recovering their equilibrium, up again they go to soar above their fellows, turning as they turn, rolling sometimes, when they roll, until one of those extraordinary series of somersaults, and then another and another, bring them to the spangling mass beneath them, which now, perhaps, are at such a stupendous height that at times (even to a long-sighted pair of eyes), they are entirely lost to view, and the adverting observer too often finds himself vacantly staring into space, and probably enjoying a peculiar sort of feeling which (in the absence of medical references), I shall describe in my own way—viz., as resembling "lock-jaw" in the neck and back; and, strange to say, an equally singular feeling pervades one's optics; in fact, all is gone—objects become cloudy or obscure; it is a genuine case of staring these birds out of sight, for now all is green, now all is blue, now green and blue. Kaleidoscopic scenes are on view free of charge—it is truly a blue look-out. The Pigeons, pretty things, are clean gone, and one's vision partially so. "Yet lost to sight to memory dear," for on soliloquising and on the endeavour to straighten one's vertebrae, a rub of one's eyes, and a look again upon earthly objects, it is unfortunately found that for a time all, all is chaos. Oh, dear! yes; 'tis confusion worse confounded (and I speak from experience), myriads of acrobatic phantom-Pigeons are performing in wild confusion upon every semi-discernible object. They appear to one's over-strained optics as Mad Tumblers disturbed by the unwelcome and sudden visitation of a blessed feline quadruped or the more remarkable circumnavigations of the embryo aerial velocipede which is to arouse all nature with astonishment.

But where are the Pigeons? That is the first question on the complete restoration of one's discerning powers after perhaps an hour or two of repose. Out you go, and up you look; but where, oh where have they gone? They are indeed "gone from my gaze like a beautiful dream." Again and again are the eyes strained to the extremest stretch of vision. East, west, north, and south are eagerly scanned until the eye has traversed the semicircle of blue, when at last the eye rests for a time upon a light fleecy cloud, and lo! twinkle, twinkle—no not "little star," because stars don't (as a rule) "twinkle" at mid-

day. Nor do they sparkle to any degree through even light clouds; so shade your eyes and take another survey, and behold, sure enough, the little host of flickering dots or specks prove to be the still unwearied compact mass just passing beneath the light vapoury cloud which, by strong contrast, makes them visible and thereby reveals their whereabouts. Yes, there they are, still gliding on in about the same radius as they have traversed so oft; tumbling, rolling, tipping as before, according to their several qualities, when first lost to view; and this daily proceeding with good and well-trained stocks continues for hours; the birds seem to revel in the sport and, as it were, each one appears to outvie the others until, with an apparently general understanding, they begin their gradual descent, sailing, more or less, after each performance, but without even yet showing the least symptom of flagging or weariness from their lengthened sojourn in the cooler skyward regions.

It is often in their descent that the best top-flying Rollers perform the most wonderful revolutions; for when the flight have alighted these "top-sawyers" or "leaders," as they are termed, are still a good height, taking small circuits; then hovering or soaring immediately above their home, they commence to finish by a series of rolls, descending from 10 to 20 yards at a time like a falling ring, then balancing or steadying themselves with outstretched wings like a hawk between each series of somersaults, and completing generally with a grand *finale*, and then a hurch and a pitch forward with closed wings, and the day's fly is over. Their aerial qualifications alone have raised them high in the estimation of numerous fanciers who regard their performances as the highest and best qualification for affording real enjoyment to those who like Pigeons.—J. W. LUDLOW.—(*American Pet Stock Bulletin*.)

STRENGTHENING STOCKS BY UNIONS.

BEES ceased breeding this year earlier than usual; and as the season has been an unfavourable one, every bee-keeper would do well to examine his stocks and leave nothing to chance. From almost all parts of England we are hearing of stocks being in a very poor condition, and likely to perish if not liberally fed. One gentleman who called here yesterday said he had reduced his stocks to fourteen in number by uniting the weaker to the stronger ones, and had given his bees £10-worth of sugar this autumn.

We are also uniting the weak to the strong hives, and, moreover, I purchased a great many swarms of condemned bees in Lincolnshire, which I have united to my stocks. These bees arrived about eight o'clock at night in three boxes, and as I intended to strengthen twenty hives with them, I deemed it wise on arrival to unite them by candle-light. The twenty hives to receive the Lincolnshire bees were well fed by pouring some syrup strongly impregnated with nutmeg over both bees and combs. It took twenty minutes to syrup these hives, which were left uncovered till they received the bees. Then we placed the boxfuls of bees opposite a window well lighted with gas and candles, and by this light we laded the bees out of the boxes into the twenty hives, giving each hive about a quartful of our new friends from Lincolnshire. The job was easily and speedily done, and very satisfactory, for not a battle was fought, not a bee killed. And in uniting our own bees we act in the same way, first feeding the stock by pouring syrup over the bees and combs before the other bees are cast in amongst them. The bees thus fed are full of contentment and joy: their hilarity is at its height about twenty minutes after the syrup has been administered, when the bees should be cast in amongst them. The use of the nutmeg is to prevent the bees from knowing the strangers by smell. I believe it possible to successfully unite a thousand swarms to stocks without the use of the nutmeg or mint in the syrup, but still it answers the end for which it is used in uniting swarms.—A. PETTIGREW.

WHAT IS HONEY?

I HAVE hitherto been unable to notice what Mr. Pettigrew told us on this subject in a recent number of the Journal. His statement amounts to this—that honey is not a pure production of nature gathered by bees from the flowers or elsewhere, but that it is manufactured, as it were, by these insects out of a more or less weak syrup of sugar which they find in flowers. To put it in his own words, "All honey proper and genuine has been swallowed and disgorged twice by bees. On being swallowed the second time it undergoes a chemical change—a sweetening and thickening process. Thus it is made into honey proper." Mr. Pettigrew next refers to a review of his "Handy Book of Bees," in which I "hinted," he says, "that his statements might be the outcome of mere fancy." I forget now exactly what I did say, as I am writing from "beyond seas," and have not my books to refer to; but I must say that I was never more surprised in my life by any statement of this sort. I remember well my valued friend the late Mr. Woodbury discussing the question as one which might possibly be correct,

but with his usual caution and correctness, he did not venture to state this as a fact. Mr. Pettigrew is more venturesome, and boldly asserts, while pitying my ignorance, that "these things have been seen and handled hundreds of times during the last half-century." It is an odd way of expressing the fact, if fact it be, that bees make honey after twice swallowing and disgorging it; but may I ask Mr. Pettigrew for his evidences of these facts? The "instance" he mentions is no instance at all. The thinness of the syrup or honey collected from the bean flowers proves nothing, save that the honey was thin. I have a theory to account for the honey becoming thicker—it is a very simple one—merely that of evaporation in the open cells before sealing-up. It is but a theory I admit. But to allow that bees have a power of "sweetening" honey from some source of sweetness within themselves I cannot believe.—B. & W.

THE ART OF SUPERING.

"I wish I knew how to make my bees fill supers like these," said a lady at the Manchester Exhibition; "somehow mine are either spoiled by brood in them or remain unfilled and unfinished. I wish you would tell me how to manage better." This lady is a fair representative of a very large section of bee-keepers who are anxiously trying to get supers filled with pure virgin honeycomb. I therefore think it may be interesting and profitable to many if the art of supering be explained in your columns.

Amateurs and most of our lady apiarians are not concerned to know which system of bee-management is most profitable; they keep bees for pleasure, and would like to have plenty of honeycomb for their own use, and some supers well filled to give as presents to their friends. A large crystal palace of honeycomb is no mean Christmas gift, and cannot well be surpassed as a central ornament to a dinner-table.

As my object in writing is not to teach experts, but to make all mere beginners and learners in bee-keeping experts, I shall probably do this most easily by detailing my own practice in simple language, and, when necessary, giving reasons why this and that are done.

It should be understood by all, that though supers may be obtained from hives of all shapes and materials, some kinds are better than others, and where these are used both the bee-master and his bees are placed on vantage-ground. For instance, large hives are incomparably better than small ones; straw hives better than wooden hives; and those of simple construction are more easily managed, and give more freedom and scope to the industrious inmates than those which are complicated.

The position of the holes in the tops of hives, through which the bees reach and fill the supers, is of little importance. The holes in my hives are all in the centre of the crown, and measure 4 inches wide. Some modern inventors object to centre holes because they are immediately above the brood combs where queens are ever at work laying eggs, and may readily step into the supers and there deposit some. To avoid this danger these inventors have the holes in their hives nearer the outside combs, where honey is generally stored. Both answer well, for excellent supers of comb have been filled through centre and side holes. I get supers weighing 10 lbs., 20 lbs., 30 lbs., and 40 lbs. filled over centre holes without a cell of brood or speck of farina in them. The size of the holes is of some importance. I think there should be a good thoroughfare and plenty of room for travellers between the hive and super. If the passage be too narrow, as it is in some kinds of hives which I could name, the bees are longer in filling the supers, and frequently never attempt to fill them at all.

Before I give my modes of supering I have to notice one thing more—viz., that swarming is an indestructible instinct of bees; it is a law of their existence. Hence there is some risk of losing swarms by managing bees on the non-swarming system. In attempting to prevent swarming by supering, the most expert and experienced bee-master will sometimes find his design frustrated.

Elsewhere I have ventured to express an opinion that more supers of comb can be obtained by managing bees on the swarming system than on the non-swarming one. Very well; when a hive is full of combs and these combs covered with bees it will be ready to swarm in three weeks, weather being favourable. In about ten or twelve days after the outside combs are covered with bees, and eggs deposited in them, preparations for swarming may be seen going on inside the hive. Now I endeavour to prevent such preparations by giving the bees more room—that is, when I prefer honey to swarms. Well then, shortly after the combs are covered with bees, supers should be put on the hives. If the supers be made of wood or straw I first put two or three bits of clean drone comb, well cemented or waxed to labels, in their crowns, and thus tempt the bees to go into them at once and commence work. From the crowns of the supers to the crowns of the hives I use ladders of wood, about as thick as a child's finger. On these the bees group, and endeavour to build their combs from the crown downwards.

This is of great importance, for bees naturally build downwards; and when supers are thus filled the combs are squared-off and finished before they touch the crowns of the hives. When half filled they can be examined, by lifting, without injury. If guide-combs be not used the bees would probably build the combs into the supers upwards from the combs and the crowns of their hives. By using two or three bits of guide-comb the bees are tempted to commence work in the supers at the outsides as well as in the middle of them. Drone comb is used in supers as guides for this reason, that drones are seldom—I might venture to say are never—bred in supers of ordinary sizes. These supers of drone comb are invariably filled with pure virgin honey. But if you had no drone comb at hand, would you use a bit of worker comb? Yes, certainly, to induce the bees to begin at the top and build their combs in the natural way. Thus the combs in the supers are at some distance from the brood combs, till they and the super are nearly full of honey. But at the time of supering, any bee-keeper may lift one of his hives and cut out a few pieces of drone comb to be used as guides. Indeed, when we are bending our energies to get many and fine supers of honeycomb we cut out of our hives all the white drone comb we can get. I prefer it empty, so that it can be easily fixed in supers before they are put on hives. As soon as they are put on, the bees go up amongst the empty combs, fix them more firmly, and begin to store honey in them; and when such supers are taken off, it will be found that the clumsy work of the bee-master has been hidden amongst the more perfect work of the bees. Such supers are just as good, sweet, and saleable as those that have never been touched by the hand of man.

One year I made a special effort to get a great number of supers of honeycomb. When all my straw and glass supers were filled, I went to our grocer at Rusholme, and bought a great many small boxes, which he had emptied of mustard and other articles. They were about a foot square and 3 inches deep—just what I wanted. He charged 2*d.* each for them. A small hole, say 3 inches wide, was cut in the bottom of each box; then they were filled as full and as neatly as I could with combs (white and beautiful) cut from large hives, and placed on hives ready to fill them with honey. Thus more than half the work was done for the bees before they entered these supers. Next to straw supers, about 4 inches deep and 12 inches wide, come these cheap shallow boxes for convenience. They are convenient both to fill and to empty.

Next week I shall notice the best ways of filling glass supers, crystal palaces, and other matters pertaining to this art.—A. PETTIGREW, *Sale, Cheshire.*

AUTUMN SWARM.—In one of the Yorkshire newspapers it is stated that on September 30th Mr. John Davison, of Richmond, took a swarm of bees which had swarmed in a garden in Frenchgate. The same gentleman was similarly occupied with a swarm belonging to Mr. Thos. Thompson, of the Green. The fact is attributable to the hot weather which prevailed. On the following morning the thermometer reached 89, and 72 in the shade.

SIR EDWIN LANDSEER.

OCCASIONALLY I notice in your Journal articles on dogs. Now that the great painter of dogs is no more, may I ask if any of your elderly correspondents happen to remember Landseer in his youth? If so, was he sportsman? what dogs did he himself pet and most care for? &c. Just at this time any additional information concerning the great painter, and especially concerning his early days, would be read with excessive interest.—II.

[We know much of "the great painter of dogs" in his early days. He was staying together with his friend, Mr. John Hayter, jun., at the clergyman's of a village in Essex, where we then resided, and he was then engaged on painting the replicas of his "Rat-Catchers." We think he had orders for six, and he was painting them all at the same time, so that each might have precisely the same colours. He mourned over the monotony of the occupation. Either then, or not long after, we heard him talk of painting a "Hector and Andromache," an idea he realised in the duck-mourning over the dead drake, and which Mr. Graves under the title of "The Widow," has now exhibiting in his noble collection of engravings of Sir Edwin's pictures. We recommend our readers to inspect that collection—there are 36 engravings from the pictures by "the Shakespeare of the animal world." In infancy, his mother being weakly, we were told, he was sent to be nursed at Bedleigh, near Maldon, in Essex. At the latter place he continued in boyhood at Mr. Woolley Simpson's, and even then he painted in oil colours. At the time we became his acquaintance he was taken across the country shooting to a farm-house, the good dame at which was requested to have some bread and cheese placed before him and his friend in "the keeping-room." With listening eyes and smiling lip, rubbing his hands, he went up to an oil painting

hanging over the fireplace—"Well, it is not so bad, is it?" and he looked again and again at it during luncheon. It was a stalled horse turning his head to welcome the groom coming with a sieve of oats, and was a picture painted in Sir Edwin's boyhood.

Temper-trying was he to his sporting companion, for when that companion's pointers stood and backed staunchly—"Stop! stop!" was Laidseer's invariably very audible whisper, while he laid down his gun, took his sketch-book from his pocket, and outlined the dogs. The delay was forgiven so soon as sitting down in the shade for a bite and sup, he showed his masterly sketch. During these intervals of rest his pencil was rarely idle, and there was one group of Dock leaves that was often portrayed in his sketch-book, as the wind and rain had varied it—"Capital for a foreground" was his comment.—[Eds.]

OSTEND RABBITS.—The declared value of foreign poultry and game imported in the last nine months was £135,211, which was a large increase on the previous year. Ostend Rabbits are included, and the importation is considerable.

OUR LETTER BOX.

ADDRESS (Turkey Quill).—Mr. Wolstenhulme, 3, Elizabeth Cottages, Archway Road, Highgate.

BRAMA POULTRY CLUB (J. D.).—We never heard of the club before. The rule is very objectionable, but we presume it is a private association, with which we have no right to interfere.

SHOWING OTHER PERSONS' BIRDS (Craig).—Merely buying the eggs for other persons to hatch and to rear the chickens at their own expense would not entitle you to show the birds as your own.

DISEASED POTATOES FOR FOWLS (E. A. B.).—If boiled they would not injure the fowls. One feed daily in addition to other more nutritious food.

DUCK AS AN EGG-PRODUCER (I. W.).—The number of eggs laid by a Duck depends very much on the breed to which she belongs. In all poultry the non-sitters lay more than those that are concerned in the rising generation. Thus the Aylesbury will lay a greater number of eggs than any other Duck. The Black Duck, called the Labrador, or the East Indian, or Buenos Ayrean, is a good layer. The Rouen is an average layer, and the Wild Duck lays few compared to these. An old Duck is, as a rule, a better layer than a young one, but it is impossible to give the average of any of them. Aylesbury Ducks begin to lay in November and December; Rouens three months later. Both the time when they begin laying, and the number of eggs they lay, are influenced by their keep and by judicious management.

COCKEREL SEVERELY PURGED (Cheshire Subscriber).—We are sorry to say yours is not an uncommon case. Birds frequently suffer on their return from shows, either from the mistaken kindness of visitors who give them all sorts of out-of-the-way food, and from the rubbish that is put at the bottoms of the pens, instead of earth or gravel. Whatever it may be, the bird must pick-up some of it with his food, and if it be of an indigestible character he must suffer from it. If your bird is suffering from any such cause, there will be no relief till it is removed. We advise, then, a table-spoonful of castor oil to be followed by Ealy's pills, varied with an occasional pill of camphor, and by stimulants such as brandy and ale.

SPANISH FOWLS CATABARRIED (Black Spanish Fancier).—Your fowls are suffering from the alternations of weather, and the rapid changes from warm to cold, and wet to dry. In fact, they have a little cold. Birds that are compelled to live in paved yards are always subject to this disorder, and it sometimes takes a worse form. Give them some bread and ale. Spread gravel a couple of inches thick over the yard. Let them have some camphor always in the water, enough to make it taste. Give them some lettuce to eat, and see they do not roost in a draught. Spanish fowls are not subject to roup.

SILVER-LACED BANTAMS' PLUMAGE (B. T. C.).—None of the so-called Silver Sights of the present day would have been admitted years ago as belonging to the breed, their colour would have been declared wrong. When the Silver Sighting left the hands of its maker, Sir John "of that ilk," the foundation colour of the plumage was that of frosted silver—a dead white. Sir John kept the two colours, Golden and Silver, carefully separate, but since then they have been allowed to run together, and it is from that fact the Silvers have the yellow or creamy tinge of which you complain. You now propose to do that which Sir John Sighting and his son Sir Thomas always did, to repair colour and to alter lacing. You must be careful to choose the White Bantam cock with drooping wings and without sickle feathers. It will make one season difference. The effect of the Black hen will be to make the lacing heavier. Be careful to select a cock to put with these hens that can be depended upon as a breeder; you probably know all cannot. You cannot do better than you propose, if you wish to make the Silvers more silver, and the Golden better laced.

ROOF IN PIGEONS (Y. A.).—Give a few peppercorns daily, and keep the bird warm if the case is only a slight one. Move him into a stable where a horse is kept if it happens to be convenient, as there the atmosphere is suitable, and yet no fire heat. If the case is bad make small pills of an equal quantity of jalap and cayenne mixed up with butter, and give a pill every other day. Feed well. As to infection, fanciers differ, but by keeping the bird apart from the others you act prudently.

EMPTY TRAP HIVES IN GARDEN (Mrs. H.).—There is no law against "people keeping empty hives standing ready to catch swarming bees in it always the people's own," but the dishonesty of the intention ought to prevent it. The owner of a swarm so trapped has a right to recover it.

PRESENT WEIGHT OF A STOCK (E. S. H.).—The weight of bees at this time of year is greatly reduced, and is reducing fast, but they will now begin again to breed, and will, of course, increase in weight. We cannot do more than guess the weight of your bees, so much depends upon their numbers. If fairly strong they might weigh from 2 to 3 lbs. Ten pounds of actual honey will carry most stocks well through the winter. Probably 8 lbs. would suffice.

STRAW SKEP ON A SHERRINGTON BAR-FRAME (H. J. H. Thomas).—We think your better way will be to separate the two at once, and preserve the Sherrington and the few combs in it for the first swarm next year. The separation

is easily effected. All the bees, and the honey too, are now in the skep, so that you barely to apply a little pressure to lift the skep from the Sherrington, and then place it on the board. If the two remain together, the bees would doubtless fill the Sherrington with combs next year, but probably the half of them would be drone combs.

TRANSFERRING BEES (A. T. Webb).—Unquestionably it is much too late to transfer bees. You must wait till May.

PRIZE HIVES AT MANCHESTER (C. H. E.).—The hive, if it might be called a hive, which took the first prize in the ornamental class, was made wholly of glass of three thicknesses, globular, with a centre hole for supering. The board on which it stood was covered with crimson velvet outside the circumference of the hive. It was made for the occasion, and is worthless for anything but exhibition. The second prize hive in this class was made of mahogany, square, with four sides of glass.

CRYSTAL PALACE HIVES (Edm.).—The "Crystal Palaces" were very large supers, with lids at their tops like the bottles seen in confectioners' shops. Mr. Breen's prize "Palace" stood 22 inches high, 10 inches wide at the bottom, 15 inches at the widest part, and about 7 or 8 inches wide at the lid. Mr. Pettigrew's was nearly as high, 15 inches wide, and narrowed to only 5 inches at the bottom. We are unable to say that a good coat of paint will preserve straw hives, for we have not tested it; but find that hives well and neatly sewn with canes will stand the wear and tear of ten years without paint, and look well to the last. We agree with you that a milk-pancheon is a very unsightly cover for a bee hive.

METEOROLOGICAL OBSERVATIONS,

CAMDEN SQUARE, LONDON.

Lat. 51° 32' 49" N.; Long. 0° 8' 0" W.; Altitude 111 feet.

DATE.	9 A.M.				IN THE DAY.				RAIN.	
	Barom. at Foot of Barometer.	Hygromete- ter.		Direction of Wind.	Temp. of Soil at 1 ft.	Shade Temperature.		Radiation Temperature.		
		Dry.	Wet.			Max.	Min.	In sun.		On grass.
1873.										
Oct.										
Th. 15	29.936	88.0	84.0	N.	48.7	57.3	33.1	58.2	57.8	—
Fr. 16	30.051	41.0	44.5	W.	49.7	58.8	35.4	89.0	50.3	—
Sat. 17	30.162	48.2	48.7	W.	49.6	60.8	36.3	95.8	39.4	—
Sun. 18	30.015	53.8	51.3	W.	50.3	61.6	36.4	89.0	37.3	—
Mon. 19	30.243	49.6	47.7	N.	51.8	55.7	45.6	69.4	39.4	0.093
Tu. 20	29.811	49.7	49.4	W.	51.7	54.3	45.7	98.9	43.3	—
Wed. 21	29.888	44.2	41.1	S.W.	48.9	53.7	34.9	69.3	31.0	0.238
Means	30.021	46.8	45.8		50.3	57.5	38.3	84.5	34.2	0.331

REMARKS.

15th.—Foggy till about half-past ten, then fine till half-past three, when it began to rain, and rained at intervals during the rest of the day.

16th.—A fine day; foggy in the morning.

17th.—Slightly foggy; bright during the day, but rather cloudy in the evening.

18th.—Rather cloudy, sun shining at intervals; a few drops of rain in the evening.

19th.—Light rain nearly all day.

20th.—Drizzling in the morning, but a fine day, although rather cloudy.

21st.—Cloudy in the morning; began to rain at half-past eleven and rained without intermission till half-past four, and at intervals during the evening.

A moderately fine week. Average temperature about 3° lower than last week.—G. J. SYMONS.

COVENT GARDEN MARKET—OCTOBER 22.

We have nothing fresh to report, having good supplies both of English and foreign fruit. Vegetables abundant.

FRUIT.

	s. d.	s. d.		s. d.	s. d.
Apples.....	1 sieve	1 0 to 1 6	Mulberries.....	per lb.	0 0 to 0 0
Apricots.....	doz.	0 0 0 0	Nectarines.....	doz.	0 0 0 0
Cherries.....	per lb.	0 0 0 0	Oranges.....	per 100	10 0 20 0
Chestnuts.....	bushel	0 0 0 0	Peaches.....	doz.	8 0 12 0
Currants.....	1 sieve	0 0 0 0	Pears, kitchen.....	doz.	1 0 2 0
Black.....	do.	0 0 0 0	dessert.....	doz.	2 0 3 0
Figs.....	doz.	0 6 2 0	Pine Apples.....	lb.	3 0 6 0
Fibrets.....	lb.	1 0 1 6	Plums.....	per 100	2 0 4 0
Cobs.....	lb.	1 6 0 0	Quinces.....	doz.	1 0 3 0
Gooseberries.....	quart	0 0 0 0	Raspberries.....	lb.	0 0 0 0
Grapes, household.....	lb.	1 0 5 0	Strawberries.....	per lb.	0 0 0 0
Lemons.....	per 100	10 16 0	Walnuts.....	bushel	10 16 0
Melons.....	each	2 0 5 0	ditto.....	per 100	2 0 2 6

VEGETABLES.

	s. d.	s. d.		s. d.	s. d.
Artichokes.....	doz.	3 0 to 6 0	Mushrooms.....	pottle	1 0 to 2 0
Asparagus.....	per 100	0 0 0 0	Mustard & Cress, punnet	0 2 0 0	
French.....	doz.	0 0 0 0	Onions.....	bushel	3 0 6 0
Beans, kidney.....	1 sieve	2 0 0 0	pickling.....	quart	0 6 0 0
Beet, red.....	doz	1 0 3 0	Parsley per doz.	bunches	0 0 4 0
Broccoli.....	bundle	0 9 1 6	Parsnips.....	doz.	0 9 1 0
Cabbage.....	doz.	1 0 1 6	Peas.....	quart	0 0 0 0
Caspennus.....	per 100	1 6 0 0	Potatoes.....	bushel	3 0 4 6
Carrots.....	bunch	0 6 0 0	Kidney.....	doz.	0 0 0 0
Cauliflower.....	doz.	3 6 0 0	Round.....	do.	0 0 0 0
Celery.....	bundle	1 6 2 0	Radishes.....	doz.	0 0 1 6
Coleworts.....	doz.	2 6 0 0	Rhubarb.....	bundle	0 0 0 0
Cumbers.....	each	3 0 9 3	Salsify.....	bundle	1 0 1 6
pickling.....	doz.	0 0 0 0	Savoy.....	doz.	0 0 0 0
Endive.....	doz.	2 0 0 0	Scorzonera.....	bundle	1 0 0 0
Fennel.....	bunch	0 3 0 0	Sea-kale.....	basket	0 0 0 0
Garlic.....	lb.	6 0 0 0	Shallots.....	lb.	0 3 0 0
Herbs.....	bunch	0 3 0 0	Spinach.....	bushel	2 0 5 0
Horseradish.....	bundle	3 4 0 0	Tomatoes.....	doz.	1 0 2 0
Leeks.....	bunch	0 9 0 0	Turnips.....	bunch	0 1 3 0
Lettuce.....	doz.	1 0 1 6	Vegetable marrow.....	0 3 0 0	

WEEKLY CALENDAR.

Day of Month	Day of Week.	OCT. 30—NOV. 5, 1873.	Average Temperature near London.			Rain in 43 years.		Sun Rises		Sun Sets.		Moon Rises.		Moon Sets.		Moon's Age.	Clock after Sun.	Day of Year.	
			Day.	Night.	Mean.	Days.	m.	h.	m.	h.	m.	h.	m.	h.					
30	Tu		54.9	38.3	46.6	22	53	af	6	35	af	7	3			9	16	14	303
31	F		51.0	38.0	46.0	22	54	6	35	4	25	3	34	0		10	16	16	304
1	S	ALL SAINTS.	54.3	37.9	46.1	25	55	6	31	4	30	3	4	2		11	16	17	305
2	ScN	21 SUNDAY AFTER TRINITY.	54.4	37.3	45.8	19	58	6	29	4	34	3	3.5	3		12	16	18	306
3	M	Michaelmas Law Term begins.	53.5	35.9	44.7	19	0	7	28	4	9	4	0	5		13	16	18	307
4	Th		52.1	36.6	41.3	22	1	7	26	4	27	4	21	6		14	16	17	308
5	W		52.9	37.2	45.0	20	3	7	24	4	49	4	59	7		15	16	16	309

From observations taken near London during forty-three years, the average day temperature of the week is 53.7; and its night temperature 37.3. The greatest heat was 67, on the 31st, 1854; and the lowest cold 29, on the 5th, 1868. The greatest fall of rain was 0.98 inch.

MORE ABOUT ROSES.



CAN stand it no longer. The fit is on, and I, too, must give it vent. "Roses again!" Yes; I am certainly touched with Rose fever, and it is not intermittent, but a steady, ever-growing-worse attack.

Well, I threw up my hat for the Manetti stock the second year I grew Roses, and it has been up ever since; and I should like to say, when Mr. Camm says, "I advise all Rose-growers who find their Manettis gradually dying-down to lift them, and put them in lighter and poorer soil"—Don't. Yes, don't most decidedly; plant them in light soil if you will, but not poorer. That they grow in light soil well, I grant, and so they do in heavy, I do not mean cold blue clay—"gault" we call it here. Ah! and geologically "gault" it is. Round Cambridge it crops-up oftener than it is liked. Wherever the upper greensand, or coprolite beds—our gold mines—are worn away, there is the blue gault, and then woe betide the gardener or farmer. But, dear me! I was talking about Roses, wasn't I? Well, I grow Manetti Roses on both light and heavy soils, my garden being boulder clay or drift. I have soils and soils, and I really mean to say that my Manetti-worked plants grow strongest and yield the best blooms on the heavy soil, and I manure heavily, for I show Roses, oh yes! and win a prize now and then. Do you know—I am almost afraid to even whisper it—but I am half inclined to think Mr. Camm soured his soil with heavy manuring at the time of planting his Manetti Roses? Do you think he would be down on me if I suggested such a thing? I hope not; for it is in my experience that the Manetti does not like much manure till it gets hold, but after that it is like a full-grown store pig that has another month to live—give it him too good if you can! I believe many good Rose plants are killed by mulching, much as it is advocated. Cover your Rose bed with fat manure, and after a month what is it?—cold, cloggy, and wet. My plan is, and my plants like it by their growth, in the spring to cover the beds with good manure (I keep fattening pigs), and to just insert the fork and turn it over, so as to cover the manure and to leave it rough.

In looking over the list of Roses that Mr. Beachy recommends, I could not help wishing he had said Catherine Mermet, one of the best and loveliest Teas in form, colour, scent, and texture; it is so satiny soft.

I was almost tempted to write when the talk waxed warm about the frauds at exhibitions. Borrowing, buying, or stealing blooms is equally bad; and to all who practise it I would say with Browning, "There go my heart's abhorrence." But, ah me! it is often winked at by the authorities, because "they don't want to offend anybody," or "don't want to make anything unpleasant this jolly day," and the exhibitor who shows his own Roses only has to take second or third place. I will remember an exhibitor, showing against me, borrowing blooms—I saw it done: but then you see "I did not want

to make things unpleasant," and have had the pleasure of licking him since a time or two.

Now I am mounted—and although my old hobby-horse is rather lame, still he goes—I should like to tell you a few things I don't like to see at Rose exhibitions.

I don't like to see anyone show Roses that he has not grown; it ought to lower him in his own self-respect if he has any, and certainly does with others.

I don't like to see it stated in the rules of a society or show, that no competitor and his flowers will be admitted after a stated time, unless it is intended to carry it out. It is no joke to be in a hot tent with your flowers through adhering to the rules, and then to see other exhibitors bring in their flowers two or three hours after the stated time, in utter contempt of all "rules and regulations," and the authorities winking at it by not liking to make things unpleasant.

I don't like to see Roses wrongly and badly judged, and the judges acknowledging that "they knew nothing about Roses, and had done their best." This happened to me and others this last season. You see it disgusts a fellow, and rather damps his enthusiasm.

I don't like to see more than one Rose of a sort in a stand, even if it is ticketed with another name. I have seen five of a sort in a stand of twenty-four. You see it is not complying with the schedule, and looks dishonest. Two of one sort may get in by accident, but five looks like design; and if memory is so bad with some, I would suggest ticketing the blooms as out.

I don't like to see foliage that does not belong to it put in with a Rose. That is not complying with the rules; and although one does not like to make things unpleasant, still it is rather annoying to find a rival first because his foliage is better than yours, when it never grew on the same Rose tree.

I don't like to see another exhibitor, when putting up his stand next mine, let his elbow go splootch on the best Rose in my stand; for although it is pure accident, it is liable to get one's "back up"—that takes somewhat from the pleasure of showing.

I don't like to see a professional bring up an amateur's blooms and set them up for him. We are only mortal, and the best of us are liable to temptation, and I hope we all like to please our friends. You see, another bloom than the amateur's might by accident get in his lot, unless very great care were used.

Well, as I do not think you will be weak enough to publish these very weak jottings, I will confidently tell you of one other thing I do not like, and that is showing at the Crystal Palace. Why? Why, can't you guess? Well, quite confidentially, you know, I have to start from home by the mail train (midnight), get to town in the "cold raw" of early morning, to the Palace about 7 A.M., work like a Turk (by-the-by, who ever knew a Turk to work? Figure of speech you know), to get the stands set up, and when all is done, can't get a decent breakfast till 1 P.M.! Of course one lives on the excitement till the Roses are set up, and then when one is clean used-up, the "proto-plasm" wants, I think, feeding with a good breakfast

Would it not be as well if the Palace authorities were to see to it? "Roll and butter," or "cold meat," is very nice at times, but after being up all night and travelling, the advantage of getting a hot breakfast is appreciated by at least one, and I believe all of us very weak mortals.—W. FARRER, *Howe House, Huntingdon Road, Cambridge.*

A FEW SORTS OF TOMATOES.—No. 2.

KEYE'S EARLY PROLIFIC.—As its name implies, this variety is a few days earlier than the old Red Tomato, and it is certainly as prolific as that variety, but its fruit is, on the whole, fully two sizes smaller, and in most instances so deeply ribbed as to be nearly cut in two. The skin is rather thick, therefore there is not much pulp for the size of the fruit. I submit that for out-door culture it is not even second-rate, but for pot-culture it may be desirable; even then I do not consider it equal to the Orange-feld.

GENERAL GRANT.—A strong grower but not a prolific variety. Its fruit is produced on short racemes of not more than seven fruit in each, but generally five, and attains about the size of a Golden Pippin Apple. It is round and handsome, being without ribs, and ripens to a very high colour. It is about a week later than the Common Red, but it keeps a long time after having been gathered. I do not find any other particular merit attached to it. It would require a much greater space to grow a given quantity of fruit than any sort I have yet named.

HATHAWAY'S EXCELSIOR.—This is also a strong grower and very prolific. The fruit is large, heavy, and handsome, being nearly as round as a cricket-ball, not a rib upon it, and ripening well up to the stem. The skin is thin, smooth, and shining, and the flesh moderately firm. It is a most excellent sort for slicing-up in Tomato salads. It is a somewhat new variety, and I purchased it on the recommendation of a friend that it was one of the best Tomatoes for general cultivation; in that opinion I entirely agree. Since that time the Royal Horticultural Society have had it on trial at Chiswick, and awarded it a first-class certificate.

PEAR-SHAPE.—This sort with me was but a moderate grower, and a number of the fruit, instead of coming in the shape of a Pear, were very similar to that of General Grant, only not so large, but when ripe and true to shape they are very ornamental, though small and only moderately numerous. The uncertainty of this variety in character, and its small fruit, prevent its being generally grown. I do not think I shall try it any more.

RED CURRANT.—This is an exceedingly handsome and ornamental variety, producing its scarlet-coloured fruit in racemes of from 8 to 20 inches in length. The fruit is about the size and shape of that of *Solanum Capsicastrum*. Many of the racemes bring to perfection as many as from thirty to forty fruit on each, and they are very freely produced, so much so as to make a properly cultivated plant appear literally covered with fruit. The foliage is small and the wood both slender and short-jointed, but the plant grows freely, is altogether the most attractive variety I have seen, and a most useful one for garnishing dishes of fish, &c. It will grow and thrive as well in the open border, trained to stakes or trellis-work, as it does against a wall, but the fruit does not ripen so early. To those who like such subjects for greenhouse decoration here is a plant which far exceeds in decorative qualities Chilies, Capsicums, &c.

RED CHERRY.—This is called Red Currant by some, but my variety is in no way like the preceding. The habit of growth is coarser, and it is a very shy bearer. The fruit is produced in semi-racemes of from five to ten fruits each. It is about as large as a Cherry and ripens to a very high colour. I do not consider it worth much, and shall not grow it again.

DE LAVE.—I have tried this three years both under a wall and in the open border, and in neither position has it proved worth growing. The season must be hot and sunny to ripen the fruit perfectly, but when grown in pots under glass it turns out well, and from its self-supporting habit it is a very suitable variety for that purpose.

YELLOW CHERRY.—This corresponds in every way to the Red Cherry Tomato, except that its fruit is yellow and a little larger. I consider it is only worth growing for the sake of variety.

YELLOW BALL.—This is also yellow-fruited. Its habit of growth is vigorous, though it is not a prolific sort. Its fruit is as round as a ball and attains nearly the size of General

Grant. If this could be improved in size it would prove to be the best of the Yellows, but as it is I am not prepared to say much in its favour, and should still prefer to grow the

OLD LARGE YELLOW.—In habit of growth, productiveness, and shape of fruit it appears exactly like the Common Red, though its colour is yellow and its fruit is second in size to that variety; it ripens about the same time. I consider it is the best of the yellows, and to those who like the colour it may be worth growing, but in my experience I could never find that the yellow Tomatoes are appreciated; I always hear that the colour is objected to when they are served-up.

THE COMMON OR LARGE RED.—This sort I need not take the trouble to describe. All know it, and if their experience is like mine it is yet too good to be discarded, for if quantity and quality of fruit be wanted we must still grow it. I took an average of four plants of each sort of Tomato I grew, and intended to weigh the produce of fruit from beginning to end, but that week of wet rough weather in September brought on the disease so severely that quantities of fruit were spoiled and my intentions frustrated; however, as far as I did go, the Common Red bore off the palm for weight, Charter Oak Prize was next, then Hathaway's Excelsior, and Keye's Early Prolific was fourth. If we were to take the weight of equal measures of fruit, doubtless Hathaway's Excelsior would far exceed the others, because it is a weighty solid fruit which would pack closely in the basket. I think it would be profitable if any person who has grown other sorts of Tomatoes than those which I have named would state the result of his experience.—THOMAS RECORD.

THE POTATO DISEASE IN 1873.

JOURNEYINGS in England, Scotland, and Ireland during this past summer gave me many opportunities of noticing to what extent the Potato crops had suffered from disease in several localities.

In West Cornwall we had, as usual, signs of its presence among the early sorts in May, a leaf or two being blotched, and small patches being more or less affected; but in the beginning of June matters looked worse, and the haulm was in many places blighted extensively. Now, the general rule has been that low-lying partially-shaded spots suffered first and most severely; but not so this year, for in many instances these had escaped, while the sunny south side of the hill was devastated. But still, the disease did not reach the tubers in anything like the proportion in which it might have been looked for. Digging, of course, went on rapidly, for when disease attacks our early crops, though not ripe, they are very nearly fit to be taken up for the early supply, and fully an average crop was commonly sold, and at good prices.

The latter part of June I spent in and around London, and certainly most promising was, at that time, the appearance of the Potato crop. The same remark applies to Ireland in the beginning of July, and to Scotland during the latter part of that month. In August, however, long-continued rain and consequent low temperature began their work, and in Perthshire, around Dunkeld particularly, there were manifest unmistakable symptoms that disease was at work. Going southwards appearances improved, but in September I found the Essex fields that had looked so well in June sadly blighted, and; he like through the south and south-western districts some were worse, some were better, but very few, apparently, were altogether unscathed.

In West Cornwall, where I again found myself in the middle of September, there was scarce a vestige of haulm left, so thoroughly had the malady there done its work. I had myself planted an experimental piece with various late sorts, American as well as English. Of those which turned out best, as regards their power of resisting disease, there were Sutton's Red-skin Flourball and Skerry Blues. The first of these, however, turned out worthless in quality, and they have consequently been given to the pigs, but the latter gave a fair crop, and were excellent. The Early Rose, Goodrich, and another somewhat similar American variety, suffered, I think, even more than the Flukes, Victorias, and other common English varieties. The Red-skin Flourballs have, indeed, always belied their name, so far as I can learn, in this district, and I should be glad to hear that they have justified it elsewhere. They certainly, however, do make a better fight against the disease than any other variety that I have ever grown, even putting out fresh leaves after the first have been destroyed.

Much questioning was there also in all these various locali-

ties touching the disease, its usual effects, and suggested remedies; but from all that I gathered, the conclusion remained, that in fact we know little or nothing more about its cause and treatment than we did some twenty years ago. As a rule, it does not usually make its appearance till the crop is approaching maturity. Fine bright weather retards it; dull, close, foggy days develop it rapidly, and then, once developed, nothing avails to stop its ravages. The oft-suggested plan of cutting away the haulm close to the roots I have myself tried in various cases without any benefit. This very year, observing patches of disease in a piece of Early Myatt's, I cut to the ground one portion, while an adjoining one of similar size was left untouched. A fortnight later and both were dug up, when, where the haulm had been left the Potatoes were considerably larger, and no more diseased among them than in the other. As this bears out my conclusions of former years, removing the haulm serves only, it would seem, to reduce the crop; and just so we might expect it would be, for probably as soon as the leaf is attacked the sap throughout the plant becomes diseased, equally in the portions below as in those above the ground.

Soil, climate, and cultivation may all, I believe, contribute their share in fostering or resisting the Potato malady. A light porous soil, a dry climate, and a moderate allowance of manure, will usually produce a healthy but not too vigorous a growth, while the contrary to these conditions will result in that overluxuriant vegetation which is the first to suffer. Subject, of course, to particular variations, this seems the common rule, and hence I apprehend that the drier soils and higher summer temperature of the midland and eastern districts of England need fear no rivalry in late Potato-growing from localities which, like West Cornwall, have an excess of moisture and deficiency of heat.

If accurate accounts were attainable, I believe that it would be found better economy in this particular district to import our winter Potatoes rather than to grow them. But in soils and climates the best suited to this crop, has it not, I would ask, been found that even in years when the actual disease has been least felt, or even when there have been no signs whatever of it, the average crops of late Potatoes are now very far below the yield of ten or twenty years ago? Where due rotation has not been observed this would only be a necessary result; but I ask the question, What has occurred where the land has only been called upon for this particular crop in its proper course? Does this, if such is the case, point to a reduced constitutional vigour of the plant? And again, if so, has this resulted from the continuance of disease or from any other cause?

Such are my Potato-jottings for this year. Seed is already being purchased for next year's crops, and many complaints are heard as to the difficulty of getting sound samples. This strengthens my opinion that the past has generally been a bad season for Potato disease, as might, indeed, have been expected from the prevailing character of the weather. How, then, have foreign growers fared? What supplies have France, Holland, and Belgium for us? Can they grow an equal crop to that of past years? and is the disease less prevalent abroad than with ourselves? All these are questions of interest, and may throw light on what so much still needs it—viz., the origin, conditions, and treatment of this scourge of our fields.—W.

ROSE STOCKS FROM CUTTINGS.

I READ very attentively every article in THE JOURNAL OF HORTICULTURE treating on Roses, Briar and Manetti stocks, and have just finished a perusal of Mr. Camm's observations on the latter in the number of October 15th. So far as my experience teaches I agree with him almost entirely—that the collecting of Briars is a most rugged, tiresome, and expensive concern, for I have gone for them ten or twelve miles, and had them conveyed home both by trains and carts. Feeling this work both costly and fatiguing, I set to work in another direction.

I had sown seeds years ago which never germinated, and therefore had abandoned this plan. I resolved, however, to try cuttings, and falling in with a very favourite Briar (for there are hundreds of varieties of them) in August, I dug a piece of ground and dibbled in the cuttings taken off mostly at the joints, making them as firm as ever I could. The cuttings exactly resembled those of Gooseberries. To my great delight nearly every one of them lived. It is not the cuttings themselves, however, that will benefit the rosarian; he must

wait two or three years longer, and then they will send up from the roots shoots 7 or 8 feet high, as straight as an arrow—the very acme of perfection, and ready for the insertion of his best Roses. That year I put in about thirty cuttings, and every year since have been adding to the number.

By this means good sorts only are propagated—the real Dog Rose—scentless, with few prickles, and these strongly hooked downwards, and not perpendicular to the stem, with improved roots.

If Mr. Camm and nurserymen would propagate their own Briars in this manner in the months of August and September, there would be less outcry about the short lives of Roses; but finding the plants a scarce commodity the briarman makes all fish that comes in his net, brings home all that comes in his way, provided they be young and straight, regardless how many prickles there may be upon them, and with a skin as red as a soldier's coat; these are paid for and worked, and the consequence is, if the bud succeed, the Rose lives, producing blooms—poor things—for two or three years, lingers on, and then dies of consumption. Give the Briar fair play, and it is an excellent stock. Like Mr. Reynolds Hole I am thoroughly of opinion that if one can get a Rose on the Briar of the right sort, and on the main shoot, it will far surpass that on the Manetti, just in proportion as the former is more vigorous-growing than the latter; provided it will grow on the Briar at all, for I find that, like many living animals, they are very capricious. Some will live only on one kind of stock, others on another, and many on both—*e.g.*, with me Charles Lefebvre will not thrive on the Briar, neither will Baroness Rothschild, but both do well on the Manetti, and on their own roots. Again, Général Jacqueminot, Maurice Bernardin, and Pierre Notting will not thrive on the Manetti, and succeed excellently on the Briar.—D. D., *Makerston, Kelsö.*

N.B.—I forgot to say I propagate my Manetti stocks also by cuttings, while I am budding in August and September.

LOBELIA WHITE PERFECTION.

A REALLY good white-flowering bedding plant is a great desideratum, whether it be a Geranium, Verbena, Lobelia, or anything else. We are still very deficient of white-flowering plants for the flower garden, though of white foliage we have plenty; but in cold wet situations like mine, even such plants in the majority of seasons are disappointing just when we want them to present the best appearance. It is, therefore, with much pleasure I can recommend this welcome addition to our scanty supply. Bearing in mind the wet and unfavourable season—here, throughout the summer, we have only been once three days in succession without rain—and taking into account the unfavourable situation, it seems wonderful that this Lobelia should have done so well. It is what may be called a white strain of Lobelia speciosa, and much praise is due to the Messrs. Veitch, of Chelsea (from whom we had our supply of seed), for sending out such an excellent variety. Never did the Committee of the Royal Horticultural Society award a better-merited certificate. It is not to be expected that so great a flit as the Lobelia is, should be in this instance quite constant to colour from seed; yet, notwithstanding a few true blues which put in an appearance, it is remarkably pure—none of your half pink, half blue, and half-a-dozen other shades, but a white, as its name denotes, to perfection. Nothing can be more even in growth, standing from 5 to 6 inches high, and of a semi-erect habit, and the whole mass a sheet of pure white. I certainly had some misgivings until I saw the first bloom, but then with much gratification I beheld a genuine white Lobelia.

As regards the few blue-flowered plants that are produced amongst the seedlings, they make a pleasing mixture; but should they not be wanted they can be easily detected when potting the seedlings, being much lighter, and with little if any of that hairy surface that is inseparable from the blue variety; or they can be planted in little clumps, and as soon as a blue is discerned let it be pulled out. We sowed in this way two beds edged with it, and they have been much admired.—J. TAYLOR, *Marswynne, Carmarthenshire.*

HOETEIA JAPONICA, &c.—In answer to "W. G.," page 291, I have now (October 18th) six plants of *Hoeteia japonica* in full bloom, also some two or three score of Strawberry plants, a few with ripe fruit. All the above plants I forced in flower early in spring. In July I planted them out in the open

ground, where they very soon grew again, and flowered a second time the same year.—J. Down, *Gardener, Ashdown Park, Sussex.*

MR. ROBERT FISH.

In the morning of the 23rd inst. died ROBERT FISH, our able, kind-hearted, and judicious correspondent and friend during nearly the whole of the twenty-five years this Journal has existed. A few sentences in his first communication addressed exclusively to amateurs indicated the man—"What is beautiful in plants should be admired for its beauty alone. The pleasure arising from producing and tending that beauty is a different thing. Whether the plant be grown in bothouse, greenhouse, garden, or field, its peculiar beauty should at once be recognised. Cultivate plants with such a spirit, and they will promote that which is civilising, soul-elevating, and goodness-tending." In conclusion, after giving good practical advice, he added—"Amid many, or, at least, some failures, there will be acquired that general practical knowledge, the safest companion and the best testing agent of science."

From a near relative we learn that Mr. Fish was born in the village of New Scone, in Perthshire. He was educated at the parish school, and, we believe, finished his education at a seminary in Perth. It is certain that he received a good elementary education, and even what was then considered a classical one, so far as that means a knowledge of the rudiments of Greek and the capacity to read and understand Latin. These acquirements had an important bearing upon his early life. From his youth he was a careful observer of nature, and grew a diligent student of general literature, though devoting himself to his profession with an energy seldom equalled.

He served his apprenticeship under the late Mr. Beattie in the gardens of the Earl of Mansfield at Scone Palace, and was distinguished for industry in the garden and his devotion to study in his leisure. His practice was always to have a book at meal times and to read a portion to think upon when devoting the day to heavy manual or other labour. He was a contemporary and a personal friend of David Douglas the botanical collector, and took a lively interest, with the late Mr. Loudon, in the erection of a monument to his memory in the churchyard of New Scone.

From Scone Mr. Fish went to the gardens of Sir Robert Preston, of Valleyfield, in Perthshire, the same habits of diligence continuing to distinguish him; there he formed friendships that endured for life. From Valleyfield Mr. Fish went to Caenwood, Hampstead, and from thence to Plucklaugh in Staffordshire, and the Horticultural Society's gardens at Chiswick. During all these changes he was earnestly employed in mastering his profession, forming congenial friendships, and storing his mind with those almost inexhaustible resources of knowledge which he shortly afterwards began to pour forth through the public press, and that continued to flow almost without interruption to his death.

From the time of his having launched as a master gardener in that most unlikely of all spheres for the display of ability, culture, and genius, the Messrs. Tattersall's, at Hyde Park Corner, London, till within a few months of his sudden end, he contributed to the horticultural literature of the times. He was a devoted admirer of the late Mr. Loudon, who, with that noble generosity that ever distinguished him, heartily welcomed the young writer in the only possible place at that time, the "Gardener's Magazine." His first essay was on "The Coiling System of Vine Culture." It appeared in the Magazine in July, 1835. He was then at Mr. Tattersall's. He formed a friendship with Mr. Loudon that only ended with life. He originated mutual improvement societies, and his pen, his power, his purse were ever ready when horticulture made a call on these. He was Secretary to the West London Gardeners' Association in 1837. At Mr. Tattersall's he heard that Col. Sowerby had called on Dr. Lindley to inquire about Mr. Fish. This was in 1840. Dr. Lindley had not at that time known him personally; his words were characteristic—"Oh! you are Mr. Fish, are you? Well, if a title of what I have heard of you be true you are worthy of any place." He was sent down to Putteridgebury.

Any résumé of Mr. Fish's labours is impossible within the limits of a notice like this. His worth as a man is a jewel hidden deep in the hearts of all who knew him. His literary contributions appeared in nearly all the gardening periodicals until he joined the staff of this Journal, and he employed his pen for this until it dropped from his hand owing to a partial

paralysis. His skill as a gardener is evidenced by every feature of the gardens of Putteridge Park, which he may be said to have, out of a common field, constructed and furnished with a care, a zeal, and a success seldom equalled, perhaps never excelled, to the last moment of his life.

From 1810 until his death Mr. Fish remained at Putteridgebury, and for twenty-five years of that period we know him, and now record that in every relation of life he was excellent. As gardener, his skill, and good taste, and care for his employer's interest were prominently apparent. As son, husband, and brother he was deeply loved. His brothers owed him much, and delight to acknowledge the debt; for, as one of them in a note before us declares, "He was brother, father, and truest friend to me." His "genial writing," as it was well described by one of our readers, was justly appreciated by them; and we readily and unreservedly acknowledge, that during the long period he was united to us we ever found him one of the most cordial, ablest, and soundest of counsellors.

NOTES ON LILIES.—No. 5.

LILIUM TIGRINUM ERECTUM.

This is a Tiger Lily not much grown, a neglect which I think is to be regretted. It is very distinct from all other members of its family. The spots are rather small and the flowers not very large, but the erect habit and rather dwarf growth are



Liliium tigrinum erectum.

productive of a pleasing contrast when it is grouped in the conservatory with *L. tigrinum splendens* and *L. tigrinum flore-pleno*. Our first bulb was given by Mr. Leichtlin. We took up a cut flower-stem to South Kensington; but partly owing to the flowers being overblown, and partly from their being shown in company with more showy Tiger Lilies, the Committee was not much impressed with it. The photograph, as will be seen, hardly does it justice; it shows the habit, and that is all. At the time when the photographs of the Lilies had to be taken the only pot of this species in bloom had lost most of its flowers. Its height was 3½ feet. It had six blooms to a stem. The leaves were 5 inches long. It, like other Tiger Lilies, produces many stem-bulbs, and therefore can be easily increased. We purpose trying a clump in the border, which ought to have a good effect.—GEORGE F. WILSON.

PROMOTING THE CLINGING OF IVY.—If "F. G. W." would make the border for his Ivy of good compost, say a foot wide, and peg all the shoots down to the ground, just nailing 2 or

3 inches of the points to the bottom of the wall, it would sooner be covered with good, strong, healthy shoots that would cling securely; while long growth nailed to the wall gets blown about by the wind, and never fastens or grows so well as when it starts from the ground.—T. S.

KEW GARDENS.—No. 1.

[WE extract this clever popular description of Kew Gardens from the "Edinburgh Review." Additions we may occasionally make will be bracketed.]

CAN we wonder that the citizens of London have for ages been drawn, as if by some irresistible impulse, westward; beckoned onward, as it were, by the splendid beauty of the setting sun? In our own time we have seen the famous gardens of Vauxhall, where Pepys tells us the nightingales used to sing so sweetly, swallowed up in the advancing tide of brick and mortar; and Kensington Gardens, where, within the memory of many middle-aged men, squirrels were as plentiful as blackberries, are now caged-in by a suburb, until they are not more retired than a square in Bloomsbury. Westward still the great wave of human life is advancing, until our last open space yet, thank God, open to the pure country fields in the form of a public pleasure ground, is in the Royal Gardens at Kew. Like the Hampton Court Palace Gardens, they have flourished under the favour of the Crown for many reigns, and the forest-like pleasure grounds have had time to form a deep setting of noble trees round the Botanical Gardens, brilliant with flowers and exotic plants gathered from all quarters of the globe. It is true they did not pass into the possession of the Crown until the beginning of the last century, but for a century before a residence known as Kew House, with these grounds, was in the possession of Lord Capel, and from him fell into the hands of Mr. Molyneux, who married his daughter, the Lady Elizabeth Capel; so that these noble grounds, at least as far as the arboretum or forestial portion is concerned, have been in careful cultivation for at least two hundred years. Mr. Molyneux's connection with the Court, as Secretary to the Prince of Wales, son of King George II., and father of George III., appears to have drawn the attention of that Prince to the charming situation of these grounds, and induced him in the year 1730 to take a long lease of them from the Capel family. At that time the estate consisted of about 250 acres, bounded, to speak broadly, by the Richmond Road, the old Royal Deer Park, and the river Thames. In the time of George II., when these grounds were first laid out for his son, the Chinese fashion in gardening was in vogue, and the grounds round the present lake by the Palm house were designed after the fashion of the picture in the old-fashioned willow-pattern plate. In the old lake there was an island crossed by an apparently inaccessible Chinese bridge, not far off a Chinese Tai House, and as if to give a still more cosmopolitan character to the grounds, a Turkish Temple and an Assembly Room, the style of which, as set forth in Sir William Chambers' perspective view of it, it will be hard to guess at. The Great Pagoda, however, which still stands in handsome preservation some little distance off, in the midst of the arboretum or pleasure ground, is the only vestige of this Sinesian garden folly of the seventeenth century now remaining. The classical folly still exists. Sir William Chambers, as we all can see, capped artificial mounts with Temples of the Wind, Temples of the Sun, Temples of Victory and Minerva; now either entirely empty or tenanted by a stray bust or two of departed heroes, which look wonderfully cold and miserable in their deserted shrines.

These so-called classical temples and buildings in the gardens were erected under the direction of the Princess Augusta, the relief of the Prince of Wales, by whom the exotic department of the garden was commenced. All vestiges of her glass stoves have, however, given way to new buildings more fitted to the advanced appliances of our day; one noble building, however, still remains—the old orangery, a heavy but imposing-looking conservatory (marked by the date 1761 over the portal of the building), where once the blooming fruit flourished, but now devoted to specimens of colonial timber. Under the guidance of William Aiton, the author of "Hortus Kewensis," published in 1789, the gardens were enriched with a large number of foreign plants. During his time and that of his son, W. Townsend Aiton, Esq., who was an especial favourite of George III., these Gardens were the receptacle of the riches in horticulture collected and brought over by Captain Cook, Sir Joseph Banks, and Captain Flinders, in their voyages round the world. In addition to these Mr. Allan Cunningham

brought home from Australia many rare plants, and the expeditions of Bowie and Masson to Brazil and to the Cape of Good Hope furnished the Gardens with singular products of the southern hemisphere. With the reign of the poor blind king (who, by the way, spent the last years of his life in the quaint old red-brick palace seen from the lawn), the value of Kew Gardens as a scientific centre of botanical and horticultural science gradually declined, the two succeeding monarchs taking little interest in the establishment, and spending but little upon it. With the first years of the present Queen's reign, during which such vigour seemed to be infused into the scientific life of the nation, the first movement was made which transformed the Gardens from an effete royal establishment into the noble grounds which, under its able Directors, have become the most famous botanic garden in Europe. In the year 1838, in consequence of the general feeling that the Gardens should be placed upon a different footing, and thrown open to the public as a great popular and scientific institution, at the instigation of Lord John Russell a Committee was appointed to inquire into their management and condition. In 1840 the inquiry resulted in a report by Dr. Lindley, which recommended that the Royal Botanic Garden, the pleasure grounds, and the Richmond Deer Park should be transferred to Her Majesty's Woods and Forests, and this arrangement was immediately carried out; but subsequently the management has been divided between two departments, the Gardens and pleasure grounds passing to the Works and Public Buildings Department, and the remainder to the Woods, Forests, and Land Revenue Office. The Botanic Gardens in 1841 received as its Director, on the resignation of Mr. Aiton, Sir William Hooker, and from the day of the advent of this distinguished botanist the fame of the national establishment immediately began to re-assert itself. The proposal of Dr. Lindley, in his report to Government, gradually, under the care of this distinguished Director, became an established fact:—"A National Garden ought to be the centre round which all minor establishments of the same nature should be arranged: they should all be under the control of the chief of that garden, acting in concert with him, and through him with one another, reporting constantly their proceedings, explaining their wants, receiving their supplies, and aiding the mother country in everything that is useful in the vegetable kingdom. Medicine, commerce, agriculture, horticulture and many valuable branches of manufacture would derive much benefit from the adoption of such a system. From a garden of this kind Government would be able to obtain authentic and official information on points connected with the founding of new colonies; it would afford plants there required, without its being necessary as now to apply to the officers of private establishments for advice and assistance." In order to give space for these improvements, however, considerably more room was required than could be found in the original Botanic Gardens, which at the time of the transfer from the Crown consisted of only eleven acres. This portion of the old royal domain was at once opened to the public, together with its plant-houses and museums, as they then existed. These inadequate limits were soon increased by the grounds immediately about the orangery and the conservatory, which gave an additional four acres; the pinetum was subsequently added by the Queen. This land, which was contiguous with the pleasure ground, afforded room for a collection of plants of the Pine tribe, and for the erection of the Palm stove, which was built in 1818, and for the lake in its modern form—an addition of forty-seven acres. In 1816-7 the royal kitchen and forcing grounds were incorporated with the Botanic Gardens, making an additional seventy-five acres in all. In 1861 Decimus Burton commenced the building of the temperate house, which lies in the avenue terminated by the old Pagoda. The arboretum or pleasure grounds were, after the death of the late King of Hanover, thrown open to the public. These grounds, which the non-scientific public greatly esteem on account of the beautiful timber they contain, comprise an additional 270 acres, and, in addition to this, the old Royal Deer Park, of about four hundred acres, now belongs to the Woods and Forest Department, affording almost unlimited space for the extension of the Gardens when more space is required. These beautiful enclosures have, in short, grown-up piece by piece, like the British Constitution, by grants and arrangements with the Crown, and they now form the finest horticultural establishment in the world, without cavil or dispute. It is needless to say that to give a full account of the Gardens in a botanical sense would occupy volumes. As, however, we are writing for the intelligent visitor, and not for the professional

botanist, we shall probably satisfy him by pointing out the main features worthy of attention in the Garden and its museums.

The public are more familiar with the entrance from the Green than with any of the other entrances from the Richmond Road, or from the towing-path facing the Brentford and Isleworth ferries. The fine old gateway, a specimen of iron-work but rarely met with, seems to smile upon the holiday folks who, hot from toiling over the Kew Bridge, built after the Chinese ideas of such a structure, are gratified both in eye and mind by the luxuriant verdure that meets their eye immediately they pass these portals. It is no spick-and-span new garden they look upon; the turf speaks of ages of careful culture, the trees rise to a noble altitude, and their foliage strikes them as something rare and beautiful. And well it may; for the spot immediately within view is the old arboretum. Here for two hundred years at least all the rare trees of the old and new world have been collected and carefully tended. The buildings, too, wear an air of picturesque beauty which speaks of the past. The old Kew Palace, somewhat retired on the right hand, speaks of the days when solid building in fine red-brick, which harmonised so well with the verdure around, was a living fashion. It seems, like all the old buildings of that age, to have a history, and that history, as we know, was associated with the latter years of the poor, blind, old king, which were spent within its walls. At that time the grounds around the palace were not nearly so open as they are now, the paths wound about amid shrubs; and here, on one occasion, as Fanny Burney tells us in her autobiography, the poor king, escaping from his keepers, pursued her, as she fled terrified through the garden to escape him. Here, also, Queen Charlotte lived many years after his decease, and closed her days. But scientifically as well as socially this spot is famous. Looking over the wire fence which separates the royal grounds from the garden—for they still belong to the Crown—we see a sundial mounted on an antique pedestal. This site marks one of the great astronomical triumphs of the past. The curious spectator may not have an opportunity of reading the inscription which is engraved upon it, which we therefore give—

“On this spot, in 1725, the Rev. James Bradley made the first observations which led to his two great discoveries—the aberration of light, and the nutation of the earth's axis. The telescope he used had been erected by Samuel Molyneux, Esq., in a house which afterwards became a royal residence, and was taken down in 1803. To perpetuate the memory of so important a station, this dial was placed on it in 1832, by command of His Most Gracious Majesty King William IV.”

Thus by a most happy coincidence this ground may be considered sacred to the great explorers of the skies and the earth—the one a searcher of the starry heavens, the other of the rarities of mother earth; and in the names of Bradley, the Astronomer Royal, and Sir William Hooker, the creator, so to speak, of these gardens in a scientific sense, may be traced the origin of the two scientific establishments, the Kew Gardens and the Kew Observatory.

But to turn once more to the cool shade of the noble trees which tempt the lounge, scientific or otherwise, in these delightful gardens. As we have said, many of them are now in their prime, and all are more or less rare as well as beautiful. Very many of them are exotic, and were removed here by the Duke of Argyll, termed by Horace Walpole “the tree-monger,” from his famous garden at Whitton, near Hounslow. Among the most umbrageous of these trees we may note the Turkey or Mossy-cupped Oak of South Europe and Asia Minor. The noble spreading branches of this tree always attract the visitor, and around the Cork Oak near at hand it has been found necessary to put up an iron fence to keep off visitors, the tree having been nearly destroyed by the anxiety of the curious to take away trophies of its living bark. On the lawn near the pathway leading to the herbageous grounds may be seen a Weeping Willow that possesses an historic interest, inasmuch as it is grown from a cutting taken from the tree growing over the grave in which the Emperor Napoleon was buried at St. Helena. We perceive in Museum No. 1, a portion of the Oak tree under which the great Duke stood and gave his orders at Waterloo; a seat should be made of this, in order that the visitor may, at his ease, contemplate the relic of the great Emperor. Near at hand is a very curious tree, the Hop Hornbeam, so called on account of the blossoms resembling those of the Hop. The Black Walnut of the United States and the common Walnut grow side by side.—(*Edinburgh Review.*)

“The following is from the unpublished journal of a gentleman who visited St. Helena in 1842:—

Left James' Town about eleven to visit Napoleon's tomb, in a little double-bodied phaeton a little larger than a child's carriage, drawn by two strong horses, and the lightness of the one and the strength of the other were soon found to be desirable. Never did I travel over such a road in my life, road only traversable by one carriage except in places, and then in passing another the wheels graze—graze on a ledge with a rock hundreds of feet perpendicular above you, and a chasm hundreds of feet in perpendicular descent on the other side! View of the town in the rocky glen beneath very striking. First, striking, *par excellence*, where all is striking, is “The Briars,” a large residence lately purchased by Mr. Solomons for £600, and where Bonaparte at first resided until Longwood was ready for him. It is at the very termination of James' Valley, where it abruptly is concluded by a perpendicular rock, 200 feet perpendicular, down the face of which descends a waterfall, that looks as it falls like a long fillet of waving smoke.

The next object is the residence of Mr. Young, the Custom-house Collector of the island. It is seated on the summit of one of the loftiest hills, and in the bosom of a very large wood of Scotch Firs. It is just before reaching this that vegetation in healthy greenness first appears, and consists of Mesembryanthemums, Prickly Pears, coarse grass, and the common Furze, which with its bright golden blossom had quite an Essex look about it. Furze and the wood of the Gum Shrub are the only fuel of the people, excepting that of the slave ships, which now are so continually broken-up at the island, since it has got an Admiralty Court. Six such vessels, schooners of about 200 tons, were being thus served whilst we were there. The Chief Justice, Mr. Wild, is also Judge of this Court, but without any additional salary. As Chief Justice he has £800 a-year. No barristers. The Town Clerk, an attorney, is Queen's Counsel!

About half a mile beyond Mr. Young's residence the road forks, and a board tells you that the left leads to Napoleon's tomb. The descent is frightfully precipitous, and at last the carriage has to be left, and a few hundred yards traversed on foot to the residence of Mrs. Tarbutt, who rents the right of exhibiting the tomb, and for which she charges 3s. 6d. a-head. It is a very small, neat, white cottage, all one floor.

This was a little cottage whether Mr. Tarbutt (who was a merchant at James' Town, and becoming involved destroyed himself two or three years ago), was accustomed to come of a Sunday, and during the hottest season, with his wife and children. It is about two miles and a half from Longwood, prettily situated on the side of one of the mountain declivities, and looking down into one of the deep alpine valleys, so wild and so magnificent in this island. This cottage was soon found out by Bonaparte, and whenever the family were absent he was accustomed to stroll hither with Count and Madame Bertrand, and read resting upon the horse-hair sofa, still preserved in the cottage, or, when the season was warm, beneath the trees where his tomb was made. These trees were a few Willows planted in a circle, and leaning inwards to a common centre, planted by Mr. Tarbutt in a little hollow enclosed on three sides by the mountain tops, for the purpose of affording shade to his cows whilst being milked. It is about 100 yards from the cottage, and close to a spring of most pure pellucid water, and which Bonaparte drank to the exclusion of all other water during his residence on the island. So quiet, so sheltered, and yet so grand is this little spot, that it is no matter for surprise that Bonaparte should so markedly express a wish for his remains to repose there if he died upon the island. The English Government resolved to gratify the Emperor's wish, and so soon as his death was known offered to purchase the plot from Mr. Tarbutt. It was sold to them for £1200, to remain in their possession “so long as the body of Bonaparte remained there interred.” This wording secured its return to Mr. Tarbutt so soon as it was exhumed for removal to France. On Mr. Tarbutt's death it was sold by his creditors, and the purchaser, a Mr. Pritchard, lets it to Mr. Tarbutt's widow for £110 a-year. She obtains her living in the way I have mentioned, and by selling refreshments to the visitors. We had some ale and bread and butter, and Water-cresses fresh from the Napoleon spring. The vault remains open, and the hollow at the bottom precisely as when Napoleon's coffin was reposing within it. The whole is lined with plaster, is about 8 feet deep, and descended into by a flight of wooden steps, which are already suffering sad dilapidation

from the knives of the thoughtless acquisitive. One Goth actually had loosened, during the temporary absence of the exhibitor, one of the stones of the vault, and was carrying it off under his arm!

There is a little cottage near the vault where the exhibitor resides. This was the barracks for the sergeant's guard constantly kept there during the time Napoleon was inhumed in the place, and one little detached room is where the officer slept, who came every evening.

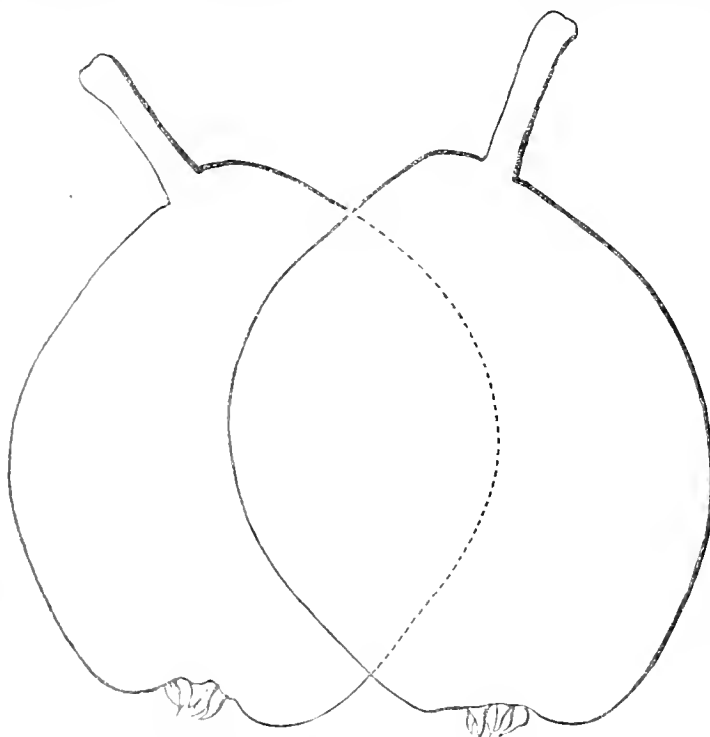
The present exhibitor is an old invalid soldier, a lucky fellow who has a pension of £37 from the E.I. Company, another of £10 settled upon him by the French Government, besides the doles he receives from visitors. The same Govern-

ment, through Prince de Joinville, promised Mrs. Tarbutt a pension as a token of their sense of the readiness with which Mrs. Tarbutt parted with the ground, but this pension has never been paid. The strongest ground for claim is, that Bonaparte used to resort so much to their residence during his life. The vault is surrounded by a strong iron railing, and is situated within an enclosure of wooden railing, such as is common in front of the villa gardens near country towns. Within are planted some Cypress trees, but there are no trees living that were there in Bonaparte's time. Those of the Willows which were alive were taken away in packages in the "Belle Poule," but the dead trunk of one of them still remains.]

PEAR LUCY GRIEVE.

This new English Pear we have received from Mr. Peter Grieve, of Culford, Bury St. Edmunds, whose name is familiarly known in the gardening world, and especially so as the improver of the coloured-leaved Geraniums, one of which bears the same name as the excellent Pear upon which we are now writing. The history of this Pear is a short and simple one, like that of the little girl, now gone to her rest, who sowed the seed of it, and whose name it bears. Mr. Grieve, in a communication, says—"The pips from which this tree and a few others were raised were sown in a flower-pot by a child some twelve or more years since, and the subsequent death of the raiser caused the seedlings to be regarded with more interest than would otherwise have been the case. The tree which has produced the fruit sent, and which is the first that has fruited, has not been grafted, but is growing upon its own roots, and trained to a south wall. My impression was that the trees, although very distinct in habit and foliage from each other, were the produce of the Winter Nellis variety, but of this I am not sure."

The fruit is sometimes larger than those that are figured, being 3 inches long and 2½ inches wide.



Pear Lucy Grieve.

It is rather uneven in outline, and is bossed round the waist and about the eye, and its shape is a combination of Glou Morceau and Swan's Egg, the appearance about the crown being particularly like the former. Skin lemon yellow, with occasionally a brownish-red blush on the side next the sun; and the whole surface is sprinkled with cinnamon-coloured russet dots, which in some parts, and particularly round the stalk, are so thick as to become patches of russet. Eye rather open, with long narrow segments set in an uneven depression. Stalk an inch long, woody, set even with the surface. Flesh white, very tender and melting, very juicy and richly-flavoured.

This is a delicious Pear, and has the texture of flesh of Marie Louise. It is ripe during October.

The fruit from which this description was taken was grown against a wall, and it is probable if grown on a standard it would ripen later.

THE MANETTI STOCK.

Mr. Camm's comments on the Manetti stock induce me to put upon paper a few remarks which I made at the opening of a Gardeners' Institute at Darlington, with regard to the action of different soils on different stocks, more especially with reference to the Manetti and the Briar.

It is a very common thing to hear the most opposite opinions expressed with regard to the Manetti stock by men who are good growers of Roses and earnest amateurs, and it generally happens on inquiry that these differences arise from the nature of the soil each rosarian has to deal with. One man will say, "Oh! a Manetti is no use with me, it never gives me a good bloom, and is always throwing-up suckers." Another man will say, "I can get no Roses to do well with me except on the Manetti stock." Mr. Camm gives a very good instance of how the Manetti stock may be injured by over-good treatment; but before he discards the Manetti from that plot of ground and plants Roses on Briars I should say, Stay your hand. Dig

the ground well over, and let it be thoroughly aerated and all the ingredients mixed. I may be mistaken, but it seems to me from his account as if all the materials were thrown together in a crude state, and not properly prepared for the roots of the Manetti. And, secondly, I might ask, Might not the weakly state of the stocks have something to do with it? One does not feed an invalid with turtle and venison, nor a baby with roast beef, though each might do well on milk and farinaceous food. My experience tells me that the Manetti Rose will stand a rich soil, provided it is not over-heavy, and that in a lighter soil it will digest a good deal of strong manure; but the instance Mr. Camm records only confirms my previous idea, that many a Rose on the Manetti is injured by over-much manure and over-much coddling. One of our Rose-growers covers his bed with manure and litter for the winter, and then puts soil on the top of that again: this seems to me a sure way to provide for Orange fungus and other evils

of a like nature. Why I should especially say to Mr. Camm, "Do not be in a hurry to discard the Manetti for Briars," is, if he wishes his beds to last, they have far more chance of doing so on the Manetti than on the Briar; and, except in cold stiff clay soils, I should never advise Roses on the Briar to be planted for permanent effect, except it were those worked on the seedling Briar, when a Rose has a chance of making its own roots, and there is less tendency to root-suckers from the Briar stock.

This brings me to the remark that I made at Darlington, and that is that Roses have fallen into disrepute in many gardens, and many people say, "Oh! it is no use my attempting to grow Roses here," merely because they have never grown anything but standards. The rage for standards has militated more than anything else to hinder the spread of Rose-growing; and my reasons for stating this are these: All standards are, as a rule, dug from hedgerows and plantations by ordinary labourers, who care more about getting a good straight stem than a good root. They are cut out of a hedge in any way they can get at them, and then laid by in bundles at home, often not even put in by the heels, but merely thrown under a shed with a little straw over them till the man has obtained a sufficient number to take them to a nurseryman. The nurseryman plants them in rows, and perhaps out of every hundred from twenty-five to thirty per cent. die, and of the remainder only thirty per cent. have sufficient root to bear transplanting. Well, all that live and push their buds are in due course budded and sent out from the nurseries. If they get into a good soil which suits the Briar they have a chance—thirty per cent. of them—to make good plants and to grow well and bloom freely under certain circumstances; but if, as is too often the case, the soil is a light loam, or sandy or peaty, then the Briar stock after a year or two gradually deteriorates.

It is the nature of all Roses to renovate themselves by shoots pushed from the base. Look at a strong Dog Rose growing in a hedge; you will see each year strong shoots sent from the base, or else root-suckers, each sucker stronger than the one sent out the year previous. Now, this nature of a Rose is entirely set on one side by the practice of growing standards with bushy symmetrical heads. Every strong shoot is pinched-in to prevent its getting the better of its neighbour. In my early days as a boy I have often heard gardeners say, "Oh! I must cut back or cut out that shoot, as it is a rogue;" although if the rogue had been left to itself it would have given the best bloom on the tree next year when properly pruned in the spring. Against this constant pinching-in of the head the Briar is as constantly remonstrating by pushing out suckers from the roots—not from eyes in the stock itself, as in the case of the Manetti, but robbers that mine their way under ground, and appear from 2 to 3 feet, and often more, away from the stem, and which as constantly have to be cut off. Another evil with regard to standards, too, is the price of them. Owing to the difficulty of obtaining good stems and so great a percentage dying, those persons who have followed the fashion of planting tall standards are chary about the number they plant, and others are prevented altogether.

I have not quite finished this catalogue of delinquencies yet. The last I bring forward against the Briar Rose, and not the least, is, that except, perhaps, for three or four weeks when in full flower, they are not pretty objects, and in winter decidedly ugly objects. The queen of flowers should not be grown as a mop on the top of a straight stem tied to a thick stick, and owing to the whole of the head being exposed they are liable to severe injury from frost—in fact, in the winter of 1860-61 I lost out of about one hundred standards every Rose but two. This alone in the north of England would decide me against the use of standards; but I am also convinced that in light loamy soils on gravelly or sandy subsoils no Roses on the Briar either as dwarfs or standards will last. About five years ago I made a new Rose garden, and planted 250 to 270 Roses in it. In the centre of the two beds I had dwarfs on Briars. On examining the other day, there is only one of the original ones living, and that one dragging on a struggling existence which will be ended by the spade this year. The rest are on the Manetti stock, and have gone on pushing strong shoots from the ground, many of them making 4 to 7 feet every year. I have, of course, lost a few weakly ones amongst them, but not many—certainly not more than half the number of those planted on the Briar, though there were at least sixteen on the Manetti to one on the Briar to start with.

I do not wish to say one word against the quality of the

bloom to be picked from maiden Briars on soils which suit them, but I do say that, with exceptional cases, the blooms from transplanted cut-back Briars are very poor after the first year or two, except in the hands of experienced gardeners who know their requirements; but for all ordinary garden soils and for permanent planting in a rosery, give me plants on the Manetti. My reasons are these: Any ordinary garden soil may be made to suit the Manetti stock, and even where soil is as bad as Mr. Camm's, beds may be made-up to grow them by judicious mixing. Then by planting the collar of the Rose—*i.e.*, the union of the scion with the stock—low enough (and this is an essential point to be attended to), the Rose emits roots of its own, and continues to push up strong shoots from the base, according to the nature of Roses, and by judicious pruning, by removing all wood more than two years old, a strong, healthy, vigorous growth is kept up. Instead, too, of having a head open to the mercy of every frost, a slight covering of litter or winter's genial covering of snow protects the base, and even if killed down to the ground the Roses push up again from the ground as strong as ever. I have frequently had my plants cut down level with the ground, and yet they made plants 3 or 4 feet high the same year. There is no bother, again, about root-suckers. I know many, from not planting deeply enough, and from not carefully taking the eyes out of the stocks before planting, have Manetti shoots from the stem; but I have never yet seen on the Manetti a root-sucker properly so called, nor do I on an average have more than one Manetti shoot on every fifty plants; whereas I have counted as many as fifteen to twenty on a single Briar stock.

I think, in the same way, that much of the discrepancy we hear of with regard to the action of the Quince on the Pear, or the Paradise, Doucin, or Burr Knott on the Apple, arises not so much from the influence of the stock on the fruit as the influence of the soil on the stock. For instance, the Quince and the Paradise are both surface-rooters; if they get on to strong loamy soil with a large admixture of clay they have no chance of making fine surface fibres. On some calcareous thin soils, again, they burn, whereas in deep light loam of a sandy nature they will grow Apple and Pear trees with as large tops almost as Crab stocks or Pear stocks. In one place, again, Apples and Pears have to be constantly lifted or root-pruned to induce fruitfulness; in another such treatment is either perfectly unnecessary or would be wanton destruction. In many a case, too, a tree is said to canker on a particular stock, whereas in another soil or even in another aspect it would succeed; in fact I see far too great a tendency to generalise from individual instances.

Another great advantage of the Manetti stock, and one which I have already partly alluded to, is that there is no hideous bare stem, and you can plant the Roses in beds, and peg them down or treat them as pillars, and with proper care the quality of the Roses will be as good after four or five years' planting as the first year.

When gardeners have a strong clam or unctuous marly soil, or even a tenacious loam, to contend with, I would give persons about to plant Manetti the same advice that Punch did those about to marry—Don't! It is, as a rule, labour lost. There dwarf Roses on the Briar would succeed; but there especially would I recommend Roses budded on the seedling Briar, such as those with which Mr. Prince, of Oxford, has been so successful; as, instead of having been rudely torn from hedges with their roots cut, these seedling Roses budded when two years from the seed, have strong healthy roots uninjured, and the union between the scion and stock is perfectly formed. Moreover, the Roses on these seedling stocks may be planted as if on their own roots with no unsightly stems to contend against.

I have spun a somewhat long yarn on Mr. Camm's text, but I am very glad to find so many amateurs are beginning to adhere more strongly to the Manetti stock, as everything which adds to the permanency of Rose-beds helps to give an additional interest to Rose-growing. I have now had the experience of eighteen years with regard to the Manetti, and I have still left on that stock Roses which were killed down to the ground in the fearful winter of 1860, but which recovered and have borne transplanting and are alive now.—C. P. PEACH.

ELECTION OF ROSES.

MR. HIXTON has obtained the votes of about fifteen well-known Rose-cultivators on the merits of the new Roses—that is, those brought out in the three years 1870-1-2. We intend

publishing the voting papers and Mr. Hinton's notes next Thursday.

DESTROYING WASPS.

I SEE some of your contributors wish to know how to destroy wasps and to take their nests. It is now about fifteen or sixteen years since, when as I was "sugaring" in the New Forest (collectors of Lepidoptera will know what I mean by "sugaring,") one night in September, I was rather startled by the sudden blaze of a large fire a few yards off me, and to see an apparition busy poking-up and adding to the conflagration. On going up to ascertain what it was all about, it proved to be an old keeper friend burning wasps. "Why, what the deuce are you at, Jimmy?" "Burning wasps," was the reply. "But I can kill them much easier and surer than that," said I. "Can you now?" said Jimmy; "there is another nest close here." So off we started, I having my beetle-bottle in my pocket with a good lump of cyanide of potassium in it, this—the cyanide—I well moistened and wrapp'd in a piece of rag, and popped in the entrance to the nest, poked it down with a piece of stick, and stopp'd-up the hole. In about half an hour, to Jimmy's astonishment, I quietly dug-out the nest and put it in his hands; to his great delight and admiration every wasp was as dead as a "red herring." I was in great request for the rest of the time I was in the Forest that autumn, and whenever I have visited it since.

But I find a far better way is to make a very strong solution with water, and to pour about a quarter of a pint in the hole leading to the wasps' nest. You need not mind about stopp'd-up the hole, nor need it be done at night. Go quietly and pour in the solution at mid-day, and every wasp will go home and be killed. I have sometimes had to clear the entrance of dead wasps to make way for others. I have killed hundreds of nests since, and dug-out scores of nests—beautiful objects they are, varying from the size of a cricket-ball to that of a bushel measure. I ought to say that the cyanide is a most deadly poison, and requires very careful handling, and after using it do not lick your fingers.—W. F.

This subject is again receiving its share of attention. The best plan is to pour gas tar into the holes. If the hole descends, and a good dose is given, the work is done; you need not, as a matter of fact, even close the hole. But our practice is to dig out and thoroughly destroy every nest at a price of 6*s.* It is well worth this expenditure. The wasps this year have not destroyed a pennyworth of Grapes. This year some strong nests on the opposite side, and close to a stream of water, deep, and 4 feet wide, bothered us, but our vermin-killer was equal to the occasion. He cut down a fine stem of *Heracleum giganteum*, and removed the pith from the joints, making what he called a "telescope." One end of this he put across the water into the hole of the nest, and poured tar into the other. The tar thus entered their habitations, and although the holes were never stopp'd-up, the destruction was complete, and a wasp never seen afterwards.

We do not care to take the nests whole for exhibition, but one was exhibited under a glass shade at the Bracebridge Show in September, and certainly arrested the attention of the numbers of visitors as much as did anything else in the Exhibition. Perhaps, however, the ticket attached lent its share to the curiosity of the thing, on which the President (Rev. C. C. Ellison) had written, "For price of honey inquire within."—J. W.

NOTES AND GLEANINGS.

A COMMITTEE has been formed for the purpose of raising a TESTIMONIAL TO MR. JAMES RICHARDS, late Assistant-Secretary to the Royal Horticultural Society, by which "his friends desire to express the high esteem in which he has ever been held by them on account of his personal worth; to acknowledge the never-failing courtesy, impartiality, and thoroughness which marked all his official relations with the Fellows during the long period of his connection with the Society; and to record their regret that circumstances should have led to the severance of his relation with the Society."

— THERE is to be an INTERNATIONAL HORTICULTURAL EXHIBITION held at FLORENCE from the 10th to the 25th of May, 1874, in connection with an International Botanical Congress, which will take place at the same time. The schedule which we have received contains 248 classes, and it is announced that prizes will be awarded consisting of 100 gold medals, 221 silver,

and 131 bronze; and besides these, the Jury will have at their disposal a number of gold, silver, and bronze medals for plants and meritorious objects not comprised in the schedule. Besides these, large gold medals will be given by His Majesty the King of Italy, the Ministry of Agriculture and Commerce, the lady patronesses, the province of Florence, and the city of Florence, to exhibitors who have contributed most by the beauty and importance of their exhibitions to the success of the Show. Prince Paul Demidoff has placed at the disposition of the Jury two large gold medals of the value of 500 francs each to the winner of the first prize in Classes 114 and 116 for Roses.

— IT is not usually till Lord Mayor's-day that crowds flock to see the CHRYSANTHEMUMS in the TEMPLE GARDENS, but last year Mr. Newton, of the Inner Temple, secured a fine display nearly a fortnight sooner than ordinary, and this year he is earlier still. The Japanese varieties in particular are many of them already in their full beauty, especially James Salter and Red Dragon; but Elaine, pure white, which was last year awarded a first-class certificate by the Royal Horticultural Society's Floral Committee, is the gem of the collection, being fully 6½ inches in diameter, and there are several other blooms of the same variety nearly as large. Of the ordinary large-flowering kinds there are fine examples of Plenipo, Lord Derby, Mr. Brumlees, Little Harry, Prince Alfred, &c., and next week it is expected the show will be at its best. In the Middle Temple Mr. Dale has also a nice little collection, which, however, is not so forward. Among Japanese varieties Elaine and Fair Maid of Guernsey promise to be very fine. Mr. Dale has also this year added a number of reflexed kinds to give variety from the usual incurved form.

— MESSRS. CARTER & Co. will hold their Metropolitan Root Show at the Crystal Palace this year. They offer twenty-six prizes for various roots grown by the farmer and gardener.

— MR. ELLIOTT remarks that few people know the richness or delicacy of PEARS until they have eaten of a summer or autumn specimen which was gathered just as soon as it would separate easily and readily from the tree, and then ripened up in flannel wraps and darkness. Temperature is again a point in this perfecting process; if above 80° Fahrenheit the Pear will be liable to rot at the core, if below 60° it will colour, but will not develop its saccharine perfectly.—(*New York Tribune.*)

THE BEAUTIFUL AND USEFUL INSECTS OF OUR GARDENS.—No. 11.

I MUST confess to being one of those old-fashioned individuals who do not quite approve of the course of study some female philosophers of our time pursue. To certain naturalists it is very possible that Mrs. Mary Treat's paper on "Controlling Sex in Butterflies" (*American Naturalist*, vol. vii., p. 129) may be a treat to read; for my own part I could not help wishing that her sex had so far controlled her as to have led her to the choice of a happier theme. After a good deal of wire-drawing we manage to find out the gist of the paper, which is this: that the worst-fed caterpillars almost invariably produced males. Given a due amount of heat and moisture, and plenty of food, and there was an immense preponderance of female specimens. These observations, of course, were made upon individuals in confinement, but the author contends that by parity of reasoning the same results would ensue in insects at large. Male butterflies in truth are simply starved females; and as it must happen in nearly every brood that a pair have to pass through less favourable conditions than their brethren, from that pair males are developed. How the balance of the sexes in these circumstances is maintained the author does not trouble to inform us, or, perhaps, to speculate upon at all.

As her conclusion of her experiments in rearing, Mrs. Treat states rather naively as follows:—"It would seem as the result of the whole that sex is not determined in the eggs of insects, and that the female require more nourishment than the male. Nor does this appear strange when we consider the reproductive nature of the female. It has frequently been said to me, 'If your theory is true, it makes the female higher in the scale superior to the male.' I believe it has always been admitted that the female gives birth to the young. If this is considered superiority, then the female is superior; but if beauty of form and colour is taken into account, then the male insect is superior; the same as with birds and the higher animals." A Mr. Andrews, who cannot accept the theory, writes to propose this crucial test—let the experimentalist

select a species (for such species there are) wherein the ordinary female larva differs from the male. If by any peculiar treatment she can turn these into male insects we shall have a strong proof that she is right. But I have been reflecting on the bearing of all this upon horticultural pursuits, as it leads to the supposition that a great benefit might accrue, not only from killing caterpillars, but from keeping them on short commons. As the author of the paper sagaciously points out, male butterflies do not lay eggs, and a starvation system carried through a few generations might blot out an obnoxious species altogether. But I am afraid the theory will not "hold water."

Butterflies of several species, injurious and harmless to the garden, are loth to leave the autumn flowers, and we are apt to notice them more, perhaps, at this season than when insects of all kinds are about in swarms. We are sure to see in October the unloved Garden White (*Pieris Brassicæ*) and the handsome and strong-winged Vanessa (no foes to us, but rather our friends) sweep over the flower beds whenever there is a sunny day, though they rarely appear in transient gleams. The Red Admiral (*P. Atalanta*) is one of the boldest of these garden visitors, and his red and black adornment are very conspicuous, though the artistic eye prefers to these the more delicate and varied markings on the under side of the wings. This butterfly has, in some respects, peculiar tastes; it will occasionally pitch upon the sugar spread by insect-hunters at night, when all respectable butterflies should have retired to rest, and it also eagerly sips the sap which exudes from some trees in autumn. So confident is the Red Admiral in his powers of flight, that he will let the stroller come provokingly near, and then he suddenly dashes off high in air, possibly to return when the annoyance has past. After October this species lays up for the winter in some cozy hiding-place. The Comma butterfly (*Graphis C. Album*), a species flying in October, is at present confined almost entirely to the midland counties. Unlike some of the Vanessa, it shows no partiality to the coast, nor does it seem restricted to the districts where its favourite food-plant, the Hop, grows.

Abundant in Worcestershire and Herefordshire, it is at present unknown in Kent and Surrey, though these are also Hop counties. The old entomologists write of the Comma as a London species, and it is possible that when it occurred on the heaths near London it was also distributed through the adjacent counties lying to the south.

The caterpillar of this butterfly comes under the observation of those who are not naturalists, because it is found feeding on the Hop during, or a little before, the time of the autumn gathering; but yet it can hardly be said to be one of the enemies of the plant, being rarely seen in any numbers, and always confining itself to the leaves. In gardens it is not infrequently found feeding upon the Red Currant. This caterpillar is of a grey tint, chequered with reddish, and well coated with branching spines, which are brown or whitish brown, excepting those which arise from a short white stripe on the back, and these are pure white. Two of the spines project forward in front in a singular manner, giving to the head the appearance of being horned. The pupa or chrysalis is hardly appropriately designated by the latter name, for it is brown, marked with black lines, and bears metallic blotches, which are of a silvery tint. No other brood of caterpillars has ever been observed except this one in July and August, yet it is still a matter that is mooted among entomologists whether there are not more broods than one of the species every year, because some of the butterflies captured in certain months display notable differences which are constant.

In form the Comma is quite unique among our British butterflies, being considerably angled; on the upper surface, which is brown, with a darker band, and various scattered spots, may be traced a resemblance to some of its near rela-

tives; the under side of the wings, among the confused brown shadings, has a distinct mark, which is either like a comma or the letter C, as the eye of the onlooker judges of it. In one of the varieties there is a mingling of green in the brown on the under side, and in another the whole is suffused with tawny yellow. But in each of the modifications in its appearance the Comma is a handsome butterfly, and as it is fortunately by its choice of localities, rather out of the way of some of the insatiable hunters after such insects, we may hope it will still visit fields and gardens in the midland counties, and, possibly, extend its range. It has been taken recently in Yorkshire and in Wales. The Comma is, in the open country, frequently to be seen settling on the Thistles; in gardens, fruit, especially over-ripe Plums, prove an attraction to the insect. Of the spring flight of these insects less is known; no doubt eggs are deposited then, as with the other Vanessa, and at least a moiety of the October specimens live through the winter.

The "merry little Copper" Butterfly, as various authors have seen fit to call it, dashes to and fro, sometimes haunting



Small Copper Butterfly (*Polyommatus Phlaea*).

the grassy slope, and sometimes fluttering over the flower beds, being, as Mr. Newman has noted, rather fond of the flowers of the Verbena. We may see it all through October, and even into November; for the autumn individuals of this species (known to entomologists of our day as *Polyommatus Phlaea*) do not survive the winter, but flutter on until their lives are ended by the cold nights. Why this butterfly should have been thought to be especially merry I cannot tell; though a lively, yet not a fast flyer, it is not more brisk than other species of its size. Undoubtedly the Copper is inclined to be pugnacious, and these butterflies may be observed chasing the autumn specimens of the common Blue (*P. Alexis*), or even daring to approach the Tortoiseshell; but perhaps this is all in sport, though it is still true that there are real butterfly contests, and all the torn wings we see are not to be attributed to the force of the wind.

In *P. Phlaea* the expansion of the wings is only about an inch; were the insect larger perhaps its beauties would be more highly estimated. The fore wings are coppery red, spotted with black; the hind wings blackish brown, with a coppery band along the hind margin. A curious variety is frequent in France and Germany, wherein the copper hue is replaced by a silvery white, and these have occasionally been picked up in England, and, naturally, considerably prized by collectors. The female butterflies of this species have usually a row of blue spots just above the band on the hind wings. A more brilliant butterfly allied to this, and once abundant in the Fens—namely, the Large Copper, *P. Hippothoe* in science, has been lost to us since 1818, and is not very likely to turn up again in Britain. The lesser species under notice is distributed throughout these islands, except in the extreme north of Scotland. There would seem to be three seasons of the year—namely, about April, June, and the close of autumn—when the butterfly is on the wing.

The caterpillar of the Copper Butterfly is found in August feeding upon Dock and other species of *Rumex*; yet it is often missed by those who are seeking it, through its habit of at once dropping from the plant when alarmed. In its mode of travelling over leaves or other objects one is reminded of the movements of the molluscous animals, for it slips along quite in a slug-like way; and indeed, altogether, it is dissimilar to what we consider the ordinary type of a caterpillar, not being long and cylindrical, but with the back very convex, and the segments overlapping each other. It has been compared to the familiar shell called a Chiton. The head is completely sheltered by the second segment. The growth of the summer brood of



Comma Butterfly, *Graphis C. Album*.

the caterpillars of *P. Phleas* is rapid, three weeks sufficing to bring them from the egg to maturity; but the "Coppers" now about prove to be the parents of a later brood of caterpillars which hibernate. They probably pass the ungenial months lay down, resting on the stems of grasses or upon the earth. —J. R. S. C.

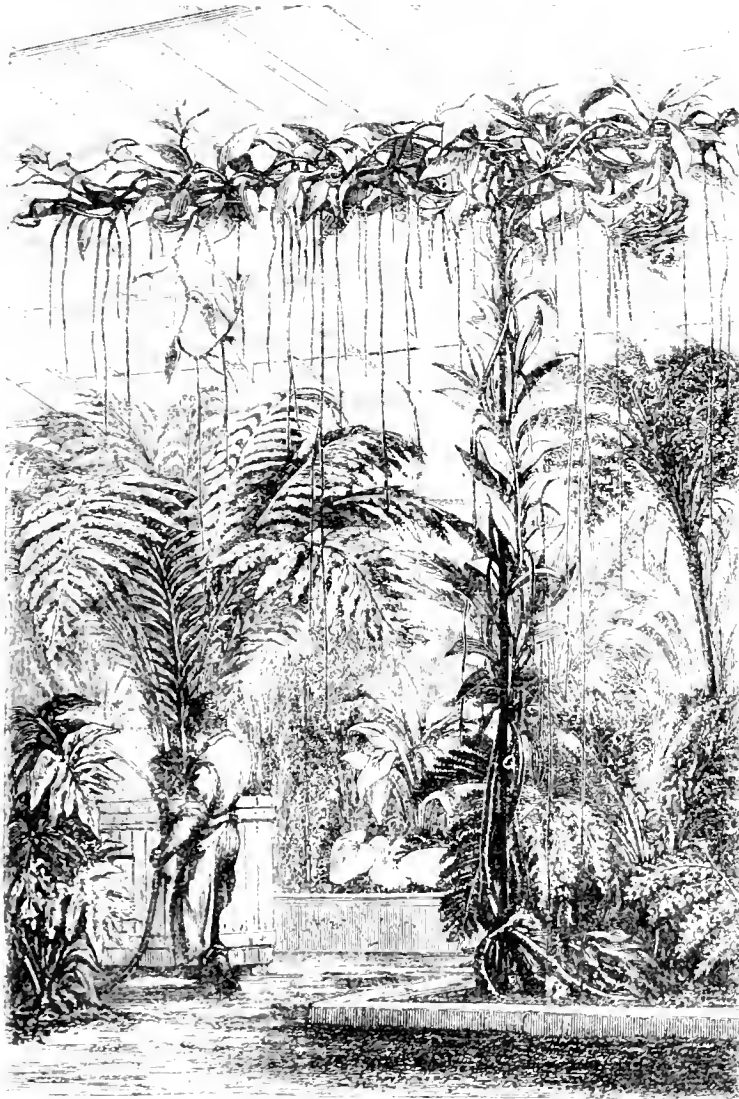
ADVENTITIOUS ROOTS.

A CORRESPONDENT, ("PONTYPOOL,") is quite incorrect in noting the Grape Vine as "the only cultivated plant that emits roots

the stems need to extend further, and that these adventitious roots are ready to perform good service to sustain that extension.

The instances we have particularised are not all, and by the courtesy of Messrs. Cassell & Co. we are enabled to illustrate one other. In M. Figuier's "Vegetable World," which they have published, occurs the following passage and engraving:—

"In the tropical forests of America and Asia the Vanilla, whose fruit is so sought after for its sweet aroma, twines its slender stem round the neighbouring trees, forming an elegant



Conservatory of the Jardin des Plantes, with the adventitious root of the Vanilla.

from its stems." On the contrary, there are many plants which produce roots in the same way. We have stood under the Banyan tree in the Botanic Garden of Calcutta, every branch of which had emitted an adventitious root, and every one of which roots had reached, penetrated, and derived nourishment from the soil. The common bane of cultivators, the Couch Grass (*Alopecurus repens*), emits adventitious roots from each joint of its creeping stems. Even the true roots of the Primrose will die, yet the plant continues to flourish, because adventitious roots are emitted from the stem. Why the Grape Vine emits such roots from its stems is still a question unanswered conclusively. They always indicate vigorous growth, therefore the true roots need no such aid. It may be, as in the case of the Banyan, an intimation that

flexible, and aerial garland, and once a grateful and pleasing ornament in these vast solitude. The underground roots of the Vanilla would not be sufficient for the maintenance of the plant, and the rising of the nourishing sap would take place too slowly. But nature has provided for this inconvenience by the adventitious roots which the plant throws out at intervals along its stem. Living in the warm and humid atmosphere of tropical forests, the stronger shoots soon reach the ground, and root themselves in the soil. Others float freely in the atmosphere, inhaling the humidity and conveying it to the parent stem. All these processes may be observed in full operation in many well-ordered conservatories."

We might add many other illustrations, but it will suffice to observe that the fibres which are emitted by the stems of the

Ivy, and enable it to adhere to the wall it climbs, are adventitious roots. That they can perform the functions of true roots we are convinced, for we have seen Ivy plants retaining their verdure on walls after the stems of those plants had been severed from their roots. Then there is the common Dodder (*Cuscuta*), which by the adventitious roots of its stems abstracts the sap of the plant it embraces until it brings death to that plant.

INQUIRY.

HAVE any gardeners been visited by a Scotchman in Norfolk and Suffolk selling cloth that proves useless? He makes various statements as to who are his uncles.

WORK FOR THE WEEK.

KITCHEN GARDEN.

EVERY part of the garden should now be kept free from litter. Celery and all other vegetables should be trimmed at the rubbish heap, and not on the quarters, as is sometimes the case; the latter method gives an unsightly appearance, and serves to encourage slugs and insects injurious to gardens. Where *Asparagus* is required throughout the winter, beds should now be made for forcing it; half-spent dung mixed with a small portion of fresh manure and some beech or oak leaves will maintain a steady heat for a length of time. Make a bed 4 feet high, and put on the frame immediately; when the heat is up and has become regular, level the bed and lay on a coating of leaf mould 3 or 4 inches thick, then place the roots as thickly as possible over the bed, and cover with 3 inches of the same soil; next give a good watering, and afterwards close the frames until the heat rises, when air must be given according to the state of the bed and the weather—from 57° to 60° of heat will be quite sufficient at any time. Dress the out-door beds if not yet done. Where Broccoli has grown very vigorously, and is required late in the spring, it may yet be laid down as recommended last month; the roots should be deprived of as little of the soil as possible. *Cucumbers* in pots must be supplied with manure water if the plants are growing vigorously, it being necessary to afford them nutritious matter pretty freely to make up for the deficiency of soil. Plantations of *Lettuce* for spring use should be looked over frequently in the morning, and all slugs destroyed; if they should be very plentiful sprinkle lime over the whole of the ground either early in the morning or late at night when the weather is mild. Secure from frost any now ready for use. The *Mushroom* beds now coming into bearing should be carefully looked over twice a week. If any very dry spots are observed on the beds, slightly sprinkle them; this will scarcely be necessary if dung is used to maintain the necessary temperature. The whole of the main crop of *Potatoes* should now be taken up and carefully stowed away. Those planted in August should be protected from frost with pea haulm. In favourable soils and situations these will afford a supply of new *Potatoes* from the end of this month till Christmas. *Sea-kale* can be forced in a similar manner to *Asparagus*, but it is much less troublesome to force it in the open ground; by placing pots over the roots, and covering with leaves and dung, it may be had in perfection by Christmas.

FRUIT GARDEN.

At the risk of being charged with repetition I cannot avoid urging the importance of early autumn planting; if put off till December scarcely any advantage is gained over planting in March or April, but a great disadvantage will be experienced if severe weather should set in immediately afterwards. If the leaves are still somewhat green, the check given by raising the plants will have a tendency to accelerate the ripening of the wood; and if, after watering, the bark of the young wood should present any appearance of shrivelling, the stems of the trees may be twisted round with hay or straw bands, and a slight shading given to the top for a few days with fronds of ferns, &c. The straw bands should be twisted hard, so as not to retain much moisture, and for tender trees they will be as serviceable in moderating the rays of the sun in summer, as in guarding against the severity of the frost in winter; if, in addition, the roots are well manured with dry litter they will continue to grow all the winter, and thus be well fitted to supply the expanding buds in spring. In many gardens an extinction of many of the old trees should be gradually effected. I say gradually, because frequently gardeners ardent after novelty get themselves into scrapes by clearing away too much at a time, and thus rendering the supply deficient until their young trees come into bearing. In planting, care should be taken to select the most approved sorts. The improved varieties of Pears should be introduced into every garden either by planting or by grafting on established trees. In addition to their other good qualities, most of them are great bearers, and produce fruit when the trees are comparatively young. No Pears need be grown on a south wall in favourable places, with the exception of, per-

haps, a Jargonelle, to supply early fruit; this, along with the Citron des Carmes and one or two more varieties, will be quite sufficient.

FLOWER GARDEN.

Fuchsias and similar plants that usually shoot up if killed to the ground should have a coating of leaf mould, decayed tan, or some light material laid over the roots. Also protect tender shrubs with baskets and mats; cut down and clear away the stems of herbaceous plants. The weather is now favourable for planting, and it should therefore be proceeded with expeditiously. Where large trees or shrubs are to be removed they should be taken up with the greatest care; every root should be carefully preserved, more particularly the small ones, this being of greater importance than that of preserving an immense ball of earth to a few of the larger roots. Should a tree or shrub lose by accident many of their roots at the time of removal, a part of the head should be pruned away, as the head and root should always bear some proportion to each other. After planting they should be securely staked, that the wind may not have sufficient power to loosen them.

CONSERVATORY AND GREENHOUSE.

When the principal collection of *Chrysanthemums* comes into bloom, a selection should be made of the best and most useful sorts. Give timely attention to providing a succession of blooms with which to keep the house gay, and avoid as far as possible the expense of forcing, which is injurious to most plants. Be careful not to let plants in bloom suffer from want of water, giving weak manure water to *Chrysanthemums*, *Salvias*, *Camellias*, &c., and use every means to preserve the beauty of specimens in bloom as long as possible. Damp and mildew are the great enemies to be guarded against at present in conservatories and greenhouses, and these must be sharply looked after, especially in the case of plants that have not ripened their growth well, and are in a rather soft state. If not already done, get plants tied into proper form with the least possible delay, for it is difficult to tie a plant so that it will not look a little stiff and unnatural, and the sooner all this kind of work is done the better the specimens will look when in bloom.

STOVE.

Most of the plants should now be kept as much as possible in a state of rest. No woody plants should be allowed to become quite dry, but they should only have sufficient water to enable them to retain their foliage if evergreen, which is the case with most of the plants in this department. Watch narrowly for insects, and destroy them as soon as perceived.

PITS AND FRAMES.

The pits and frames containing *Auriculas*, *Carnations*, and similar plants should have the lights drawn off every mild day. If any of the plants should want water give it sparingly, and only to those in actual want of it.—W. KEANE.

DOINGS OF THE LAST WEEK.

A CONSIDERABLE fall of rain during the past week has somewhat retarded out-of-door operations. It has been cold too, the thermometer being occasionally down to the freezing point in the morning. We would just notice the state of the *Potato* crops in this neighbourhood. They are rapidly lifting them on the farm, and the result is as follows:—*Dalmahoy*s and *White Dons*, which seem to be the most susceptible, are almost totally destroyed. *Regents* (Walker's) are not quite so bad. *Rocks* are very good in quality, and are not much diseased. *Flourballs* are not diseased; indeed all the sorts introduced from America seem to be free from blight; so that if the quality is somewhat inferior to our own standard sorts, there is compensation in the freedom from disease and the weight of crop, the yield in many instances being enormous.

KITCHEN GARDEN.

The bush and pyramidal fruit trees now that the fruit is gathered should be looked over, and all superfluous shoots and branches removed. Our own require to be looked over, but work of a more pressing nature demands attention, and where this is the case the trees will sustain no injury if they are attended to at the earliest convenient opportunity. In doing so it is well to give an eye to any insect pests, which by being destroyed at this time will cause a great saving in labour in spring and summer when there is little time to attend to it. For instance, the eggs of *Bombyx Neustria*, or *Lackey Moth*, can readily be detected in clusters on the small branches; they are generally glued together and fastened firmly round twigs as thick as a cedar pencil. The *Quick hedges* and orchards of *Apple* trees are frequently defoliated before midsummer by the ravages of this pest, though hand-picking in winter, or destroying the caterpillars as they form in clusters shortly after they emerge from the eggs, would have to a large extent prevented it.

We cut over the *Asparagus* close to the ground, and carried off the tops at once to prevent the seeds falling on the beds, where they would vegetate during the ensuing summer, and cause much labour with the hoe.

FRUIT AND FORCING HOUSES.

It is only necessary to allude to the treatment which the *Pine Apples* receive at this time. In the houses where fruit is swelling-off and ripening the temperature should be about 65° at night, with a rise of from 5 to 10 by day. It is, however, not absolutely necessary to maintain quite so much heat, as the fruit will ripen and be of good flavour if the temperature is 5 lower, only in the lower mean it will not arrive at maturity so rapidly. Considerable attention must also be paid to atmospheric moisture and ventilation. No water should be kept in the evaporating troughs, as enough moisture can be obtained by sprinkling the paths and walls of the house twice daily, and even this amount of moisture should be regulated by the state of the weather out of doors. Very little water is required at the roots of the plants; those having fruit in any stage of development should not be allowed to get quite dry, otherwise the fruit will be juiceless and wanting in flavour, and too much water will cause it to become black at the core, or to show decay in patches upon the exterior portion, and if it do not this it will not keep long after it is ripe. A well-ripened Pine Apple, if it is cut as soon as it is ripe and placed in a dry fruit room from which frost is excluded, will keep perfectly sound and good for three or four weeks. Ventilate the houses in all weather, except cutting frosty winds; even in very cold weather the top lights should be moved down or opened, if only half an inch. The smallest chink will fill the house with fresh air, and at the same time promote circulation.

Cucumber Houses.—This is now a critical time for the occupants of these, and where houses are badly constructed much care and judgment are necessary to produce a continuous supply of fruit from now until February. Low lean-to pits are the worst places imaginable for Cucumbers, especially if a man cannot get inside to attend to the plants without moving the lights; no wonder if in such a case damp and canker cause wholesale destruction. Half-span houses facing the south are the best, and a sufficient quantity of hot-water pipes should be laid down so that the temperature can be maintained at 65°, even in a severe frost, without overheating them; and the plants must be trained to a trellis fixed about a foot from the glass. We do not require a large supply during the winter, so it is not necessary to overcrop the plants, only two fruit being allowed on a plant at a time. No disease has ever visited us, and our stock of plants is always increased by cuttings. This winter we are growing our own Tender and True, also Blue Gown; they are, doubtless, the best two Cucumbers that have yet been raised, and both sorts are shy in producing seeds. Our plants are looked over once a week, to thin-out the growing shoots and to train and stop those that remain. If there is any trace of thrips, fumigate with tobacco until they are destroyed. Bottom heat is entirely supplied by means of hot-water pipes, and when this is the case there is some danger of the plants suffering from want of water, even if the soil in which they are growing be wet on the surface; when watering, give sufficient to thoroughly wet the soil through. Our beds of soil are about 20 inches in depth, and they require watering once in three or four weeks.

PLANT STOVE AND CONSERVATORY.

In the stove the principal work has been to look over all plants infested with mealy bug, and to wash them when there were any traces of insects. It is very difficult to get rid of this pest altogether, but it can be done by persistent washing with soft soap and warm water. At this time of the year the plants must be carefully looked over once every week, and all wood-work must be washed two or three times during winter with warm water. Slugs have been troublesome to us; the young growths of Orchids are very attractive to them. As they invariably feed at night it is necessary to take a lamp to watch their movements, and they can be destroyed as they are found feeding upon the plants. Greenhouse plants require to be carefully watered, it will not do to use the watering-pot indiscriminately amongst soft and hard wooded plants. Healthy hard-wooded plants which are not restricted in pot-room require water once or twice a week, but it will not do to look over the plants so seldom as this. They should be looked over at least every alternate day, and the state of the roots and requirements of each plant ascertained.

Chrysanthemums will soon be in full beauty, and those who have given most attention to their plants during the summer months will now enjoy the fruits of their labours. James Salter and Elaine amongst the Japanese, and Mrs. Rundle amongst the large-flowering section, are now in flower. The varieties of *Cedri Nulli* are amongst the earliest flowering of the Pompon section. We have been tying and training the dwarf-growing specimens, and we dusted all of them with flowers of sulphur to destroy mildew. This generally appears on the plants as soon as they are placed under glass. It can always be destroyed without injuring the plants if sulphur be used upon them on its first appearance. Many appliances have been invented, more or less expensive, for dusting them with sulphur. The best which has yet come under our notice is worthy of recommendation for its smallness of cost and simplicity, at the

same time it is very efficient. It is simply a pair of bellows with a small box, at one corner of which there is a hole to fit the nozzle of the bellows, and at the other a smaller hole through which the sulphur is blown out in a regular and fine cloud when the bellows are in operation.

The earliest of the *Hyacinths* are ready to be removed to the forcing houses, and the latest-flowering Dutch bulbs have just been potted.

FLOWER GARDEN.

Looked over the herbaceous border, and cut away all growths which had got out of bounds; attention to this is necessary all through the summer, as the smaller-growing species are apt to be smothered and ultimately destroyed by their larger-growing neighbours. Many persons complain that the more rare and small-growing Alpines will not succeed in the neighbourhood of London. They will succeed very well even in ordinary soil if they have justice done to them. Many persons want a mass of flower all the summer, and bedding plants amongst Alpines; the consequence is that the gross-growing Zonal Pelargoniums, Verbenas, &c., overgrow such plants as the alpine Gentian, the dwarf-growing Saxifrages, and others. It is necessary to keep the herbaceous border distinct from the bedding plants, and the smaller-growing Alpines in a different part from the taller-growing robust species.

Planted out a number of kinds of *Narcissus*. These fine old flowers have been sadly neglected recently, but the rage for masses of colour having somewhat abated, we may hope to see them inquired after again. Even the old-fashioned Daffodil has been turned out of the cottage gardens, and little plots 4 yards by 8 have their rows of Geraniums and Calceolarias, and where there is no accommodation for wintering bedding plants the owner must buy or beg fresh plants every year; whereas the charm of gardening consists in variety, and attending to the requirements of the same plant or plants all the year round. One or two of the best kinds of *Narcissus* to plant are *N. poeticus*, *N. poeticus flore-pleno*, *N. Bulbocodium* (the Hoop Petticoat), *N. juncifolius*, a charming small species with lush-like leaves; *N. incomparabilis* and its double varieties; and *N. cernuus plenus*. The last-named is rare and expensive, but it is very beautiful. Having once obtained a supply of bulbs of any of the above, they are little or no trouble afterwards; all that is required is to divide the roots and plant afresh every third or fourth year.—J. DOUGLAS.

TRADE CATALOGUES RECEIVED.

Charles Turner, Royal Nurseries, Slough.—*Catalogue of Roses, Fruit Trees, Conifers, Hardy Trees, Shrubs, &c.*
 Little & Ballantyne, Carlisle, and 36, Mark Lane, London.—*Descriptive List of Roses, Rhododendrons, &c.*
 Jean Verschaffelt, Faubourg de Bruxelles, No. 134, Ghent, Belgium.—*Supplement et Extrait du Catalogue des Plantes.*
 Jules de Cock & Sœur, Ledeburg, near Ghent.—*Trade Catalogue—Autumn, 1873, Spring and Summer, 1874.*
 Constant Kerkvoorde, Wetteren, Belgium.—*Catalogue des Arbres, Fruitières, Rosiers, Arbres et Arbustes d'Ornement.*

TO CORRESPONDENTS.

* * We request that no one will write privately to any of the correspondents of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to *The Editors of the Journal of Horticulture, &c., 171, Fleet Street, London, E.C.*

We also request that correspondents will not mix up on the same sheet questions relating to Gardening and those on Poultry and Bee subjects, if they expect to get them answered promptly and conveniently, but write them on separate communications. Also never to send more than two or three questions at once.

BOOKS (*Frank W.*).—Balfour's First and Second Books of Botany. They are two very small volumes in Collins's Elementary Series. (*M. Cocks*).—Sutherland's "Handbook of Herbaceous and Alpine Plants," and Williams's "Stove and Greenhouse Plants."

GRAPES SHANKING (*C. B.*).—As the Vines are planted outside the vinery, we are of opinion that the shanking is caused by the roots being chilled and not supplying sufficient sap to the bunches. If the roots were mulched over, and over the mulch a tarpaulin to exclude excessive wet, the evil probably would not occur.

HALF-CHARRING VINE SHOOTS (*I. Constant Subscriber*).—The end of the shoot on which a bunch of Grapes is growing is held in the frame of a lamp until partially charred, previously to inserting the shoot in water as described in our number published on the 1st of last May.

DRIVING AWAY RATS AND MICE (*S. Brown*).—The old magazine which states that a plant which grows in great abundance in every field, the Dog's-tongue (*Cynoglossum officinale*), if bruised and laid in places where rats and mice abound drives them away, may be correct, for it smells delectably. Apply to some of the herbalists in Covent Garden Market.

FRUIT TREES FOR KITCHEN GARDEN (Ramalho).—We cannot tell from your plan whether you can make use of both sides of the wall, but we assume you do not intend to do so. The east wall will have a west aspect and will be suitable for Pears, which we should plant as vertical five-branched cordons, at 3½ feet apart, on the Quince stock. The brick wall to the north will have a south aspect; plant it with Apricots at 15 feet apart. The oak fence will be available on its east side for Plums and Cherries, which may be planted 15 feet apart. The oak fence to the south will have a north aspect; it will suit the Morello Cherry or Currants. The border 28 feet wide will answer for Currants and Gooseberries, and the whole of the inner borders we should margin with fruit trees, planting them 3 feet from the edge of the walks, planting Pears on the Quince, Apples on the Paradise stock, Cherries on the Mahaleb, and Plums as bushes and pyramids. On the opposite side of the walk you may have Apple or Pear trees trained as double cordons on the Paradise or Quince stock. They should be planted about 1 foot from the edge of the walk, and trained to strained galvanised wire. The remainder of the borders you would not probably find too large for Strawberries and Raspberries, which you seem to have overlooked. Plant them on the 10-foot west (east aspect) border. The centre of the main borders or quarters will be suitable for Potatoes.

VARIEGATED IVY ON IRON BALUSTRADE (E. W.).—The Ivy will grow, but not cling to an iron balustrade. Plant in rich light soil and train the shoots, securing them with tarred string as they grow to the ironwork.

WOODLICE, CRICKETS, AND COCKROACHES IN MUSHROOM HOUSE (R., Lancashire).—For the woodlice place a little short hay all round the walls, and on this pour boiling water in the morning, also pour it down the wall. The woodlice will secrete themselves in the hay, of which there need not be more than an inch wide at the junction of the bed with the wall; and the boiling water, if confined to this, will not injure the Mushroom beds to any great extent. Repeated a few times, this proceeding will free the house of the woodlice for a while. Phosphor paste spread on thin slices of bread will destroy the crickets and cockroaches.

SAFRANO ROSE TREE TOO LARGE (S. S.).—There is no necessity to increase the size of pot. Turn it out of its pot, remove from it all the soil that can be got without injuring the roots, and re-pot in the same size. This should be done at once. The head need not be subjected to more than the usual pruning, but, if anything, cut-in rather closer than if the plant had not been disrooted.

SOWING LILY OF THE VALLEY (Kenilworth).—Keep them in layers in dry sand until spring, and then sow in light rich soil in a slightly shaded position.

PLANTING THORN HEDGE (T. C.).—For forming a hedge quickly we recommend plants 2½ feet high, stiff rather than long and weak in growth—those known as "extra picked." We should have along with the Quicks every fourth plant a Beech 2½ feet high. Allowing eight plants to 1 yard there will be two Beeches and six Quicks; for your 220 yards you will therefore need 460 Beeches and 1380 Thorns. As you plant on the level the ground should be deeply dug or trenched, and if it is in bad heart a liberal dressing of manure may be mixed with it. The space trenched or dug should not be less than 2 feet wide, along the centre of which you should take out a trench, and in this place the Quick and Beech at the distance named, and as deeply as they were planted before, filling-in with fine soil, and making firm and level. The plants should not be cut-back until they have grown a year, and then be cut to 6 inches from the ground, excepting the Beech, which should only have the sides and tops trimmed, and this you may do with the Quicks, only when cut down they make much closer and better bottoms.

EXHIBITING ACACIA LONGIFOLIA MAGNIFICA (A. W.).—A good, well-formed and flowered specimen of Azalea or Pimelea would be more valuable in a collection of plants at an exhibition than the Acacia, but a great deal depends on the plants and their "get-up."

HEATING GREENHOUSE AND PIT (W. J. M.).—As the end of your greenhouse is at the back of the kitchen fireplace, we should, if practicable, heat it from a boiler behind the kitchen fire, and thus make one fire do for both. Two 3-inch flows and the same number of return pipes down one side and across the end up to the doorway would afford you sufficient heat for the greenhouse. Two 3-inch pipes—namely, a flow and return, would give sufficient top heat for the pit; and have the same number of pipes beneath the bed for bottom heat. We fear, however, that you will not be able to heat it from the kitchen fire, as the house may be below the fireplace. In this case you would need a boiler with a stovehole outside, sunk so as to get the necessary level. Considering the present price of coal, if possible have a boiler at the back of the kitchen fire. Your greenhouse will answer for the Vines, having the border partly within and partly outside the house. The pit will answer for all the purposes you name.

MEDLAR GATHERING (C. P., Herts.).—If, when lifted up above a horizontal position any of either the Medlars or the Nonpareil Apples part from the spray, they may be gathered.

HERBACEOUS BORDER FLOWERS (N. L. D.).—Select for yourself from the following:—*Agrostemma Coronaria flore-pleno*, crimson; *Alyssum saxatile compactum*, yellow; *Anemone apennina*, blue; *A. hortensis fulgens*, scarlet; *Anemonea orientalis*, salmon with red spots; *Aquilegia fragrans*, lemon; *Arabis alba*, white; *Auricula deltoidea grandiflora*, bluish lilac; *Aster alpinus*, blue purple; *Betonica grandiflora*, purple; *Campanula acroata*, blue; *Cheranthus Marshallii*; *Colchicum alpinum*, rose purple; *Convallaria rosea*, rose red; *Cyclamen neapolitanum* red; *Cynoglossum apenninum*, blue; *Delphinium Belladonna*; *Dianthus crenatus*, deep scarlet; *D. floribundus*, pink; *D. pinus*, white; *Dodecatheon Meadia*, lilac; *Draba nivalis*, yellow; *Erigon speciosus*, bluish purple and yellow; *Helicopsis niger*, white; *Hepatica anglica*, blue; *H. triloba*, blue and red, double and single varieties; *Hypericum calycinum*, yellow; *Theris saxatilis*, white; *Iris attica*, yellow, veined purple; *I. reticulata*, blue-purple, blotched yellow; *Lilium tenuifolium*, scarlet; *Narcissus jonquilla*, yellow; *Oenothera macroura*, yellow; *Ep. tenaxifolia*, white; *Orchis verus*, purple; *Phlox verna*, rose; *Pulsatilla agnoscifolia rubra*, purplish red; *Scilla sibirica*, blue; *Sempervivum californicum*, fine for edging, leaves in green rosettes, tipped brown; *Silene alpestris*, white; *S. Schauffa*, rose pink; *Sisyrinchium grandiflorum*, purple; *Synthyrium caucasicum*, blue; *Trollius asiaticus*, orange yellow; *T. eur-potis*, lemon; *T. nepalensis*, yellow; and *Zephyranthes candida*, white. These do not exceed 18 inches in height, though soil, &c., make considerable differences.

MELON PIT (Melon-eater).—You certainly ought to have more than six Melons from your seven-light pit. We apprehend there is no provision for firing, nor any means of increasing the temperature after the heat of the bed first made declines. In this case it will be quite early enough to sow the seed at the beginning of April in a cucumber frame or hotbed, and grow so

as to have strong plants by the beginning of May. The pit, we presume, will be filled with leaves, and be this month planted with Potatoes, which will be off in April or early in May, when the soil will be removed, and the leaves being only partially decayed, will, if taken out and mixed with some hot dung, afford in a few days a gentle heat sufficient to ripen a good crop of Melons in August.

VARIEGATED LAUREL (Chester).—You are not mistaken in believing that there is a variegated variety of the common Laurel. It is in the catalogues of Messrs. Veitch, Messrs. Cripps, of Tisbury Wells, the Lawson Seed and Nursery Company, and others.

VIOLETS TO BLOOM IN AUTUMN AND WINTER (Viola).—Plant rooted runners or suckers in April or early in May in good, rich, light soil, enriched with thoroughly-decayed manure or leaf soil, choosing a position shaded from the direct rays of the sun, an east border being suitable. The plants should be 1 foot apart every way, and be well supplied with water until established, likewise in dry weather during the summer. Stir the ground frequently about the plants, keep clear of weeds and runners, and dust them occasionally with soot. In September they should be taken up with balls, and planted in frames of good, rich, light soil on a dry subsoil in a sheltered sunny position. They will need to be well watered, and the lights should not be put on until continued heavy rains occur, and even then air should be given. Protect from frost by covering the lights with mats. In mild weather they cannot have too much air. The kinds we grow, and which afford us a supply of Violets in September and through the winter, are Czar, which is the only single one we grow, Double Purple or Russian, Queen of Violets, and Neapolitan. We have frames or pits 60 feet long filled with these, and containing about a thousand plants, and we have about a similar number of plants outside, which succeed those in frames, and flower until May.

BINDWEED IN ASPARAGUS BED (Son of Adam).—The roots of the Bindweed having taken possession, it will be difficult to eradicate them without destroying the bed; but we should in the first instance try a dressing of salt, at the rate of 1 lb. per square yard, in March and every month through the summer, or as long as the Bindweed shoots appear. If the Bindweed do not appear after the first or second dressing, discontinue the salt until the shoots of the Bindweed again appear.

APPLE TREE UNFRUITFUL—PLANT LEAVES FALLING (J. H. B.).—The Apple tree which does not make much wood has probably been weakened by excessive bearing in previous years, and, as the tree is not over-vigorous, we should advise your loosening the surface soil and giving a top-dressing of short manure 2 or 3 inches thick. The leaves you sent us are not those of a Thunbergia, but of Euphorbia jacquiniiflora, which loses its leaves at this period of the year, when the plants are started into growth early in the season. The only way to retain them on the plant is to keep it in a growing state by a moist brisk heat, with moderate watering at the roots. The plant will flower all the better of the wood being firm and well ripened, but in a greenhouse you will need to keep it rather dry in winter. By all means keep the shoots from the glass. We cannot undertake to name Fuchsias; they are too numerous, and resemble one another too much.

AZALEA CASTING ITS LEAVES (Q. S. D.).—It is probably due to the growth of the plant being weak and the wood small, the buds prominent, and the roots not very active. Perhaps the drainage is imperfect, or the soil deluged either from watering or rain. Some kinds, from their weak growth, are very impatient of wet, and many kinds—in fact, most of them, lose their leaves at this season or later. The only way to prevent premature growth is to keep the plants cool, light, and airy, and only moderately moist. If kept warm and moist their growth is encouraged, and a general cause of premature growth is the imperfect ripening of the wood in the previous year.

CORSAIR GERANIUM FOR BEDDING.—In my notes on Mr. Pearson's Geraniums I made an omission. I omitted to mention Corsair. This I consider the best bedding Geranium I have seen during the summer. Having visited many places of interest both in the midland counties and the north in August and September, for the express purpose of seeing the bedding-out in those places, I can say confidently it ought to have been the first on the list. —QUINTIN READ.

GARDENIA CULTURE—DRYING FERNS (Abbot).—The Gardenias from now until spring should be kept rather dry in a cool, light, and airy part of the stove, or in a warm greenhouse, giving water only to keep the leaves fresh; and in February or March place them in a temperature of 60° at night and 70° to 75° by day, with a rise of 10° to 15° from sun heat, the atmosphere being moist, but the plants not syringed overhead after the flowers begin to expand. They are all the better of a bottom heat of 75°. After flowering, the plants may be cut-in, and grown-on in a brisk moist heat of 65° by night and 70° to 75° by day, potting them, and continuing the treatment until the growth is complete; then ripen or harden-off by exposure to light and air, keeping rather dry and cool in winter. It is not good practice to dry-off Ferns, but they should be kept rather drier than when growing. The soil, even for deciduous kinds, should be kept moderately moist. The prices given of fruit in Covent Garden Market are retail. The sieve contains seven imperial gallons.

TRANSPLANTING FIG TREES (An Old Subscriber).—We should delay the planting until spring, and make sure that the border is well drained, and of light rather than heavy loamy soil. To this we would add some old mortar rubbish and mix it thoroughly with the soil. For planting we advise three parts turfy loam chipped-up rather fine, mixed with two parts old mortar rubbish and one part of decomposed manure.

TREATMENT OF MUSCAT OF ALEXANDRIA VINES (T. Mitchell).—Probably the roots have travelled into unsuitable soil, but this is often blamed when the cause of stanking has been found in the summer management of the Vines and the restrictive system of pruning. If you had not intended to plant young Vines we would have advised you to make a new border outside for the roots of the old Vines, and by a different system of pruning have managed to get rid of all the old canes in a few years by cutting out one or two of the old ones each year and training-up young canes to supply their places. This you ought to do with your young Vines; but they must have room to expand their leaves and ripen their wood, in which case a few bunches could be obtained from them in 1875.

NAMES OF FRUITS (H. Thompson).—You have not numbered or otherwise distinguished the Pears, and consequently we cannot give you the names. (*J. P. Erith*).—1, Graevenstein; 3, Manks Codlin; 4, Dutch Mignonne; 5, Fearn's Pippin; 6, Cellini; 7, Pomme de Neige. (*John Thomas*).—1, Wormsley Pippin; 3, Woodcock; 1, Winter Maudslayi; 5, Lady's Delight; 6, Minchall Crab. (*J. P. W. C.*).—The Apple is Robinson's Pippin, and the Pear Red Doyenne. (*Mrs. M. C.*).—The yellow Apple is King of the Pippins, and the green one Hawthorned.

NAMES OF PLANTS (*J. Crossfield*).—There is no doubt your plant is a *Ficus* of some sort, of which there are many species, but we cannot tell what it is from the description. Send a leaf and fruit. The bulbs of *Limonium verum* can be had at any bulb shop in London. We are surprised that you cannot get them in Manchester.

POULTRY, BEE, AND PIGEON CHRONICLE.

STANDARD CHARACTERISTICS.

The writers who give their opinions on this head seem to be ignorant of the fact that Mr. Baily, of Mount Street, Grosvenor Square, published the colour, &c., of exhibition fowls in 1860, and that a "Standard of Excellence" was issued by the Poultry Club in 1865, the Club being composed of the best exhibitors, breeders, and fanciers of the time, many remaining until this day, and that a second edition is now being published. Having acted as judge in England and several times abroad, I can speak as to the great boon that this work is to amateurs. When I went to Canada the ignorance on poultry points was ludicrous, but by the help of exhibitions and the "Standard" which amateurs were able to get at—it being reprinted in portions in the monthly numbers of the "Canada Farmer"—their eyes were opened and they saw. The Americans were in the same state, and they copied it; but inasmuch as it did not suit some of the compilers to alter their birds they eased-off the "Standard" a bit to suit their views. Well, they have a right to their opinions.

As to judgments being made arithmetically, I can hardly conceive that that was the intention of the Poultry Club, but to stamp simply a relative value on each point. No judge who has not a practical knowledge of his work can act properly, and a nice job he would have to sum-up the merits and demerits in an addition sum even in the fifteen scale. I certainly myself found the "Standard" very useful in shutting-up disappointed exhibitors, and could fill your pages with amusing stories on that head. But as I know for a fact that after our four exhibitions at Toronto, combined with the publication of the first edition of the "Standard," the fowl fever spread throughout the length and breadth of Canada and the United States, in the latter to a marvellous extent up to the present day. I, in the name of Canada, whose poultry representative I have the honour to be in this country, am grateful to the compilers of the work for their labours.

That the supposition that any judge would be tied down to the actual value of the different points is fallacious, but that the work is a most valuable one must be admitted, and I think that few judges would be found to withhold a prize from any bird bred up to the "Standard."

"X. Y. Z." gives beginners too much credit when he says they know what and how to show. An old exhibitor does, from his long practical knowledge and experience, not so the novices.—F. C. HASSARD, *Sheerness*.

BRIGG POULTRY SHOW.

This was held in the Corn Exchange on the 21st inst. There could not have been a better show of Pigeons.

The *Dorkings*, both old and young, were very good. *Cochins* were good throughout, the first-prize pen taking the cup for the best pen in Classes 1, 3, 5, 6, 8, and 10. The chicken classes were also very good. *Brahmas* had three classes, which were all good. The first prize pen of chickens was the best that has been seen this year. Of *Careless* and *Houdans*, both classes were good. *Houdans*, or any other French variety, were very fair. The *Game* classes were well filled, and for the most part good birds. Of *Spanish* there were only seven entries in the two classes; the adult birds were very bad. The *Bantam* classes were the largest and best in the Show, there being twenty entries in one class. The Any variety class was very well filled, Poles and Silkies being the prize birds. There were also some good Black Hamburgs.

Among *Pigeons*, Carriers and Pouters were as good as could possibly be seen, the first-prize Carriers winning the cup for the best pen of Pigeons in the Show. Tumblers were very fair. Fantails were good; Jacobins all good, not a bad pen shown; and Turbits fair. Trumpeters and Babs were very good. The Any other variety class was well filled, comprising some very fine birds.

There was a very good show of *Rabbits*, especially in the Any variety class, which was well filled. In every respect the Show was a very great success.

This was the first Show that has been held at Brigg, but the arrangements were very good and gave complete satisfaction to all concerned, and we believe the Brigg Show will in time become one of our very best.

DOCKINGS.—1, M. M. Cashmore, Sheepshead Loughborough. 2, Withheld. **CHICKENS**.—1, W. H. Crowe, Ewald, Derby. 2, W. Harvey, Sheffield. **COCHINS**.—1, W. H. Crowe, Ewald, Derby. 2, W. Harvey, Sheffield. **CARELESS**.—1, W. H. Crowe, Ewald, Derby. 2, W. Harvey, Sheffield. **HOUDANS**.—1, W. H. Crowe, Ewald, Derby. 2, W. Harvey, Sheffield. **GAME**.—1, W. H. Crowe, Ewald, Derby. 2, W. Harvey, Sheffield. **SPANISH**.—1, W. H. Crowe, Ewald, Derby. 2, W. Harvey, Sheffield. **BANTAMS**.—1, W. H. Crowe, Ewald, Derby. 2, W. Harvey, Sheffield. **ANY OTHER VARIETY**.—1, W. H. Crowe, Ewald, Derby. 2, W. Harvey, Sheffield.

BRAHMAS.—*Dark*.—1, J. M. Atkinson, Alford. 2, R. Swan, Lincoln. *Any variety*.—1, J. Watts, King's Heath, Birmingham. 2, W. F. Garner, Dyke, Bourne. *Chickens*.—1, J. Holmes, Whiteches, Chesterfield. 2, J. H. Pickles, Burdale, Southport. 3, J. Stow, Morton, Bourne. **CREVE-ŒUFS**.—1, Rev. J. R. Lane, Roxley Vicarage, Brigg. 2, Mrs. E. Cross, Appleby Vicarage, Brigg. 3, G. Green, Castor. *Chickens*. 1 and 2, Rev. C. C. Evans, Langford Vicarage, Bingley, Wadsworth. **HOUDEANS**.—*Gold and Silver pencilled*.—1, T. May, Waverhampton. 2, M. M. Cashmore. 3, W. G. Waters, Elsham, Brigg. *Gold and Silver pencilled*.—1, R. Newbitt. 2, Barch & Boulter, Sheffield. 3, M. M. Cashmore. 4, A. F. Faulkner; R. Newbitt.

GAME.—*Any variety*.—1 and Cup, E. Aykroyd, Ecclehill, Leeds. 2, F. Sales, Crowle. *Chickens*.—1, E. Aykroyd. 2, E. Winwood, Worcester.

SPANISH.—1, A. Cauty. 2, G. G. Thompson, Barton-on-Humber. *Chickens*.—1, S. W. Ballam. 2, R. Newbitt, Epworth. 3, W. Harvey, Sheffield. **HOUDEANS**.—*Gold and Silver pencilled*.—1, T. May, Waverhampton. 2, M. M. Cashmore. 3, W. G. Waters, Elsham, Brigg. *Gold and Silver pencilled*.—1, R. Newbitt. 2, Barch & Boulter, Sheffield. 3, M. M. Cashmore. 4, A. F. Faulkner; R. Newbitt.

BANTAMS.—*Game*.—1, W. Adams, Ipswich. 2, J. Fletcher, Stoneclough. 3, J. P. Mansell, Lincoln. 4, F. Duckering, Knibton-Embasy; R. Newbitt. *Any variety except Game*.—1, W. H. Robinson, Long Lee, Keighley. 2, M. Leuo, Markyate Street, 3, R. S. S. Woodgate.

ANY OTHER DISTINCT VARIETY.—1, W. Harvey. 2, J. Watts. 3, Mrs. E. Cross; M. M. Cashmore. 4, G. W. Boothby, Louth.

GEANTS.—1, T. M. Berry. 2, J. B. Hepworth, Hatfield, Doncaster. **DUCKS**.—*ylesbury*.—1, T. P. Carver, Lamethorpe, Boroughbridge. 2, W. H. Crowe. 3, T. Sear, Tingewick; W. G. Waters. 4, M. M. Cashmore. *Rouen*.—1, R. Swan. 2, J. Watts. 3, W. H. Leno. 4, W. H. Crowe. *Any other variety*.—1, R. Faulding, Brigg. 2, M. Leno. 3, J. Watts. 4, R. J. Sergeant, Barton-on-Humber.

TURKEYS.—1, T. M. Derry. 2, M. Kew, Market Overton. 3, Mrs. Smith.

PIGEONS.

CARRIERS.—1, Cup, and 2, F. Horner, Harewood, Leeds. 3, H. Yardley, Birmingham. 4, T. Chambers, jun., Northampton; P. R. Spencer, Hereford.

POUTERS.—1, W. Ridley, Hexham. 2, T. Rule, Durham. 3, W. Harvey; L. Watkin, Northampton; T. Rule; Rev. C. C. Ewbank; E. Horner.

TUMBLERS.—1, H. Yardley. 2, W. Adams.

FANTAILS.—1, T. Rule. 2, J. F. Loversidge, Newark. 3, J. F. Loversidge; J. Walker, Newark. 4, F. Horner.

JACOBINS.—1 and 2, A. A. Vander Meersch, Tooting. 3, E. Horner. **TURBITS**.—1, C. N. Layde, Cottingham. 2, A. Silvester, Sheffield. 3, O. E. Crosswell, Early Wood, Bagshot.

TRUMPETERS.—1, W. Harvey. 2, T. Rule. 3, P. R. Spencer; E. Horner. 4, A. A. Vander Meersch.

BABS.—1 and 2, E. Horner. 3, H. Yardley. **ANY OTHER VARIETY**.—1, A. A. Vander Meersch. 2, E. Horner. 3, A. A. Silvester; P. R. Spencer. 4, W. Harvey; A. A. Vander Meersch.

RABBITS.—*Lop-eared*.—1, Shaw & Allison, Sheffield. 2, J. Hume, York. *Any other variety*.—1, W. Bowes, Elmhurst, Darlington. 2, J. Owen. 3, W. H. Howden, Hull; F. Sabbage, Northampton; J. Ebery, Elsham; A. Cauty, Barton-on-Humber.

JUDGES.—Messrs. W. B. Tegetmeier and J. Douglas.

NORTHAMPTON ORNITHOLOGICAL SOCIETY'S SHOW.

The Show of the Northampton "Good Intent Ornithological Society," was held on Wednesday and Thursday, the 22nd and 23rd inst., and in point of entries was a great success. There is no hall in the kingdom that is better adapted to such a purpose than the Corn Exchange, the light being so well and equally dispersed in all parts of the building. Strictly speaking, the Show is not confined to ornithology, the Committee considering that an additional attraction would be secured in offering a few classes for Rabbits.

The entries in these sections were only moderate, partly on account of the small amount offered, but mostly from the Society not providing pens for their exhibition, but what were shown in these classes were a credit to the exhibitors, especially in some cases which are deserving of special notice. In the first class a grand Blue Pointer cock stood first, and a White second, the first-named bird being one of the largest-blown birds we have ever seen, and altogether massive and well-built. The second was a White, slim and beautiful in form, but losing in several other points. In Carriers, two Dum hens won the prizes, and they were capital birds, well made-up and shown in nice bloom. A Yellow Jacobin cock of good points was first in the next class, and a Blue Turbit cock second. In Dragons the contest was severe between the two winners, which were Blue, a single point deciding between them; many of the others being also good. In Any other variety, a nice White Trumpeter was first, and a Silver Antwerp second; and in the Selling class, White Pointers and Almond Tumblers won the prizes.

Lop-eared Rabbits were not good, if we except the first-prize Fawn doe, which was very young, and the Sooty Fawn buck that took second. The varieties, on the contrary, were a grand lot, the Tortoiseshell Dutch buck, to which the first prize was awarded, being about perfect; the second going to Angora, and the third to a Black-and-white Dutch; while many other deserving specimens had to be content with commendations.

In the *Canary* department the entries were very large, but we are sorry to have to relate that several stained specimens were subjected to the test, proof of artificial colouring fairly established, and the birds at once disqualified, those in the Buff Cinnamons being the worst cases; and we were informed that these birds would be sold by public auction in accordance with the fourth rule of the schedule. We do not know if this regulation was carried out. We hope it was, and if our reporter had mentioned the names of the exhibitors we would have published them.

Messrs. Beunrose & Orme had no specimens of their high-coloured birds at the Show; and although we can sympathise

with those Committees who, for the sake of securing the entries in great numbers (which we admit is of primary importance), yet we consider it a disappointment to the public and a decided hardship to those gentlemen that their specimens should be blackballed, for, whatever may be said to the contrary, there are few members of the fancy who would not have been glad to be the first to attain such an object, and it is well known that most of the best fanciers have done all in their power to attain the highest point in colour by select feeding and otherwise. Supposing, even, that the great beauty of colour of these birds will last only to the next moult, they are, at any rate, on a par with the Lizards and the London Fancy, whose fleeting beauty lasts but for the first season; and we would suggest to those Committees a way out of the difficulty, which, we think, would prove fully satisfactory to all concerned, and that is that a special class be set apart for these birds for a couple of seasons, and a cup or medal of merit be awarded to, say, the best half-dozen birds. This course, we contend, while saving the shows in a pecuniary point, would cast no reflection upon these gentlemen, and would preserve the great treat for the public—viz., a sight of such extraordinary specimens. The Norwich classes were well represented, there being 140 specimens competing in the first six classes. The birds exhibited by Messrs. Enoch and Atkins were of large size and good in feather and quality.

The Ticked and Unevenly-marked classes contained some nice birds. The winner in the Yellow class, belonging to Mr. Irons, was a very showy bird, and the second and third were also of good quality.

The Evenly-marked or Variegated classes contained some well-marked birds. The first-prize bird in Yellows was of strong colour, although the marking would have been no worse if it had been a little heavier.

The first in Buffs was a very clear hen, good in all points and very even in marking; the second also being good, but, to some extent, out of condition. The Crested Yellow class was a great surprise, one after another throughout the class proving good; but even these were eclipsed by the Buffs, the first-prize bird in the latter being a fitting compeer for the recently-imported specimens of Trumpeter Pigeons, the crest being of such size as to cover-up the eyes completely; the rest of the birds were also capital specimens. Belgians were good, but it was difficult to catch these indolent gentlemen out of repose, or in such condition as to display their beauties.

The Yorkshire Canaries were not good, but the Cinnamons were good in all classes; in the Selling class the entries were numerous, and many cheap birds changed hands.

In British birds a most splendid Starling was first, a Thrush second, and a Skylark third; and there were some good birds in the Mules, the first being a grand Yellow, and the second a Buff very well marked.

CANARIES.

NORWICH.—*Clear Yellow*.—1, Enoch & Atkins, Coventry. 2, G. Golby, Dallington, Northampton. 3, J. Audley, Leicester. *rhc*, G. Golby; H. & D. Audley. *hc*, Adams & Athersuch; Cox & Brown. c, S. Tomes; J. Audley. *Clear Buff*.—1 and 2, Enoch & Atkins. 3, R. B. Newson, Bromley. *rhc*, Adams & Athersuch (2). *hc*, J. Audley; Enoch & Atkins. c, R. B. Newson; Cox & Brown.

NORWICH.—*Evenly-marked or Variegated Yellow*.—1 and 3, J. Audley. 2, Enoch & Atkins. *rhc*, Adams & Athersuch (2). *hc*, H. & D. Audley; Cox & Brown. c, Adams & Athersuch; H. & D. Audley. *Evenly-marked or Variegated Buff*.—1, H. & D. Audley, Leicester. 2 and 3, Adams & Athersuch, Coventry. *rhc*, J. Goode. *hc*, Martin & Griffin. c, W. Lee.

NORWICH.—*Ticked or Unevenly-marked Yellow*.—1, T. Irons, Northampton. 2, Over & Griffin, Coventry. 3, W. & T. Wright, Northampton. *rhc*, Adams & Athersuch. *hc*, Enoch & Atkins. c, Adams & Athersuch; J. Judge. *Ticked or Unevenly-marked Buff*.—1 and 3, Adams & Athersuch. 2, Cox and Brown, Northampton. *rhc*, S. Tomes; Adams & Athersuch; Over & Griffin. *hc*, J. Clark; R. B. Newson. c, S. Tomes.

NORWICH.—*Any variety of Crested Yellow*.—1, J. Judge, Derby. 2, Rice and Gilbert, Northampton. 3 and *hc*, Cox & Brown. *rhc* and c, G. Clifton. *Any variety of Crested Buff*.—1 and 3, W. & T. Wright, Northampton. 2, S. Tomes, Northampton. *hc*, Cox & Brown. *hc*, Barwell & Sons; J. Goode (2). c, Hampton & Chamberlain.

BELGIANS.—*Clear, Ticked, or Variegated Yellow*.—1 and 3, J. N. Harrison, Belber, Derby. 2, S. Bunting, Derby. *Clear, Ticked, or Variegated Buff*.—1 and 3, J. N. Harrison. 2, E. Hawman, Middlebrough. *rhc*, W. Forth, York.

YORKSHIRE.—*Any variety of Yellow*.—1, T. Irons. 2, L. Belk, Dewsbury. 3, W. W. Johnson, Carlton, Northallerton. *rhc*, W. Forth. *Any variety of Buff*.—1, T. Irons. 2, T. Geminwood, North Acliam, Middlebrough. 3, W. Forth. *hc*, L. Belk. *hc*, W. W. Johnson.

LIZARD.—*Golden-spangled*.—1 and *rhc*, W. Watson, jun., Darlington. 2 and 3, R. Ritchie, Darlington. *hc*, S. Bunting. *Silverspangled*.—1, 3, and *rhc*, W. Watson, jun. 2, R. Ritchie. *hc*, S. Bunting.

CINNAMON.—*Jonque*.—1, Adams & Athersuch. 2, J. Taylor, Middlebrough. 3, Barwell & Sons, Northampton. *rhc* and c, C. Law. *hc*, Cox & Brown. *Buff*.—1 and 2, Adams & Athersuch. 3, Cox & Brown. *rhc*, Rice & Gilbert. *hc*, J. Taylor. c, W. Stamford.

CINNAMON.—*Ticked or Broken, Jonque or Buff*.—1, Adams & Athersuch. 2, J. Taylor. 3, S. Tomes. *rhc*, Martin & Griffin. *hc*, C. Law. c, T. Irons.

CINNAMON.—*Evenly-marked or Variegated Yellow or Buff*.—1, L. Belk. 2 and 3, T. Irons. 3, W. Douglas, Northampton. *rhc*, G. Kerton. *hc*, C. Law.

ANY OTHER VARIETY.—1, L. Belk. 2, Rice & Gilbert. 3, R. Hawman. *rhc*, J. Tear. *hc*, J. N. Harrison. c, E. S. Johnson.

GOLDFINCH MULES.—*Evenly-marked or Variegated*.—1, J. Goode, Leicester. 2, T. Allenby, Crossgate, Durham. 3, R. Hawman. *hc*, Hampton & Chamberlain; Moore & Wynde. *hc*, H. & D. Audley. c, T. Hopkins. *Dark*.—1, W. & T. Wright. 2 and *hc*, Cox & Brown. 3, Moore & Wynde.

BRITISH BIRDS.—1, J. Albright, Northampton. 2, Cox & Brown. 3, T. Knight, Northampton. *rhc*, Cox & Brown; W. & C. Burnston. *hc*, Cox and Brown; G. Cleavel.

PARROTS.—1, S. Bunting. 2, J. Powell, Northampton. 3 and *hc*, J. Munslow, Northampton. *rhc*, J. Goodall; J. Munslow.

SELLING CLASS.—1 and Extra 3, Cox & Brown. 2, Martin & Griffin. 3,

Adams & Athersuch. *rhc*, Cox & Brown; Adams & Athersuch (2); T. Middleton. *hc*, Cox & Brown; Adams & Athersuch. c, A. Camps; S. Stratford.

PIGEONS.

POUTERS.—1, W. Nottage, Northampton. 2, L. Watkin, Northampton. *hc*, L. Watkin; W. Nottage. c, A. Silvester.

CARRIERS.—1 and 2, T. Chambers, jun., Northampton. *hc*, M. Perrin; W. Nottage. c, D. Barnett; W. Brown; A. Silvester.

TRENDS OR JACOBS.—1, T. W. Swallow, Northampton. 2, A. Silvester, Sheffield. *hc*, A. Silvester; T. W. Swallow (2); W. Nottage.

DRAGOONS.—1 and *rhc*, F. Gamble, Northampton. 2, T. Chambers, jun. *hc*, A. Silvester; W. Nottage; W. Brown (2); T. Chambers, jun.; T. Bedford.

ANY OTHER VARIETY.—1, A. Silvester. 2, J. Mantel (Antwerp). *rhc*, T. Chambers, jun. *hc*, W. Nottage; D. Barnett (Barb); A. Silvester; J. Mantel (Antwerp). c, H. A. Saddington; W. Nottage; J. Mantel (Antwerp).

SELLING CLASS.—1, L. Watkin. 2 and *rhc*, W. Nottage. *hc*, W. Nottage; W. Brown; T. Chambers, jun. c, T. Gill.

RABBITS.—*Long-eared*.—1, A. Ashmead, Northampton. 2, F. Sabbage, Northampton. *hc*, J. Castidine; S. Whitehouse. c, J. Tebbutt. *Any other variety*.—1, F. Sabbage (Angora). 2, H. C. Hancock (Angora). 3 and 4, G. Foster (Dutch and Patagonian). *hc*, C. Cory (Angora); J. Millard (Dutch); S. Youl (Angora); A. Ashmead. c, F. Sabbage (Dutch).

Cup won by Adams & Athersuch, with eighteen points.

JUDGES.—*Cage Birds*: Mr. W. Walter, Winchester, and Mr. J. Bexson, Derby. *Pigeons and Rabbits*: Mr. E. Hutton, Pudsey.

NORWICH CANARY SHOW.

HAD I invested sixpence in a guide-book I might have posted myself up in the history of Norwich and its antiquities, and have given a better description of St. Andrew's Hall than I am now able to do. Guide-books make capital "cribs." Who this particular St. Andrew was I do not know, or when he lived or when he died, why he was canonised, or when the Hall which bears his name was built. All this and much more I might have learned for sixpence; but as it is, the life of this respected man is to me a sealed book. Saint is such a common prefix in Norwich that one would almost imagine it had been the favourite residence of those

"Elevated with the saints to mount,"

and I should not have been surprised to have seen the familiar title over some of the shop-doors. I can give no better description of the Hall than that in its exterior it looks like a church with the tower and steeple cut off, and the interior conveys the idea of its being some grand old ecclesiastical structure converted to secular purposes. It had been kindly lent to the "Alliance" by the Mayor and Corporation of the city.

It was nearly ten o'clock at night when I and my colleague, Mr. Baxter, arrived at Norwich; but late as it was, of course we went just to take a peep at the Hall. It was then only very dimly lighted, but there was light sufficient to show that the morrow would open on a scene the like of which I never saw approached in a Canary show. Truly the "Alliance" had done their duty in securing such a noble edifice in which to exhibit their treasures. The Social Science Congress had held its meetings within its walls only recently, and the decorations had been allowed to remain, adding such a splendour to the Show as could only be obtained under similar circumstances. Apart from the tasteful adjuncts, the walls are covered to the very roof with life-size portraits in oil of Norfolk worthies, among which is one of Nelson, for which I was informed the Corporation had refused £15,000. It is not often that the Canary is seen with such surroundings as these. When we entered the Hall next morning to begin our work the sight was most imposing; and to add still more to the beauty of the scene, Messrs. Ewing & Co., of the Royal Norfolk Nurseries, discharged during the day wagon after wagon of ornamental shrubs and fine-foliated plants till the place became a perfect Paradise, and the illustrious worthies on the walls seemed to wink and blink in the sunshine as if perfectly conscious of the whole, specially one benevolent-looking old gentleman in drab knee-breeches and gaiters, the inscription on whose frame told how well he had filled the civic chair in days gone by. Such a fine, genial-looking face! Wherever we went those gaiters were always looking at us. If I remember rightly, one hand was in the pocket of the drab knee-breeches. If not, it ought to have been, as I was told it was in life constantly there, and was never withdrawn empty.

We commenced our work at the most difficult end of the schedule, which end, however, on looking at the catalogue, proves to be the middle thereof. I refer to the Cages-of-Six of the "Bath House" and "Alliance" clubs. In each of these classes there was a premium of a silver medal as first prize, and the competition was keen. The "Bath House" mustered twelve groups, and here, perhaps, it was not so difficult to arrive at a conclusion as in the case of the "Alliance," which staged no less than thirty-three sixes. These forty-five groups, containing in the aggregate 270 birds, formed a spectacle one has to go to Norwich, the city of Canaries, to see. From end to end it was all quality, and it was a long time before we, after carefully weighing over the pros and cons, filled our balance sheet, and made Mr. Frost, of the "Bath House," and Mr. Betts of the "Alliance," happy men. In both cases each won with a trifle in hand. Mr. Everett, the Treasurer and backbone of the

"Alliance," was clearly second in his club, though it was nearly six of one and half a dozen of the other with Mr. Merry and Mr. Hovell in the "Bath House," who were respectively second and third. Laying down as a basis of operations that five good birds and an indifferent one did not constitute a level six, gave Mr. Merry the turn of the scale. It will easily be imagined that behind these stood many cages of superlative excellence, and I may say that I was never before so struck with the wonderful quality of feather the Norwich breeders possess.

These disposed of, the ten open classes of Norwich birds next claimed our attention. The "Alliance" with a just appreciation of what every Englishman loves—fair play, had not supplemented its prize list with an announcement that "no unnatural colours would be staged," neither had it issued any proclamation to "honest fanciers," nor had it met in committee and paraded its virtues in pharisaical fashion. Norwich knew well that its breeders had for more than a century never feared to meet any comers, and when beaten could often congratulate themselves that it was with their own blood, birds whose pedigree was written in some cottage beside the loom of a weaver or other artisan, from whose "mews" had been sold high-bred stock to other localities. It was not likely, then, that these men were going to show the white feather in the contest, or allow any outside pressure to influence them. For the fame of the "Bemrose & Orme," birds had reached the old city, and many a man who had been a Canary fancier from his boyhood would wonder whether such things could really be; and still wondering and half doubting, brought his best forces into play, and went into the battle like a man determined to beat or be beaten. And this was not done without some sacrifice. The "Alliance" knew that in the absence of extraordinary support its members were committing themselves to certain pecuniary loss. All honour, then, to the men who, having made it their motto, "A clear stage and no favour," do not falsify themselves, but set an example to some in a higher station in life, who when the time for the exercise of principle comes, lose their heads, and in so doing make a rod for their own backs. This was the password of the "Alliance," and they met their fate like men.

In Clear Yellow, Bemrose & Orme were first and second with two wonders. Their third bird was not in condition, or colour must have carried it through. As it was, Imhoff & Smith (Coventry) took third place with a wonderful Jonque. Size, colour, and quality were all there, but it is too long in the feather. Still, it is a bird one could look at for a day—a triton among minnows. Among the commended division, Mr. F. Willis, Messrs. Mackley, and Mr. Hovell, all of Norwich, showed a class of birds which, under the new regime, would—it's difficult to say what they would look like.

In Clear Buffs, Bemrose & Orme took all the prizes, their birds being unapproachable for colour and meal. In my eye their Mealy birds eclipse their Jonques, the high colour showing the farina to such advantage. Imhoff & Smith, in this class also, showed two remarkable birds, as also did Mr. F. Willis and the Mackley Brothers. They were faultless, but beside the wonderful Derby specimens their colour paled.

The Variegated classes were superb. Bemrose & Orme were first and second in the Evenly-marked Jonques both in marks and colour. Mr. Wones's (Norwich) third-prize bird was a great beauty and merits special notice. In respect of wing-marks it was superior to Bemrose & Orme's second, but the pencilling on the eyes was not so decided. Here again colour told in the close struggle. Mr. Wones's bird has that beautiful silky quality of feather which rivets the eye at once: it was in the bloom of perfect condition too, and the moment it was at rest threw out its snowy under-flue like floss silk. The very highly commended were all superior birds.

Bemrose & Orme were first, second, and third in Evenly-marked Buffs, closely pressed by Mr. J. Goode, of Leicester, and Mr. E. Shaw, Nottingham. To each of these was awarded a very high commendation. In the same class Mr. Wones showed a well-marked hen, nearly perfect, but the left eye is a trifle heavier than the right—colour rather flat.

The Ticked classes were, as they usually are, simply grand. It was a great day for the lovers of high-class birds when we in Sunderland, some years ago, made provision for this class of bird, the parents of perfection. They ate the backbone, main-stay, bones, muscles, and sinews of the Norwich variety. Never was such a bird seen as Bemrose & Orme's first prize Ticked Jonque. One wit said he could feel the "heat" when he passed the cage. The second and third, too, were miracles. By some oversight the printer omitted to print the commendations in this class, but there were some valuable stock-birds among those mentioned in the prize-list last week. My memorandum book has Imhoff & Smith and E. Shaw specially noted.

Bemrose & Orme's carriage stopped the way again in the Ticked Buffs, and Mr. F. Willis and others had to rest contented with cards of merit on their cages, which, however, did indeed contain meritorious specimens.

The Marked Crested Yellows were not good. They were produced in greater perfection in Norwich years ago, or my taste

is more fastidious. A good crested Jonque is very difficult to breed, I admit, but the greater part of those shown in both the classes apportioned to the Yellows were very much below par. It was very different with the Crested Buffs. Here there was plenty of feather, and, in not a few cases, width of skull and corresponding excellence of crest. With the Norwich breeders quality is a *sine quâ non*; quality is another name for high Norwich properties, and that is equivalent to loss of crest points. I have before explained that the crest is not native to the Norwich variety, but is an imported element, obtained either from the majestic Manchester Copy or the smaller, neatly-finished crested German bird. From the Copy are obtained size, coarseness, length of feather, and other points not desirable in a Norwich bird; but there is no mistake about the description of crest resulting from the cross. It has size and shape, and the object to be aimed at is to breed in the desired size and shape of crest, and to breed-out all the objectionable points. I think in Norwich they have gone too far—the birds show splendid quality but not enough crest, and a Copy or two imported into the city will do no harm. In Marked Crested Buffs Mr. F. Alden was first with a grand bird. I have seen crests which could have extinguished even this bird's head, but so much high quality and crest is not often seen. It was truly a crested Norwich. The same exhibitor also showed two others; one, evidently his pet bird, was a fine stock bird, but its place was in the barem rather than in the show-cage. Mr. Goode was second and third with two over-year birds. For style and carriage the second was unsurpassed. A very fine one-winged bird, Mr. W. Drake (Norwich), who, was snapped up at its catalogue price. The purchaser has a valuable stock bird in it. The gem of the Clear-bodied birds with dark crests was Mr. W. Sparkes's (Norwich) hen. On the other side of the Hall, in the groups, was a cage of six young crests from her; all good. Mr. Wones was second with a fine hen; more quality and less crest. The third bird also was good, but it was a clear case of one, two, three with a lot of really good stuff in the rear, as well there might be in twenty-two entries. In Crests there were in all seventy-five entries.

In Clear and Ticked Belgians there were but six entries; Mr. Harrison, of Belper, showing in a form which would have required some beating had there been six times as many.

Lizards were wretched. Unfortunately, Mr. Ritchie's (Darlington) arrived too late for competition. He sent six, which were the admiration of all beholders. It was grieving to see them out of the fray.

The Yorkshire mustered in force, and birds which have already passed under review this season added another notch to their score. These birds attracted a great deal of attention, and many were the expressions of satisfaction at the way in which the two counties have shaken hands. I am sorry to say, however, that one exhibitor, Mr. M. Holroyd, of Bradford, gave a practical illustration of the way in which Evenly-marked birds can be manufactured.

It was getting near dusk when we judged the Cinnamons. All had to be carried to the light, and we were eventually compelled to finish for the day while in the middle of the class, and I am afraid we made a great oversight. I am informed we passed over a *boni fide* painted specimen. Bemrose & Orme's birds were again the gems of the variety—both plain and Variegated. Mr. Luke Belk, Dewsbury, scored twice in the Variegated Buff with long stylish birds.

The "Any other variety" class did not fill well, but Messrs. Mackley scored an easy win with a fine Copy, and Mr. Rowland (Skelton, Yorks), made a mark with one of the north-country long Greens.

Every Mule of merit shown has already been under notice, except a very fine Linnets Mule shown by Messrs. Mackley, which looks very like moulting into a perfectly clear bird. Mr. J. M. Cooper (Norwich) was represented by a remarkably fine Buff Goldfinch Mule, which must have "walked in," but one tail feather was unfortunately missing. It is a beautiful Mule.

Bemrose & Orme made their final bow in the open boxes, with Messrs. Mackley second, and Mr. F. Willis third. Mackley Brothers had slightly the pull in colour, and Mr. Willis in size and condition.

It would be tedious to notice the British and Foreign birds *seriatim*, but nowhere except at the Crystal Palace was such a show ever seen, and a most gorgeous sight it was, consisting of over a hundred entries. Nearly last on the list stood the Grey Parrots. I suppose we must have given satisfaction in our awards, for one of them as I was putting a first-prize card through the ring of its cage, told me confidentially it was "all right!" A Selling Class of seventy-eight entries, from which anyone might have selected his breeding stock, completed the Show.

The Exhibition was opened on the Thursday morning with a promenade concert by the Carrow brass band, whose services were most generously tendered by Mr. Colman, the well-known manufacturer of the condiment for which, and old maids, my own county town is so famous. The grand old Hall was soon

filled with a distinguished company, and things began to assume a very rosy hue. But as the day wore on there were evident signs of a storm brewing—an ominous silence, and the absence of any marked expression of opinion about the Bemrose-and-Orme birds grew into low whispers, and first one and then another venturing to compare notes with his neighbour; it only wanted someone more outspoken than his fellows to say the word which raised the whispers to vehement denunciation, and the concealed suspicion into emphatic protest. It was very amusing to hear the decided opinions of some of the opposition; they were so much to the point, and were so conclusive as to the dishonest character of the birds. "I'm a breeder, sir, I am!" was one man's declaration of faith, and that seemed to settle the question for half a dozen of his intimates. "I ain't bred birds for forty years without knowing something," was the opinion of another. That was evidently considered a settler for me. "You are an excellent judge of birds, you are, sir (*nominativus pronomini varo exprimitur*, for which overhaul your Gilbert A'Becket). We've seen some of your judging to-day, and will see a little more to-morrow morning." From that moment I believe Mr. Baxter and I were looked upon as two victims for sacrifice. But the greatest oracle of all was an awful old fellow, of whom I am sure, even his own circle were ashamed. He was one of that kind of men who, having a smattering of ready wit, try to pass it off as knowledge. But in his case it was tinged with so much coarseness that one could not help wishing that really well-meaning men had not a more sensible and temperate advocate. He walked up and down the Show, firing his shots right and left, and then, with his hands deep in pockets, would seem to be weighing over in his mind whether tarring and feathering or the horsepond would be the most satisfactory way of vindicating justice on the morrow. In the fulness of his joy at the prospect of the sport when Bemrose & Orme should be exposed, and the Judges convicted at conniving at a felony, this terrible old man made, like one of old, a rash vow. But people should be careful how they make rash vows. A young man at Whitby Show made a rash vow; he was going to "fetch it off," or *cut* the birds. But this young man did neither. And this old man at Norwich vowed that if the birds came out of the ordeal true birds, he would find a carriage and pair and drive Mr. Orme round the city. But he didn't. On Thursday afternoon it was resolved that the Bemrose-and-Orme birds should be protested against according to Rule 5, and the thing was gone about in a business-like way. Seven exhibitors protested against seven of our decisions, and seven half-crowns were deposited, to be returned if the objections were sustained, or forfeited if considered frivolous or vexatious. I may be wrong, but I thought Mr. Mackley smiled as he heard these fated half-crowns drop one by one into the cash-box with a musical clink.

That the investigation might be conducted so as to remove all doubt as to the genuineness of the birds, the protestors engaged the services of Mr. Sutton, the eminent public analyst; and to insure things being done decently and in order I retained Mr. Stanley, solicitor, to watch the proceedings on behalf of the Judges, for though it was virtually the birds which were on their trial, it was the "decision of the Judges" against which the appeal was made. An arrangement was soon come to by which it was settled that the inquiry should take place at half-past ten the following morning, Mr. Stanley representing the Judges; Mr. Betts, Chairman of the "Alliance," representing the club; and Mr. Frank Willis appeared for the objectors. The furious old man was jubilant, and when we left the Hall at night I believe he was almost afraid to lose sight of us. Mr. F. Willis shook hands with Mr. Orme, and vowed his vow, "If the birds are true I shall be the first to shake hands with you, but if not I shall be the first to trip you up." And then we three wended our way to our hostelry, the "Duke's Palace." I don't know what the objectors did, but we had a good supper.

Next morning Mr. Orme knocked at our bedroom door, for Mr. Baxter and I had chartered a double-bedded room; it's half the fun when you're from home to have a chat and a laugh after you go to bed! When he came in I noticed a change in him and when he asked for the loan of a *visor* I thought things were getting serious—

"His eye was stern and wild, his cheek was pale and cold as clay;
Across his tightened lip a smile of fearful meaning lay;
He paused awhile—no trace of doubt was there;
It was the steady, solemn pause of resolute despair.
I saw him gaze upon the scroll, once more its words he read;
Then, calmly, with uplifted hand its folds before him spread.
I saw him bare his throat and seize the blue cold steel,
And grimly by the tempered edge he was about to feel.
A sickness crept upon my heart, and dizzy swam my head;
I could not cry, I could not stir, I felt benumbed and dead!
Again I looked. Across his face a fearful foam had passed;
He seemed to rave! O'er cheek and lip a fluky foam was cast.
He raised on high the glittering blade! Then first I found a tongue,
Hold, madman! stay the frantic deed! I cried. And forth I sprang.
Orme heard me, but he heeded not: one look around he gave,
And ere I could arrest his hand, he had begun to—shave!"

and while doing so gave us a peep behind the scenes, and related

some extraordinary stories ament Canaries, Canary breeders, and Canary exhibitors.

Half-past ten found us at the Hall, and our old enemy looked quite pleased to see us once more almost within reach of his clutch. I believe he looked upon the inquiry in the light of a coroner's inquest, and thought that Bemrose & Orme and the Judges were corpses. But there was plenty of life in Mr. Orme yet, and when the analyst had retired to the committee-room (where I should have said the protested birds had been placed under lock and key), he led in his trump in the shape of a small cage of partially-moulted birds, in which was to be seen feather in every stage of development. These birds were examined by everyone most minutely, while Mr. Orme tried to "lay out" a little money to advantage. But 20 to 1 on the birds was not even a sufficiently tempting price, and when the cage was handed back to Mr. Orme with the honest confession, "If we had seen these first we would never have protested," I thought how the seven half-crowns would be whispering to each other in the cashbox. Five minutes later the analyst's verdict was given—Perfectly genuine; and the next thing I saw was Mr. Orme being carried "shoulder high" and then "tossed;" and there is plenty of height in St. Andrew's Hall to give a man a good hoist. I never was "hoisted," but I have heard lads who have been tossed in a blanket at school say that going-up is very nice, but when you come down it feels as if you had left your liver sticking against the ceiling. I think this must have been Mr. Orme's idea, for after one "hoist" he clasped one of his enthusiastic friends by the neck, and as both could not go-up the interesting performance ended by shaking hands all round. The first to redeem his promise was Mr. F. Willis. The obstinate old curmudgeon refused to be satisfied, and the carriage was not forthcoming, and the last I saw of him he was standing in front of the first-prize Ticked Jonque solemnly asserting that it had rubbed its colour off on the back of the cage.

Had the inquiry been conducted in any other way there is no knowing to what results blind prejudice might have led. Once on a time I used to do 220 yards in decent form, and once I trained for a mile. I don't know what sort of a performer Mr. Baxter may be, but he looks as if he could go, and I have no doubt that if the inquiry had been placed in the hands of some who had made it a foregone conclusion, we should both have had an opportunity of showing our agility. Later in the day the Sheriff of Norwich presented the cup to Mr. Orme, and next morning in the "latest intelligence" column of the papers appeared the result of Mr. Sutton's analysis.—W. A. BLAKSTON.

HIGH-COLOURED CANARIES.

In the secret mode of feeding and moulting I confess I have no experience; and as Mr. Blakston states that the birds must be of good breed, the operation simply improving the colour, probably he can inform me how it happens under such circumstances that my bird should have changed from a rich orange to a green straw-colour buff. I am disposed to think that if Mr. Bemrose would publish in the Journal from whom he purchased and the price paid for the two birds previous to putting them under treatment and exhibiting at the Palace, it would somewhat assist other persons in forming an opinion on the merit or demerit of his discovery, and the quality and value of the birds required for being coloured. I have not the slightest intention to dispute Mr. Bemrose's mode of colouring, and I quite believe his statements to be correct, but I contend that birds artificially coloured, by whatever process, are not legitimate. If artificial colouring is to be considered legitimate, the mode of colouring must be left to the discretion of the exhibitor, and the birds disqualified at Cheltenham would have been legitimate. If genuine Norwich birds will not retain or perpetuate their colour, how is it that fanciers have for so many years been enabled to maintain, and by judicious and careful breeding gradually improve, the colour, and that a fresh exhibitor, to whom the secrets must be unknown, can occasionally come forward and carry off some of the best prizes?—R. J. TROAKE.

I HAVE read with a great deal of astonishment Mr. R. J. Troake's letter about colouring Canaries by feeding, because his arguments are, to say the least, somewhat peculiar. Why should a good Belgian moult-off his best points, which are part and parcel of the bird's bony structure, and the colour not entirely fail in the moulting of a true-bred Norwich, which colour is produced by a peculiar method of feeding? Why should it not? You might as well expect a Belgian to turn into a Pigeon as to expect it to change its conformation; whereas in the case of the feathers of birds, it is a well-established fact that they will alter at moulting. Look at the Lizards: they repeatedly throw out white feathers after their second moult, and I have myself been accused of malpractices because a Crystal Palace winner which was claimed changing the colour of his feathers when he moulted.

I take it that if Mr. Bemrose's birds had been fed as he fed them—and there is the secret—they would have kept their colour

when in the possession of their new owner. Mr. Troake says this is purely artificial. Are improvements artificial, whether in animals, birds, or even plants, produced by a judicious selection in breeding, and crossing, and feeding? Mr. Troake says again, it becomes merely a matter of process for colouring, and that a bird coloured by hand would be equally valuable, &c., the difference is simply the means employed. Of course that is the difference. If I want to breed a fox-terrier with black-and-tan head I do not take a white-headed dog and paint him, but I put two and two together and consider, and then one and one together, and try to breed what I want. I have given up the fancy altogether now; the influx of *bona fide* painters and stainers disgusted me, but I still have the interest of the fancy at heart, and hope Mr. Orme may long be to the front with his birds artificially coloured by good management.—CAVEAT EMPTOR.

I AM anxious that your readers should have every opportunity of judging who is right, so allow me to ask, What sort of a hen did Mr. Troake breed with? He speaks of my birds; let it be clearly understood that he only purchased one. It is of the utmost importance that the hen should be highly bred. Again I say that none but the best blood will acquire the high colour so universally admired, and which is only produced upon them by my method of feeding. Mr. Troake's remark that it is immaterial whether the colour be obtained by feeding or painting, is really laughable. The idea is certainly a novel one. In plain English, he deems it equally dishonest to paint Canaries and to feed them so as to obtain a high colour. With the former view I fully agree, though some of Mr. Troake's Cheltenham friends did not think so; but I must fully and peremptorily dissent from the opinion that feeding for colour is dishonest.

My method is simply "art assisting nature," the true plumage of the Canary having been quite unknown till now. This will and must be acknowledged by all fanciers soon. Time is my best ally, and I can afford to wait. The Norwich Show of the last week giving me twenty-four prizes and a silver cup after a professional analyst had certified to the genuineness of my birds, is another milestone in the march of success.—L. BEMROSE.

WHAT IS HONEY?

In the last number of this Journal "B. & W." asks this question. My answer is that honey proper is not found in flowers; that the sweet juice found there is collected by bees, and afterwards converted by them into honey proper—marketable and presentable. He asks for evidence, and says that "the honey collected from the bean flowers proves nothing, save that it was thin." My contention is that, inasmuch as it had not been re-swallowed by bees, it was not honey proper. Neither is cream butter, though butter is made of cream or comes from it. What evidence have you that cream is not butter? The evidence of the senses. For more than fifty years we have been seeing, handling, and tasting both cream and butter. They are different articles. In the same sense have we for more than fifty years been seeing, handling, and tasting honey from the plant, and honey from the bee. They are different articles. Will "B. & W." put the matter to the test next summer? If he does, he will find that as cream undergoes a change in the churn, honey undergoes a change in the bodies of bees.

For the sake of others who may wish to see for themselves let me suggest a very simple experiment. Some warm summer morning put a strong swarm into a hive—full or half full of empty combs—say, at 7 o'clock A.M. Weigh hive and bees before the latter begin to work. This swarm will probably collect 5 lbs. of crude honey the same day before 7 o'clock P.M. Remove the bees into another hive, and extract the honey. It will be found crude still, and as unlike honey as cream is unlike butter. No process or amount of evaporation will remove its crudeness. It will mould; it will become sour. I have never seen it crystallise like proper honey.

If this be not conclusive evidence, put another swarm into another hive with empty combs. It may collect the same weight of crude honey in the same space of time; but let it remain in the hive, and if the bees be prevented from gathering more by rain or artificial means for thirty-six hours, all the crude stuff will be changed into honey proper, and stored away on the outside of the combs. When bees come home from the fields they empty their sacs in the first empty cells they can find, and go back to the fields for more; hence, on lifting and examining a hive at the close of a hard day's work, we find the clear, limpid, but crude fluid gathered that day amongst the brood combs; there, for convenience, to be re-swallowed, and stored away at night.

One word of correction, for "B. & W." has quite unintentionally made it appear that I pitied his ignorance. I simply said it was strange he did not know these things, and in the last sentence of his letter of last week he says, "To allow that bees have a power of sweetening honey from some source of sweetness within themselves I cannot believe." "A source of sweetness within themselves" is a new idea altogether to me, and has not

come out of anything written or spoken by me. There is no "source of sweetness" inherent in a bee; neither is there a source of butter inherent in a churn. If "B. & W." will not put the matter in question to the test in his own way, perhaps he will accept next summer a jar of crude honey, and one of perfect honey, collected from the same flowers by the bees of—A. PETTIGREW.

THE ART OF SUPERING.—No. 2.

IN placing and fixing empty drone combs in supers before the bees enter them, the bee-master should not forget that there is a right and a wrong way of doing this. The more closely we imitate nature the more likely are we to succeed. All honey cells dip to their bottom; they are not horizontal. As combs are found and cut out of hives they should be placed in the supers. If they are turned bottom upwards, the cells will slope the wrong way and be much more difficult to fill. Such an operation would indicate great carelessness or want of skill on the part of the bee-surgeon.

Well then, let the combs be properly placed and partially fixed in the supers which the bees have to fill with honey. What is meant by fixing them? From my remarks of last week the reader learned that we filled shallow boxes with cakes of white empty combs, which the bees soon afterwards filled with honey. In doing this we begin at one side of the box, and, of course, finish at the other side. The combs are kept apart from one another by little bits of wax or wood—two or three between every two combs. The lids are then put on the boxes, and these are placed on full hives. The bees fix the combs more securely and begin to fill them. As soon as they are full they are taken off and other empty ones put in their places.

I shall now come to glass supers, which are rather more difficult to manage, but the work of filling them or having them filled is within the reach and compass of bee-keepers not very far advanced. To believe in our own ability to do a thing puts us on the high road to success. Let me here strongly condemn the common bee or bell-glasses which are sold for supering. Where could we find anything so unsuitable and inconvenient for the purpose of supering as these common bee-glasses? If anyone were to assert that not one out of ten used is filled I would believe the assertion. In bee-gardens lots of them are met with that were never filled since they were made. Even when filled it is no pleasant task to cut the comb out of them. We use and recommend glass supers with lids, which are better in every way and more convenient for the bee-master. Mr. Samuel Yates, of Old Millgate, Manchester, supplies me with this superior kind of supers. In his catalogue of bee-furniture he calls these lidded glasses by my name, simply because I was the first to introduce and use them in England; but in Scotland they had been used before they were employed here. They are not only better but far more ornamental than the common sort. Being in two parts they are, of course, more costly.

The reader will at once see how easy it will be to help the bees to fill this super. When a hive is ready for supering one of these empty glasses is placed on it. Then we take the lid off and place at once some pieces of empty drone comb on the crown of the hive inside the glass, and hold them erect and in proper position by wedges or little bits of comb. The lid is put on and the super is well and warmly covered with cotton wool or woollen cloths. In less than twenty-four hours the bees have adopted and fastened more securely the combs thus put in. "Why, these combs are 6 inches high to begin with, and the bees are building them upwards!" Let them go on for another twenty-four hours, or till a rough



Pettigrew's Glass Super.

wooden lid be prepared with some more white combs artificially sealed to it, three or four nice large pieces. When this is done the glass lid should be removed and the wooden one with combs depending put in its place. Thus the bees have combs from both top and bottom to unite and fill, and, when weather permits, they do it with marvellous dexterity and rapidity. When the super is filled the most expert and suspicious apiarian or dealer in honey could not detect a flaw in it. Supers of this kind are perfect in every sense, and cannot be surpassed for excellence by those which are filled by bees managed on the jog-trot system.

"I quite understand all you have said, and can now see how easy it will be to fill our shelves with supers of honeycomb in fine seasons; but one thing is not clear to me—viz., these supers have wide parts or bellies, and the combs as they are built up and down will be in the middle of the supers opposite these wider parts; how do the bees fill them?" I am glad the reader asks this question, for my answer, I hope, will raise him to the top of the class in this art of supering. Well, before I

put on the wooden lid with combs going downwards, I place some pieces of comb so that they will fill the widest parts of the glasses. These side pieces are sometimes placed one way and sometimes another. It does not matter much whether they run alongside the glass or radiate from the centre to the outsides. I think that all supers whose combs radiate from their centres to the sides, like the spokes of a cart-wheel, look better than those whose combs are flat and straight from top to bottom.

When the combs are well united and the supers nearly full, the wooden lids are cut off with a table knife or bit of fine wire, and the glass ones put on. If these glass lids are dome-shaped, with a cavity to fill, I place a few pieces of nice comb on the tops of those broken by the knife or wire, so as to fill the cavity, and then finally put on the glass lids. The bees will soon finish the work thus given them to do. Let me here say that I seldom permit my bees to fill every cell with honey and put lids over all. When every cell is filled and sealed over, the super is said to be "finished," but it never looks so well or appears so interesting as supers which are not quite finished. A few inches of cells half filled and open give supers of glass an appearance more artistic and pleasing to the eye of a naturalist.

If I have no combs enough to half-fill or quarter-fill a super of glass, I put a guide-comb on the wooden lid, give the bees a ladder up to it, and thus induce them to commence at the top. When the combs reach the sides of the super the wooden lid is cut off and the glass one put on. Bees can hold by rough wood and straw, but they cannot hold by glass, hence the use of wooden lids and ladders. The introduction of large pieces of comb into supers may be compared to travelling by express train. The other way of letting the bees do all the work is travelling by the old parliamentary train, which is longer on the road. I prefer the express to the parliamentary train.

Let me here press on the attention of my readers the necessity of covering glass supers warmly and thickly with some soft material. If they are not warmly covered the bees will not work well in them; and if not quite dark the bees will try to shut out the light by plastering and bespattering wax on the inside of the glass.

"Well, sir, you have so far unfolded the art of supering that I long for the coming of another summer that I may obtain from my own bees some glass supers of comb. Do you think I may attempt to fill a crystal palace?" Yes, by following the line of procedure marked out, you will succeed in filling with virgin honeycomb a palace of glass as large as the glass-blower can produce. "But what shall we do when a bad or unfavourable season comes?" In another article this question will be answered.—A. PETTIGREW, *Sale, Cheshire.*

ROSS POULTRY SHOW.—In the list of awards sent to us it was not mentioned that the premier prize in poultry was awarded to Mr. H. B. Merrell (Brahmas); and in Pigeons to Mr. P. R. Spencer (Pouters). Mr. Hewitt was prevented by illness from officiating as Judge, and the awards were made by Mr. Teebay.

OUR LETTER BOX.

HARTLEPOOL SHOW.—Mr. F. Banks informs us that he did not exhibit the Long Sutton prize Rabbits at Hartlepool Show.

CALOMEL FOR FOWLS (*Alerum*).—Calomel is useless to fowls, and takes no effect upon them. We expect that on examination you will find near the vent a knob of hard cheesy matter. If it bleeds, the skin is already broken. Generally, if you enlarge the opening a little with knife or scissors, and then squeeze the bottom of the ball or knob, it will shoot out. The cavity that is left must be thoroughly washed out two or three times per day. The liquid should be injected with a syringe, and after it shows an inclination to heal, alum or any other astringent may be used in warm water. The evacuations should be green, white, and figured. Your feeding is good, but do away with the sharps. Bread and milk and ground oats should cure anything.

MARKING FOWLS (*Westeroff*).—Nothing is easier than to mark poultry by putting a wire ring or sewing a piece of list round the leg, and this last is capable of development by enabling those who wish to do it to mark the different broods by using worsted or list of different colours. There is always difficulty in telling the age of hens. A very good judge may feel tolerably sure and justified in giving an opinion, but if he were asked to name the grounds on which his decision was based, he would be unable to do so, and would hide behind generalities.

LIGHT BRAHMAS (*Don Quixote*).—The "Light," there are no "White," Brahmas should have black flights and tails, and striped hackles. Any more colour than this is a defect, and would in a close competition be fatal to success. We know few more attractive poultry sights than a yard of Light Brahmas, and hardly any fowl that shows so well in a pen. Like all other light-feathered fowls they require a clear atmosphere, and are not calculated for a smoky climate.

GROUND OATS (*Ellice*).—We are glad to receive your testimony, but we are sure no one who has ever tried ground oats will speak lightly of them, or deny that they are the most satisfactory food he ever used. They cost much, but well managed we are not sure they are much dearer than inferior food. They can only be ground where the stones are dressed on purpose, and we believe there is some risk in the process. We were told there was a steel mill that could be worked by hand, and we bought one. It was worse than useless, the so-called ground oats were like a quantity of chaff mixed with an little flour.

SCURFY LEAS (*Cochin*).—The disease is called "the poultry elephantiasis."

It is unfortunately becoming very common. The first cases we saw were about ten years ago. The only treatment is to keep the legs constantly oiled, and rubbed with any softening ointment. There is no cure for it.

DIMENSIONS OF WOODHURY HIVE (*G. B.*).—The box of the Woodhury hive being 9 inches deep, and the frames 8 inches deep above measure, leaves an inch to be divided between the top and bottom. Mr. Fox thinks three-eighths of an inch for each space preferable. This is also the space between the ends of the frames and the sides of the box. The bar is 13 1/2 inches long; the notches cut in the two uprights of the frame to receive the bars leave about three-sixteenths of an inch on each side, to which the projecting pieces, five-eighths of an inch long, are nailed or dovetailed. The entire length of the top of the frame is 11 1/2 inches full. Mr. Woodhury worked with very shallow notches for the ends of the frames to rest on; the frames being easier of removal, and less likely to crush bees during manipulation. From centre to centre of each frame is 1 7/16 inch; any deviation in space can be thrown to the sides. It is best to measure from centre to centre of the frames, as then, as far as the proper spaces between the combs are concerned, it makes no difference whether the bars are wider or narrower than the dimensions given. The spaces between the frames must come right. For easy manipulation, however, it is important that all the frames should agree in measurement. If you are still in any doubt or difficulty, we should recommend your obtaining a hive from Messrs. Neighbour, Regent Street, and having all your other hives made from it. It is important that all the hives and parts of the hives shall be exactly similar in dimensions, so it is advisable to construct all from one pattern, and not copy from each other indiscriminately, as in the latter case the various parts are sure to get wrong.

CANARY LOSING ITS VOICE AFTER MOULT (*C. A.*).—This is not unusual. Some birds will make an apology for a song all through the moult, but they seldom break into full song till the change is complete. Your bird, however, seems to have caught cold, and a cold at such a time is dangerous. Keep him warm, and indulge him with a little sopped bread and milk in the morning, but do not allow it to remain to get sour. If you remove the water-vessel for two or three hours, and then replace it with a few drops of cod-liver oil floating on the surface, you will find it a simple way of administering a good medicine. I have never tried this seed, but should be very sceptical as to its being "a cure for all diseases of birds."—W. A. D.

KILLING AND PRESERVING INSECTS.—A Subscriber would be glad if anyone could inform him of the best mode of killing and preserving from decomposition butterflies and other insects.

TRANSFERRING BEES (*T. Bradley*).—It is not always necessary to put a swarm into a common straw hive first before introducing the bees to a Woodbury hive; but there are many cases in which it is decidedly more convenient to do so.

METEOROLOGICAL OBSERVATIONS,

CAMDEN SQUARE, LONDON.

Lat. 51° 32' 40" N.; Long. 0° 8' 0" W.; Altitude 111 feet.

DATE.	9 A.M.				IN THE DAY.				Rain.	
	Baromet. at 32 and 10 ft. level.	Hygrometer.		Direction of Wind.	Temp. of Soil at 1 ft.	Shade Temp. perature.		Radiation Temperature		
Dry.		Wet.	Max.			Min.	In sun.	On grass.	In.	
1873.										
Oct.										
We. 22	29.234	56.5	52.7	W.	49.6	58.7	45.4	52.0	43.0	0.233
Th. 23	28.897	49.2	47.8	S.W.	49.8	50.4	45.1	47.0	42.1	0.196
Fri. 24	29.291	37.4	3.4	N.E.	48.1	45.4	32.0	49.6	29.4	0.105
Sat. 25	29.529	37.8	37.6	N.E.	46.4	46.7	32.1	45.8	27.9	—
Sun. 26	29.859	43.8	41.8	N.	46.4	52.8	37.9	52.9	34.6	0.012
Mo. 27	30.333	40.6	38.7	N.	45.9	50.6	36.3	51.0	30.9	—
Tu. 28	30.344	32.4	31.3	N.W.	44.6	48.5	27.4	53.0	21.4	—
Means	29.679	42.5	41.0		47.3	50.4	36.3	44.9	32.8	0.546

REMARKS.

22nd.—Fine warm morning, but getting more and more cloudy and windy till about 10 A.M., when rain commenced, with a strong wind lasting till 10.30, when the sun shone, and it continued line till 1 P.M.; rain again commenced, continuing at intervals all day.

23rd.—Very wet early, drizzling at intervals till 2 P.M.; rain and sunshine alternately during the remainder of the day.

24th.—Foggy morning and dull, with occasional rain all day.

25th.—Fine morning, cloudy about noon, but soon clearing off; fine afternoon and starlit night.

26th.—Very fine all day, but particularly so in the early afternoon.

27th.—Fine morning; rather dull in afternoon, but fine evening.

28th.—Fine, but frosty and cold morning; very dark and thick from 11 A.M. to 4 P.M., though the sun was shining during the time.

Temperature considerably lower, especially towards the end of the week. Great range of barometer, exceeding 1 1/2 inch. The darkness and fog on 28th were very local, not extending to the west of London.—G. J. SYMONS.

COVENT GARDEN MARKET.—OCTOBER 29.

The last few days of fine weather have enabled the growers to send large quantities both of fruit and vegetables to market. Rough descriptions of Apples and Pears, however, realise very low prices—so much so, that they barely pay the cost of transport. Hot-house fruit is limited to Grapes, Pines, and Melons. A few Salway Peaches are to be had, but the regular October varieties have scarcely been seen this season.

FRUIT.

	s.	d.	a. d.		s.	d.	a. d.	
Apples.....	1	0	1	6	Mulberries.....	1	0	0
Apricots.....	doz.	0	0	0	Nectarines.....	doz.	0	0
Cherries.....	1/2 lb.	0	0	0	Oranges.....	100	10	0
Chestnuts.....	bushel	10	0	0	Peaches.....	doz.	8	0
Currants.....	1/2 sieve	0	0	0	Pears, kitchen.....	doz.	1	0
Black.....	do.	0	0	0	dessert.....	doz.	2	0
Figs.....	doz.	0	0	0	Pine Apples.....	lb.	3	0
Filberts.....	lb.	1	0	1	Plums.....	1/2 sieve	2	0
Gobs.....	lb.	1	6	0	Quinces.....	doz.	1	0
Gooseberries.....	quart	0	0	0	Raspberries.....	lb.	0	0
Grapes, hot-house.....	lb.	1	0	5	Strawberries.....	1/2 lb.	0	0
Melons.....	1/2 100	8	12	0	Walnuts.....	bushel	10	0
Limons.....	each	1	0	5	ditto.....	100	2	0

WEEKLY CALENDAR.

Day of Month Week.		NOVEMBER 6—12, 1873.		Average Tempera- ture near London.			Rain in 13 years		Sun Rises		Sun Sets.		Moon Rises.		Moon Sets.		Moon's Age.		Clock after Sun.		Day of Year.
Day	of	Month	Week.	Day	Night.	Mean.	Davs.	m.	h	m.	h	m.	h.	m.	h.	Davs.	m.	h.	h.	h.	
6	Th			J. Camerarius born, 1665.	36.9	44.7	19	5	af	7	23	af	4	19	5	26	9	16	15	13	310
7	F				35.7	41.1	20	7	7	7	21	4	58	5	45	10	17	16	10	311	
8	S			Cambriae Term divides.	34.3	43.1	19	9	7	19	4	51	6	53	11	18	16	6	312		
9	SUN			22 SUNDAY AFTER TRINITY. PRINCE OF WALES BORN, 1811.	33.8	42.2	16	10	7	18	4	55	7	after.	19	16	1	313			
10	M				34.0	42.2	21	12	7	16	4	5	9	21	1	20	15	55	314		
11	Tu			Half Quarter Day—Martinmas.	34.2	42.2	15	11	7	15	4	18	10	47	1	21	15	48	315		
12	W			Royal Horticultural Society, Fruit, Floral, and Gen. Meets. Chrysanthemum Show opens.	33.8	42.0	17	16	7	13	4	31	11	6	2	(	15	40	316	

From observations taken near London during forty-three years, the average day temperature of the week is 51.1; and its night temperature 34.8. The greatest heat was 63°, on the 12th, 1841; and the lowest cold 17°, on the 9th, 1864. The greatest fall of rain was 1.02 inch.

THE KITCHEN GARDEN.—No. 1.



o apology, I think, is needed for entering upon the subject of the kitchen garden, because whichever way the matter is looked upon, or whatever view is taken of it, the same result will follow—that is, there is no getting over the fact that this department of the garden is not only the most substantial, but, I think I may add, the most profitable of all departments. It is substantial, because it affords very wholesome food for consumption, which

no one can well do without; and it is profitable, because, if properly worked, its produce is greater and more serviceable, according to the outlay of expenditure, than that of the more expensive departments: of course I allude to the requirements of private establishments. But in taking a wider view of this branch of gardening, and seeing the enormous acreage around London and most large provincial towns under tillage for vegetables, it is clear enough to the most sceptical that the cultivation of vegetables affords employment to a goodly number of the population where they are grown, and is a source of profit to the market gardener; and last, but not least, it proves that the consumption of vegetables forms no unimportant item in the daily food of the inhabitants. Well, now, seeing that it has always been so clearly before us that the cultivation of vegetables is a necessity; and as much so in a private garden as in any other, there may be reason to complain a little when we associate the rising generation of gardeners with this branch of gardening. Of course there are exceptions, but the majority of them have literally shunned the use of the spade; and the heavier operations, such as digging and trenching, moving earth for the purpose of making beds and borders, planting, hoeing and stirring the soil, ridging, and the general working of the soil, to say nothing of sowing, transplanting, and planting, have received but slight attention compared with the more attractive duties attending plant-growing and other kinds of lighter work under glass. I say that in these days of progress the kitchen garden must not be left in the background, and I fancy that it needs no very extraordinary prophet to foresee that the time is not far distant when the general management of the kitchen garden and the produce therefrom will be regarded more as a standard of merit by which a gardener may hope to succeed than it was a few years ago; and there is now no lack of opportunity to excel in this part of gardening if there is the inclination.

Amateurs have not been slow to recognise the importance of a good garden, and have within the last few years gone into this branch of gardening in right good earnest and with a will that does them credit, and provision for vegetable as well as fruit-growing is constantly springing up among them and around their dwellings, so that one desires to render them some assistance if possible. I therefore purpose writing a series of papers exclusively for the use of the amateur relating to the kitchen garden, giving directions and opinions upon forming it,

desirable walls and trees for each of their aspects, making walks, laying-out the quarters, planting trees, and cropping, giving any other details that may occur to my mind as I proceed, with the hope that it may prove acceptable to your readers.—THOMAS RECORD.

ORNAMENTAL PLANTING.—No. 10.

CLIMBING PLANTS.

OF all the really valuable classes of shrubs there are none so little known or cultivated as those which from the freedom of their growth are termed climbing plants. It is, doubtless, a paucity of wall-space that deters so many from the culture of these plants: there are, however, a variety of uses to which they are applicable, apart from the covering of walls. Pegging-down the long shoots of Roses over the surface of banks and flower beds was a step in the right direction, and Clematis Jackmanni, with its numerous progeny, has become increasingly popular since its value as a bedding plant has become generally known. Arbours, fences, heaps of roots, rocks, and wire-work may all be turned to account for the purpose, and thereby gain much in appearance and add considerably to the attractions of a garden. Much caution should be exercised when artificial surfaces are prepared, both as to the materials used and the position selected for them; a rootery standing out upon a lawn would always impress one as a misplaced and incongruous object, but it would not do so if it were placed upon a bold sweep of a shrubbery border, so that the back or higher part of it became merged in the growth of the shrubs. In such a position it might touch the margin or even project somewhat upon the lawn; and the planting need not be confined solely to climbers, but should embrace a variety of dwarf-flowering and evergreen plants, so as to render it attractive at all seasons of the year. A mass of Juniperus tamariscifolia might agreeably lend the dense green carpeting of its spreading growth; the bright pink Erica carnea, the white Heath-like flower bells of Andromeda floribunda and Pernettya angustifolia, and a host of kindred forms there are, among which the trailing growth of Clematis, Honeysuckle, Virginian Creeper, Cotoneaster, and others that are thoroughly hardy might ramble. Pillar Roses, Ivy trained over wire in the form of cones, the wire arches and pendant chains of the rosery, all form prominent and pleasing objects when well managed, and a bank may be made to answer as an admirable substitute for a wall for a collection of choice climbers.

In arranging plants of this class it is important to mix the evergreen and deciduous varieties so far as is practicable, so as to avoid much of that bareness which has such a forlorn appearance during winter. Due attention should also be given to securing an agreeable variety of colour among the flowers.

The Clematis, from the profusion of flowers which it yields, and its great and varied beauty, deservedly ranks high in this section. The effect of a vigorous old plant of montana when laden with its thousands of white blossoms is very striking. C. Flammula is another fine white

kind that is remarkable for the sweet scent of its flowers; the well-known deep violet Jackmanni is, I believe, still unsurpassed by any of the later introductions of the same shade of colour. Then we have Lady Caroline Neville, of a delicate mauve shade; Madame Van Houtte, a very fine shaded white variety; lanuginosa, with pale blue flowers; and grandiflora mutabilis, having the largest flowers of any kind I have seen. There are many other fine seedlings in the hands of Messrs. Cripps of various shades of colour, such as mauve, deep crimson, and bright blue. Turning now to the Loniceras (Honeysuckle), the sub-evergreen variety flexuosa is first, with its delicious scent, and for the freedom and continuity with which it flowers; then come the white-flowered fragrantissima, the scarlet sempervirens, a very distinct variety, but with a very long straggling habit of growth, requiring considerable care in training; the yellow-flowered flava, and the very rapid-growing excellent variety brachypoda. When one or two kinds only are wanted, flexuosa and brachypoda may be strongly recommended as being of a dense branching habit, vigorous growth, very free-flowering, and most hardy, thriving well upon an exposed north aspect. Some plants of both kinds that were placed in their present position two years ago are now from 15 to 20 feet high. Nor is this simply the growth of a few strong leading shoots, for both plants have produced "breast-wood" and side shoots so freely, that frequent pruning and training have been necessary. Of the Jasmines I may select Jasminum officinale, a free-flowering, very sweet-scented white variety; the brilliant yellow revolutum; and the well-known winter-flowering nudiflorum. The Escallonias, though not a large section, are a very important one. E. Ingramii and E. macrantha are almost identical, both growing vigorously, and yielding a profusion of pretty pink flower spikes; the only difference is in the more glossy foliage of macrantha. Escallonia pterocladon is a very distinct and valuable climber, with small foliage and white flower spikes. Of Ceanothus there are azureus, with its charming panicles of pale blue flowers; and divaricatus, having a close neat growth, well clothed with glossy deep green foliage. Berberidopsis corallina is another fine species of the evergreen type that is worthy of especial attention; it has handsome leaves of a peculiarly deep shade of green, stout in texture, and freely produced, which form a fine foil to the deep crimson of its drooping clusters of rosette-like flowers. Nor must I exclude the beautiful pale blue Wistaria, the fine old Bignonia (Tecoma) radicans major, with its bold trusses of orange and crimson flowers, and Passiflora cerulea; all three of these old favourites being exceedingly valuable for covering a large area of wall-space quickly. Ligustrum japonicum and Berberis Darwinii are also worthy of a place; both have handsome evergreen foliage, and the white flowers of the first, and the deep orange flowers of the second, are alike produced abundantly. The very compact-growing Ligustrum coriaceum will, I think, prove a useful evergreen for covering low walls or pillars, its singularly round glossy foliage presenting a very striking and uncommon appearance. Garrya elliptica merits a corner from the beauty of its catkins in winter, as does the singular Chimonanthus fragrans, which produces its fragrant flowers at the same period of the year, but it ought not to occupy a prominent position, as it is not an ornamental plant.

I have excluded very many kinds of different species in order to present a really choice selection to your readers; yet the list grows upon my hands, and there are yet one or two others which I cannot pass over. What can be more beautiful at this season of the year than the Virginian Creeper (Ampelopsis hederacea) when its foliage becomes a mass of the brightest crimson, which is so beautiful that one cannot but regret its being the forerunner of decay? The more refined form of this species, Ampelopsis Veitchii, is also very ornamental; its growth is more slender than that of hederacea, and its general appearance is very elegant. Of other plants having fine foliage, but with insignificant flowers, the best are Aristolochia Sipho, Akebia quinata, and Periploca græca. —EDWARD LUCKHURST.

FRANÇOIS LACHARME ROSE.

Why is François Lacharme omitted from this year's catalogues of Roses? It is a very fine Rose in every respect, and is deliciously fragrant. It should not be allowed to go out of cultivation.—A CONSTANT AND INTERESTED READER.

Why, indeed? Well might our fair correspondent inquire, if her complaint were correct. We endorse all that she says

as to the beauty and fragrance of François Lacharme, nor do we fancy that it will go out of cultivation; but there is a fashion even in Roses, and what is old in fashion often has its other good qualities overlooked. How rarely, for instance, do we see a bonnet now-a-days; and when we do, well, how is the beauty fallen! yet we can imagine that it kept off neuralgia and other evils, besides giving the wearer an expression more in consonance with our old-fashioned notions. Be this as it may, it is very certain that in some of the Rose catalogues we often miss old friends in the rage for something new. But we do not think the case of François Lacharme quite so hopeless, for we rushed to our file of catalogues, and with a sigh of relief the first four we consulted all mentioned François Lacharme, and, moreover, gave it a good character, which we trust will prove enduring for some years longer, for the Rose deserves it. Thus fortified we looked no further, and we trust our correspondent's fears will prove groundless.]

THE ELECTION OF NEW ROSES.

LAST year's election having been on an extended scale, it did not appear advisable to hold it annually; but one of your correspondents having made inquiries on the subject, I consulted the Revs. C. P. Peach, E. N. Pochin, and Bulmer, and the majority considered that a poll of the newer varieties might prove interesting and also useful to those who only purchase "a good article," and are indisposed to lay out much on the plants that come over to us annually with such crack-jaw names, and such a flourish of trumpets as to their good qualities—characters, alas! that a year or two's trial rudely dispels. The election, therefore, was purposely restricted to the more recent introductions. But on the threshold I was met by a difficulty: Several of the larger growers and the returning officer meant two different things by the same words, and in asking for 1870, 1871, and 1872, I found I was altogether in error. I believed, with several amateurs and some nurserymen, that I was thus including all the Roses from Castellane's to Etienne Levet's year, whereas by the rules of the Royal Horticultural Society the age of a plant dates from the year that it is introduced into commerce, and thus, although called by the nurserymen in their catalogues "new Roses for 1873," it means the 1872 Roses. Intentionally the absolutely new Rose list was omitted; the experience of a single year is often very fallacious, and not a few have been misled by it. The value of this election is to assist, by a variety of opinions formed in different soils and climates thus brought together, the retention of the best varieties alone. We all know that a first season's impressions are often subsequently falsified. As a proof of this I will simply mention, that in the general election last year several new Roses of 1871 received honourable mention, notably Lyonnais and Madame Bellon; at least, these two Roses received more votes than any others of the 1871 Roses. What has a year's further experience done for them? Has it added to their reputation? I trow not. Madame Bellon is not even mentioned by some who last year thought it so promising. It is pretty, certainly, but has too slight distinctness of character. Lyonnais has not much improved, is somewhat loose, and apt, I fear, in the exhibition tent to stare the judges out of countenance, a proceeding that every well-educated and modest Rose would rigorously avoid. President Thiers, Madame Lefebvre Bernard, and Etienne Levet were next in order; the two former cannot be said to have advanced in estimation. Thiers appears overrated, is thin and flat, and little likely to hold his own any more than his namesake on the continent. Etienne Levet, on the contrary, was certainly not sufficiently esteemed. It bids fair to be the Rose of 1871, and must be in everybody's collection; indeed, its position on the poll is remarkable—second only to Comtesse d'Oxford, and equalling her ladyship in first-class votes. The two next best Roses, François Michelin and Madame George Schwartz, were unnoticed in the election last year. François Michelin must run Etienne Levet hard for the premiership of 1871 if its other qualities are as good as its looks; it is a grand Rose, and, like Etienne Levet, quite an acquisition. The position of André Dunand has disappointed me, especially as an addition to our lighter Roses; I think it will rank higher another season. Annie Laxton and Princess Beatrice are possibly in a rather false position, as I do not think all the voters realised that they are 1871 Roses. In the same position possibly is Edward Morren, which came out at an odd time between the two years, but which some consider to be 1868. Of the older varieties this has retrograded; the past

season, being wet, was not favourable to it, and in the great essential of quality it is rather deficient. With the exception of this Rose, the position of the 1869 introductions are almost identical with their relative positions in the general election last year.

Altogether there are twenty-six voters—fourteen amateurs and twelve nurserymen, and they have named fifty-one Roses as in the best twelve; whilst in the six, twenty-nine Roses are noticed.

In the following table, the first column shows the position of the Rose at the close of the poll; the second, the name, kind, and age of the Rose; column A, the number of votes given to that variety by amateurs in first six; B, the votes in the second six; C, the total of amateur votes. The same letters with an asterisk show the corresponding votes of the nurserymen, and the total number of votes polled for each Rose is found in the last column. Where the votes are equal, position on the poll is determined by votes in the first six; where still equal, the Roses are bracketed together.

POSITION No.	NAME OF ROSE.	A	B	C	A*	B*	C*	TOTAL.
1.	Comtesse d'Oxford, H.P., 1869	11	2	13	10	2	12	25
2.	Etienne Levat, H.P., 1871	12	1	13	9	2	11	24
3.	Marquise de Castellane, H.P., 1869	11	3	14	9	1	10	24
4.	Louis Van Houtte, H.P., 1869	10	1	11	11	1	12	23
5.	Mlle. Eugenie Verdier, H.P., 1869	9	1	10	6	4	10	20
6.	Francois Michelin, H.P., 1871	1	9	10	7	0	7	17
7.	Ferdinand de Lesseps, H.P., 1869	4	5	9	1	5	6	15
8.	Madame Geo. Schwartz, H.P., 1871	4	2	6	3	4	7	13
9.	Catherine Mermet, T., 1869	5	3	8	1	4	5	13
10.	Paul Neron, H.P., 1869	3	5	8	0	5	5	13
11.	President Thiers, H.P., 1871	1	3	4	0	5	5	9
12.	Annie Laxton, H.P., 1871 (Lyonnais, H.P., 1871)	4	2	6	0	2	2	8
13.	Richard Wallace, H.P., 1871	1	3	4	1	3	4	8
14.	Madame Lefebvre Bernard, H.P., 1871	0	2	2	2	4	6	8
15.	Madame Lefebvre Bernard, H.P., 1871	2	3	5	0	2	2	7
16.	Andre Dunand, H.P., 1871 (Princess Beatrice, H.P., 1871 Edouard Morren, H.P., 1869 (?)	1	5	6	0	1	1	7
17.	Madame Marie Van Houtte, T., 1871	1	2	3	1	2	3	6
18.	Edouard Morren, H.P., 1869 (?)	1	4	5	1	0	1	6
19.	Madame Marie Van Houtte, T., 1871	1	1	2	2	1	3	5
20.	Baronne Louise Uxkull, H.P., 1871	0	3	3	1	1	2	5
21.	Captain Lamour, H.P., 1870	0	2	2	0	3	3	5
22.	Madame Bellon, H.P., 1870	0	2	2	1	1	2	4
23.	Souvenir de Paul Neron, T., 1871	0	1	1	0	3	3	4
24.	Madame Hippolyte Jamin, H.P., 1871 (Madame Jules Margottin, T., 1871 Belle Lyonnaise, T., 1869 Eliza Bonlie, H.P., 1869	0	1	1	1	1	2	3
25.	Madame Jules Margottin, T., 1871	0	2	2	0	1	1	3
26.	Belle Lyonnaise, T., 1869	0	3	3	0	0	0	3
27.	Eliza Bonlie, H.P., 1869	0	0	0	0	3	3	3
28.	Reve d'Or, N., 1869	1	0	1	0	1	1	2

Madame Bernard, T., 1870; Auguste Rigotard, H.P., 1871; Madame Camille, T., 1871; Abbe Brammerel, H.P., 1871; Madame Cécile Berthod, T., 1871; Madame Chater, H.P., 1871, each obtained two votes in the second six. The latter Rose appears to like Herefordshire, for only Rev. C. Bulmer and Mr. Cranston name it; neither can I find it in any but Mr. Cranston's catalogue. The Rev. C. H. Bulmer says it has fine flowering properties, good substance, and form. Seventeen other Roses received one vote each.

Of the three years taken, 1870 furnishes us with very few, if any, Roses that are likely to be permanent favourites. The wretched Franco-Prussian war left sharper thorns in the unfortunate French than those of their Roses. Some of the names are singular as usual, but few will cling to our memories; one of them, Freres Souper et Notting, might in a Frenchman's broken English describe the poor fellows themselves, for they *suffered and had nothing*. Let us hope a brighter time is coming to them, and possibly the season's best Rose may be named Henri V.

Teas do not figure very well in this election, Catherine Mermet alone being amongst the first eighteen. It well deserves its position, being one of the most beautiful of its class, and must become a favourite. I have omitted to draw attention, in speaking of Francois Michelin, to the fact that all the nurserymen who did vote for it placed it in the first six.

I would add a hint to nurserymen in framing their catalogues. I believe that these would be made far more useful if the age of the Rose according to the Royal Horticultural Society's rules were attached. Now, frequently, the catalogues are misleading, especially to us amateurs, some of whom are disposed to eul a spade a spade. After all, however much some of us may object to the laws of the Royal Horticultural Society, especially in the matter of most of the Roses, which certainly come into commerce with us a year after their introduction to England, yet, as it is the leading Society, and, we may hope, the presiding genius over horticulture, I hold that, like the Marylebone rules in cricket or Wimbledon regulations in rifle-shooting, their rules should be maintained in preference to any private

interpretation. In conclusion, I beg most warmly to thank all who have assisted me by replying to my queries. We miss some of the old names; some have declined because they have already published their views on the subject, others from various reasons. Still I cannot but think that the general conclusions arrived at from so many different sources are exceedingly interesting, and I trust will prove to be of general utility to the young amateur.

Mr. GEORGE PAUL, Cheshunt.

- | | |
|---------------------------|----------------------------|
| 1. Comtesse d'Oxford | 7. Louis Van Houtte |
| 2. Marquise de Castellane | 8. Paul Neron |
| 3. Mlle. Eugenie Verdier | 9. President Thiers |
| 4. Etienne Levat | 10. Madame Camille |
| 5. Madame George Schwartz | 11. Madame Jules Margottin |
| 6. Marie Van Houtte | 12. Madame Hippolyte Jamin |

Mr. H. MAY, Eadme, Yorksire.

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|---------------------------|----------------------------|
| 1. Etienne Levat | 7. Richard Wallace |
| 2. Marquise de Castellane | 8. Madame Bellon |
| 3. Lyonnais | 9. Madame Lefebvre Bernard |
| 4. Baron de Prailly | 10. Mlle. Eugenie Verdier |
| 5. Louis Van Houtte | 11. Princess Beatrice |
| 6. Comtesse d'Oxford | 12. Princess Christian |

Mr. E. SMITH, Worcester.

- | | |
|------------------------------|-------------------------|
| 1. Perfection de Montplaisir | 7. Abbe Brammerel |
| 2. Comtesse d'Oxford | 8. Ferdinand de Lesseps |
| 3. Louis Van Houtte | 9. Paul Neron |
| 4. Madame Lianaud | 10. President Thiers |
| 5. Richard Wallace | 11. Eliza Bonlie |
| 6. Comtesse d'Oxford | 12. Louis Corbio |

Mr. J. HARRISON, North of England Nurseries, Darlington.

- | | |
|---------------------------|-------------------------|
| 1. Velours Pourpre | 7. Catherine Mermet |
| 2. Louis Van Houtte | 8. Madame Betard |
| 3. Etienne Levat | 9. Ferdinand de Lesseps |
| 4. Marquise de Castellane | 10. Comtesse d'Oxford |
| 5. Madame Augusta Verdier | 11. Lyonnais |
| 6. Madame George Schwartz | 12. Madame Camille |

Mr. G. COOLING, Broad Street, Bath.

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|---------------------------|----------------------------|
| 1. Comtesse d'Oxford | 7. Etienne Levat |
| 2. Louis Van Houtte | 8. Ferdinand de Lesseps |
| 3. Marquise de Castellane | 9. Captain Lamour |
| 4. Mlle. Eugenie Verdier | 10. Madame George Schwartz |
| 5. Madame Bellon | 11. Baronne Louise Uxkull |
| 6. Richard Wallace | 12. Souvenir de Paul Neron |

Mr. G. WHEELER, The Nurseries, Warrminster.

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|--------------------------|----------------------------|
| 1. Comtesse d'Oxford | 7. Capitaine Lamour |
| 2. Baronne Louise Uxkull | 8. Coquette des Blanches |
| 3. Edouard Morren | 9. Madame Lefebvre Bernard |
| 4. Etienne Levat | 10. Mlle. Eugenie Verdier |
| 5. Francois Michelin | 11. Marquise de Castellane |
| 6. Louis Van Houtte | 12. Richard Wallace |

Mr. H. DENNETT, Stapleford Nurseries, Wilton.

- | | |
|---------------------------|---------------------------|
| 1. Etienne Levat | 7. Ferdinand de Lesseps |
| 2. Francois Michelin | 8. Richard Wallace |
| 3. Marquise de Castellane | 9. Madame George Schwartz |
| 4. Louis Van Houtte | 10. Mlle. Eugenie Verdier |
| 5. Madame Hippolyte Jamin | 11. President Thiers |
| 6. Comtesse d'Oxford | 12. Catherine Mermet |

Messrs. PERKINS, Brothers, Coventry.

- | | |
|---------------------------|----------------------------|
| 1. Louis Van Houtte | 7. Souvenir de Paul Neron |
| 2. Comtesse d'Oxford | 8. Eliza Bonlie |
| 3. Marquise de Castellane | 9. Ferdinand de Lesseps |
| 4. Mlle. Eugenie Verdier | 10. Augusta Ribotard |
| 5. Etienne Levat | 11. Madame George Schwartz |
| 6. Francois Michelin | 12. Paul Neron |

Messrs. Perkins consider that Francois Michelin will probably take a still higher position.

Mr. TUNNER, Royal Nurseries, Slough.

- | | |
|---------------------------|-------------------------------|
| 1. Louis Van Houtte | 7. Comtesse d'Oxford |
| 2. Marquise de Castellane | 8. Paul Neron |
| 3. Mlle. Eugenie Verdier | 9. Richard Wallace |
| 4. Etienne Levat | 10. President Thiers |
| 5. Francois Michelin | 11. Souvenir de M. Paul Neron |
| 6. Madame George Schwartz | 12. Marie Van Houtte |

Mr. J. DURBIN, Englishcombe Rosery, Bath.

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|---------------------------|----------------------------|
| 1. Comtesse d'Oxford | 7. General Douai |
| 2. Louis Van Houtte | 8. Eliza Bonlie |
| 3. Marquise de Castellane | 9. Mlle. Eugenie Verdier |
| 4. Catherine Mermet | 10. Baronne Louise Uxkull |
| 5. Etienne Levat | 11. Abbe Brammerel |
| 6. Francois Michelin | 12. Comtesse de Nublaillac |

Mr. B. E. CASE, The Nurseries, Colchester.

- | | |
|--------------------------|-----------------------|
| 1. Comtesse d'Oxford | 7. Lyonnais |
| 2. Mlle. Eugenie Verdier | 8. Etienne Levat |
| 3. Louis Van Houtte | 9. President Thiers |
| 4. Ferdinand de Lesseps | 10. Princess Beatrice |
| 5. Marie Van Houtte | 11. Annie Laxton |
| 6. Francois Michelin | 12. Andre Dunand |

Mr. CRANSTON, King's Ave Nurseries, Hereford.

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|---------------------------|---------------------------|
| 1. Etienne Levat | 7. Madame George Schwartz |
| 2. Louis Van Houtte | 8. Lyonnais |
| 3. Comtesse d'Oxford | 9. Annie Laxton |
| 4. Marquise de Castellane | 10. Capitaine Lamour |
| 5. Mlle. Eugenie Verdier | 11. Madame Chater |
| 6. Francois Michelin | 12. Madame d'Isidore |

Rev. C. P. PEACH, Appleton-le-Street, Malton.

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|---------------------------|-----------------------------|
| 1. Annie Laxton | 7. Andre Dunand |
| 2. Comtesse d'Oxford | 8. Lyonnais |
| 3. Etienne Levot | 9. Baronne J. Uxkull |
| 4. Louis Van Houtte | 10. Madame Lefebvre Bernard |
| 5. Mlle. Eugenie Verdier | 11. President Thiers |
| 6. Marquise de Castellane | 12. Princess Beatrice |

Mr. Peach says, "I do not think very highly of any Roses since Castellane's year, unless it may be Annie Laxton, Etienne Levot, and Lyonnais. However, time will prove. I think President Thiers an overrated Rose."

Rev. E. HANDLEY, Daltonshorough.

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|----------------------------|----------------------------|
| 1. Mlle. Eugenie Verdier. | 7. François Michelon |
| 2. Comtesse d'Oxford | 8. Ferdinand de Lesseps |
| 3. Marquise de Castellane | 9. Baronne Louise Uxkull |
| 4. Etienne Levot | 10. Catherine Mermet |
| 5. Madame Lefebvre Bernard | 11. Souvenir de Paul Neron |
| 6. Louis Van Houtte | 12. Madame Jules Margottin |

Mr. HINTON, Warminster.

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|---------------------------|--------------------------|
| 1. Etienne Levot | 7. Andre Dunand |
| 2. Paul Neron | 8. François Michelon |
| 3. Catherine Mermet | 9. Louis Van Houtte |
| 4. Marquise de Castellane | 10. Marie Van Houtte |
| 5. Comtesse d'Oxford | 11. Ferdinand de Lesseps |
| 6. Mlle. Eugenie Verdier | 12. Edward Morren |

Rev. J. P. M. CANN, Monkton Wyld, Charmouth.

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|---------------------------|----------------------------|
| 1. Comtesse d'Oxford | 7. Madame Berard |
| 2. Ferdinand de Lesseps | 8. Etienne Levot |
| 3. Louis Van Houtte | 9. Capitaine Lamure |
| 4. Mlle. Eugenie Verdier | 10. Madame George Schwartz |
| 5. Catherine Mermet | 11. François Michelon |
| 6. Marquise de Castellane | 12. Andre Dunand |

Mr. J. SCOTT, Warminster.

- | | |
|---------------------------|-------------------------|
| 1. Louis Van Houtte | 7. Paul Neron |
| 2. Mlle. Eugenie Verdier | 8. Ferdinand de Lesseps |
| 3. Marquise de Castellane | 9. Andre Dunand |
| 4. Etienne Levot | 10. Comtesse d'Oxford |
| 5. Princess Beatrice | 11. François Michelon |
| 6. Catherine Mermet | 12. Richard Wallace |

Rev. E. N. POCHIN, Sibley Vicarage, Loughborough.

- | | |
|---------------------------|----------------------------|
| 1. Comtesse d'Oxford | 7. Catherine Mermet |
| 2. Marquise de Castellane | 8. Belle Lyonnaise |
| 3. Edward Morren | 9. Annie Laxton |
| 4. Mlle. Eugenie Verdier | 10. François Michelon |
| 5. Paul Neron | 11. Madame Hippolyte Jamin |
| 6. Etienne Levot | 12. Ferdinand de Lesseps |

Mr. J. BURRELL, Heighington, Darlington.

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|----------------------------|--------------------------|
| 1. Louis Van Houtte* | 7. Ferdinand de Lesseps* |
| 2. Comtesse d'Oxford* | 8. François Michelon |
| 3. Marquise de Castellane* | 9. Mlle. Eugenie Verdier |
| 4. Catherine Mermet* | 10. Lyonnais |
| 5. Madame George Schwartz* | 11. Andre Dunand |
| 6. Etienne Levot* | 12. Paul Neron |

Mr. Burrell adds that those marked with an * would take rank in the best 24 of all Roses.

Rev. H. DOMBRAIN, Westwell Vicarage, Ashford, Kent.

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|----------------------------|---------------------------|
| 1. Andre Dunand | 7. Marquise de Castellane |
| 2. Baron de Bonstetten | 8. Edouard Morren |
| 3. Madame Lefebvre Bernard | 9. Auguste Ligotard |
| 4. Etienne Levot | 10. Réve d'Or |
| 5. François Michelon | 11. Madame Cecile Berthod |
| 6. Madame George Schwartz | 12. Madame Bellon |

Mr. R. W. BEACHEY, Fluders, Kingskerswell, Devon.

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|--------------------------|---------------------------|
| 1. Louis Van Houtte | 7. Belle Lyonnaise |
| 2. Comtesse d'Oxford | 8. Paul Neron |
| 3. Mlle. Eugenie Verdier | 9. Marquise de Castellane |
| 4. Ferdinand de Lesseps | 10. Richard Wallace |
| 5. Catherine Mermet | 11. President Thiers |
| 6. Etienne Levot | 12. Lyonnais |

Mr. TAPNER, Crowhurst, Battle, Sussex.

- | | |
|---------------------------|----------------------------|
| 1. Louis Van Houtte | 7. Belle Lyonnaise |
| 2. Marquise de Castellane | 8. Souvenir de Julie Gonod |
| 3. President Thiers | 9. Madame Lefebvre Bernard |
| 4. Paul Neron | 10. Baron de Prailly |
| 5. Etienne Levot | 11. Docteur de Chalm |
| 6. Madame George Schwartz | 12. Comtesse d'Oxford |

Rev. A. CHEALES, Brockham Vicarage, Reigate.

- | | |
|---------------------------|------------------------------|
| 1. Marquise de Castellane | 7. President Thiers |
| 2. Mlle. Eugenie Verdier | 8. Edouard Morren |
| 3. Annie Laxton | 9. Paul Neron |
| 4. Louis Van Houtte | 10. Madame Cecile Berthod |
| 5. Comtesse d'Oxford | 11. Virgile |
| 6. Réve d'Or | 12. Princess Louise Victoria |

Mr. F. H. GALL, Julians, Buntingford.

- | | |
|---------------------------|-----------------------|
| 1. Marquise de Castellane | 7. Paul Neron* |
| 2. Comtesse d'Oxford | 8. Edward Morren* |
| 3. Ferdinand de Lesseps | 9. Louisa Wood |
| 4. Etienne Levot | 10. François Michelon |
| 5. Lyonnais | 11. Madame Schwartz |
| 6. Annie Laxton | 12. Princess Beatrice |

* Big enough for prizefighters, but coarse Roses.

Mr. R. J. BAKER, Heavitree, Exeter.

- | | |
|---------------------------|---------------------------|
| 1. Marquise de Castellane | 7. Baronne Louise Uxkull |
| 2. Ferdinand de Lesseps | 8. Madame Jules Margottin |
| 3. Louis Van Houtte | 9. Madame Bellon |
| 4. Comtesse d'Oxford | 10. Annie Laxton |
| 5. Etienne Levot | 11. Capitaine Michon |
| 6. Marie Van Houtte | 12. Capitaine Laxton |

Rev. C. H. BULMER, Credenhill Rectory, Hereford.

- | | |
|---------------------------|-----------------------------|
| 1. Mlle. Eugenie Verdier | 7. Marquise de Castellane |
| 2. Comtesse d'Oxford | 8. François Michelon |
| 3. Louise Van Houtte | 9. Madame Bellon |
| 4. Etienne Levot | 10. Madame Lefebvre Bernard |
| 5. Annie Laxton | 11. Madame Châte |
| 6. Madame George Schwartz | 12. Catherine Mermet |

These I think are placed in order of merit. Mr. Bulmer adds that he has degraded his last year's choice, Ferdinand de Lesseps, from the high position in which he placed him at the general election, for gross plagiarism of Exposition de Brie and Maurice Bernardin.

It is often said of women that they still nobly love on when the object of their affections has proved himself false in every way; and something of this depth of love clings to our friend Mr. Bulmer, for in a second communication he writes, urging me to give his opinion, but adds, "But only, mind, as to his being an original. He is a grand good Rose." So he is, adds the returning officer.

P.S.—After sending off the papers the following revised list reached me from the Rev. A. Cheales:—

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|---------------------------|-----------------------------|
| 1. Annie Laxton | 7. President Thiers |
| 2. Marquise de Castellane | 8. Louis Van Houtte |
| 3. Mlle. Eugenie Verdier | 9. Princess Louise Victoria |
| 4. Comtesse d'Oxford | 10. Andre Dunand |
| 5. Princess Christian | 11. Lyonnais |
| 6. Etienne Levot | 12. Madame Cecile Berthod |

It was too late to make any alterations. But supposing this second list to stand, it places Etienne Levot on an equality with Comtesse d'Oxford, and it gives another vote to Lyonnais, as also to my favourite André Dunand, which raises these Roses in position. It speaks eminently for the good qualities of Etienne Levot that it should have attained such a position.—JOSEPH HINTON, Warminster.

A BATTLE WITH WIREWORMS.

Of all garden pests none are so puzzling as that tough yellow-coated little rascal the wireworm. "What shall we do with it? how exterminate it?" is the oft-repeated cry from numerous sufferers; for, encased as it is in armour so stout as to render it impervious to all ordinary means of assaunt, it yields to nothing which can be applied to the soil, and extreme cold appears to be the only thing in nature that is fatal to it. It is for this reason that it is recommended to stir and expose foul soil during the prevalence of severe frost. It is obvious, however, that this plan is only applicable to spaces of a very limited area, and therefore a more certain and efficient plan is requisite for general adoption. The method which I am about to describe is not a new one, hence it has not the merit of novelty to recommend it; but there can be no mistake about its efficiency, the very mention of it conveying conviction to every mind that it cannot fail. Simply stated it is this: Pick the wireworms out of the soil and—smash them! This will probably at first sight be thought a tedious operation, and one that is not likely to prove altogether so certain in its effects as I have stated; I will therefore proceed to explain how well it has been found to answer in actual practice during the past season.

Very early in the present year a field was placed under my care as a kind of auxiliary kitchen garden for the cultivation of Potatoes and other culinary roots. The soil, which for many years had been stirred no deeper than about 4 inches by means of a light one-horse plough, was found to be in a very poor, almost inert condition. A liberal dressing of rich farm-yard manure was carted on to it; it was well stirred and thrown up roughly to a depth of fully 9 inches with spades, and in due course about an acre of it was planted with Potatoes. Now, neither in digging nor during the planting were many wireworms perceptible, yet, upon examination a short time afterwards, there was hardly a tuber without several wireworms attacking it—some just commencing operations, others which had burrowed so deeply as only to leave a short portion of their wiry bodies visible, while all with unerring instinct were gathering to the richest feast they had probably met with during their existence. Such an unpleasant occurrence might be regarded either as a serious dilemma or as a capital oppor-

tunity of clearing the soil of such a pest, and so saving not only the present but future crops from its ravages. While taking the latter view, the former one, which seemed to point to possible failure, was only felt as a spur to exertion, and a couple of men were immediately set to take up the Potatoes one by one with trowels, destroying every wireworm that could be found, and replacing the Potatoes in the soil as they went along the rows. It was a long and tedious job, but it was undoubtedly a thorough one, for it was computed that upwards of ten thousand of the enemy were destroyed; and so the battle was gained, the crop proving an excellent one, sound and free from any blemish.

The experience which has thus been gained will prove invaluable in future practice; and whenever land is found to be infested with wireworms, I feel assured that Potatoes placed a few inches beneath the surface and about 2 feet apart for a week or two, will prove an unfailing bait to lure them to destruction.—EDWARD LUCHESTER.

NOTES UPON FERNS.—No. 6.

DAVALLIAS.

I now purpose offering a few remarks upon this genus, known popularly as the Hare's-foot Ferns, from the great resemblance of the scaly rhizome of the typical species (*D. canariensis*) to



Davallia pyxidata.—Part of barren and fertile fronds full size, and portion of fertile frond magnified.

the foot of that animal. Many of these plants are admirably adapted for basket-culture, whilst others of larger and more robust habit of growth form noble specimens when grown in pots, their large and bright green arching fronds rendering them grand ornaments either for home decoration or exhibition purposes; whilst others, again, form beautiful objects in a Wardian case. Most of the species have fronds of a somewhat leathery texture, which renders them peculiarly suitable for cutting for vases, as they last a considerable time without curling, and sprigs of several of the more finely-divided kinds may be used with good effect for the decoration of a lady's hair.

Davallias are creeping plants, and should always be potted upon a slight cone or elevation, after the manner described for the majority of Orchids, which gives a greater surface for them to spread over, and at the same time prevents the rhizomes from being buried, which would be injurious to their well-being. As a genus they are characterised by their stout, scaly, creeping rhizome (which, however, in *one* or two

instances are sub-erect). The fronds are sometimes pinnate, but more usually bi-tripinnate, thick and leathery in texture, and deltoid in outline; veins forked and free without the slightest indication of becoming netted; the receptacles are terminal, and bear close upon the margins, usually in the sinus of the segments, oblong or sub-rotund sori, which are covered with a thin dry indusium, which is attached at the sides, and thus appears like a little jug or pitcher, and these, being produced in great abundance, add materially to the beauty of the fronds. For soil use rough peat and sand, and drain well.

GROUP I.

Species suitable for stove cultivation.

<i>pentaphylla</i>	<i>elegans</i>	<i>solida</i>
<i>ornata</i>	<i>divaricata</i>	<i>Vogelii</i>
<i>clata</i>		

GROUP II.

Species suitable for the greenhouse fernery.

<i>canariensis</i>	<i>Lindleyi</i>	<i>pyxidata</i>
<i>pulchella</i>		(see accompanying figure)

GROUP III.

Species suitable for growing in baskets in the stove fernery.

<i>dissecta</i>	<i>bullata</i> (deciduous)	<i>nitidula</i>
<i>decora</i>		

LEUCOSTEGIA.

The few species included in this genus are all very elegant plants, requiring the temperature of the stove fernery. They



Leucostegia immersa.—Pinna full size; spore-mass magnified.

are very nearly allied to *Davallia*, and, indeed, are included in it by many pteridologists, but yet have many points of distinction, which render them a distinct and natural group. The chief differences may be summed-up in this manner: They have long scaly rhizomes, which for the most part are half buried below the surface of the soil; the fronds are thin and membranous in texture; the sori are mostly situated on the extreme ends of the tips of the veins, whilst the indusium is attached by its base only, and thus leaves the sides free.

They are all extremely beautiful, and well deserve a place in every fernery. The principal kinds are—

chrophylla	immersa (deciduous) (see	affinis
Mooreana	parvula engraving)	puleiura
hirsuta	boissensis	

—EXPERTO CREDE.

KEW GARDENS.—No. 2.

NEAR the old orangery, which stands with such a commanding presence, an example of the large manner of its constructor, Sir William Chambers, even in small things, are some noble specimens of Oaks, one specimen of which, the Evergreen, or Helm Oak of Southern Europe, should not be overlooked. The fints of some of these trees are lovely in the autumn, and make us regret that the old habit of planting them in our parks has completely gone out. There is a fashion in trees and tree-planting as in most other things. For these last fifty years the deciduous trees which make autumn so glorious in the parks of Old England, have given way to trees of the evergreen kind to such an extent that they are now scarcely procurable in the nurseries of this country. Thus, when it was determined lately to plant some of the vistas radiating from the Great Palm house with the rarer specimens of hardy deciduous trees, it was found necessary to procure them from foreign nurseries! The last popular fashion is for the Deodar Cedar, which is clothing the pleasure grounds of England with its beautiful drooping foliage. The *Araucaria imbricata*, or the Puzzle Monkey as it is popularly called, is another Conifer that is making a steady footing in our pleasure grounds, but it is only lately that it has been spread about largely by the nurseryman. In the old arboretum, through which we are still strolling with the reader, is a specimen, which was planted as long ago as 1732. When Sir William Hooker was first appointed Director of the gardens he found this tree sheltered by a small hut-like structure, the supposition being that it was only half-hardy and could not withstand the rigour of our winters. We may notice here by the way that this testing of plants as regards their powers of becoming thoroughly acclimatised, is one of the most important functions of the establishment. Associated as this botanical establishment is with kindred institutions in our colonies throughout the globe, of which, indeed, it is the nursing mother, it follows that plants and seeds are constantly arriving, the very nature and habits of which are as yet unknown; but they are here tested, and if found suitable to our climate are spread throughout the land through the agency of the nurserymen. By this means enormous sums of money have been thrown into their hands, some single plants have sufficed to make the fortunes of some of the leading firms; but, as we shall show, they have returned the favour with interest.

Notwithstanding our desire to see the old fashion revived of planting deciduous trees in preference to the unchangeable evergreens, we cannot help regretting there are so few Cedars of Lebanon in these gardens. These trees were a fashion of our ancestors. They are said to have been introduced to this country by Evelyn in 1691. This being true, it disposes of very many pretty tales connected with this majestic tree. For instance, it is fondly repeated by many a pleasure party that floats past the Duke of Northumberland's grounds at Sion House, on the other side of the Thames, that Lady Jane Grey received notice of her accession to the throne whilst sitting under one of the fine Cedars in these grounds. Be that as it may, however, there can be little doubt that the Cedar of Lebanon gives an expression of grand repose to a garden which we fail to find in any other tree. How much do some of our old hereditary houses owe to their solemn grandeur—a type of the persistent historic life of their possessors? Of old there stood a fine avenue of these noble Cedars in this arboretum. They were planted about the year 1700. Of these there only now remains a fine old stump covered with Ivy. It is very much to be regretted that as they decayed some younger Cedars were not replanted. There are many very exaggerated ideas afloat relative to their slow growth, the size of many existing trees, which cannot be two hundred years old if it be really true that Evelyn first introduced them, testifying to the contrary.

But the rare trees we have mentioned are not confined to the small space which formed the old arboretum, and covered only five acres. The adjacent lawns are also planted with them, some of which have an unmistakable foreign appearance. For instance, the visitor is immediately struck by the appearance of the United States Palm and the Chusan Palm,

comparatively low trees, which meet his view immediately he enters the garden. The Oriental appearance of these makes him for a moment believe that he is in an eastern palace. A very slight protection is all that is required for them in the winter. Near to these singular trees the *Yucca gloriosa* sends up its tall spire of white flowers; they are nearly allied to the Aloes, and the visitor for a moment thinks that he has had the good fortune to see that plant in blossom, which, however, he may have done this very summer by visiting stove house No. 5, where the so-called Century Palm was in bloom for the first time in this country.

But what is that delicious scent that is wafted to us as we advance? The *Magnolia grandiflora*, with its pure white blossoms scattered amid the grand foliage of the beautiful tree, at once strikes the eye with its beauty, and answers the question. We may wander for hours amid these fine trees without tiring ourselves; but as we hear the Great Lily is just out, let us make our way to the T-shaped stove house, which is close at hand. What a delicious scent greets us as we enter! and what a glorious sight this peerless Lily presents, seated amid her green island-like leaves! Well may the famous botanist Hæmke have fallen upon his knees when he discovered it, and expressed his sense of the power and manificence of the Creator in his works. But grand as the plant is in this humid stove, under the tropic sun and in the noble waters of the Amazon it appears to this one as a giant to a pigmy. There the flower is upwards of a foot in diameter, and the leaves measure as much as 8 feet across, and are capable of bearing half a hundredweight. But comparatively dwarfed as it appears under artificial treatment, it is still surprising. The study of the evolution of leaf and flower for a day or two is most interesting. The bud, which makes its appearance from beneath the water in a few hours, as rapidly opens when it is clear of it. The bursting of the bud is accompanied by a slight noise, and immediately the house is flooded with a delicious perfume, somewhat like that of the *Magnolia*, only more delicate. As you watch the petals slowly unfold, at first the flower appears of a creamy white; but in a few hours, as its cup-like form fully opens, the most delicate pink is seen to tinge them; but the bloom lasts only for a few hours, as they perish the day of their birth, and new blooms come up and repeat the glory. But the evolution of the leaves is scarcely less interesting, if not quite so beautiful. They first appear on the surface of the water curled up, with their deep midribs strongly marked, and here and there armed with long thorn-like spikes. Coiled up like a hedgehog they first make their appearance in this world; on their putting off their defensive attitude they slowly unfold their beauty to the sky; appearing at first with a deep rim, which doubtless induced the natives to call them "water platters;" and so they unfold, until at last the circular leaf lies flat upon the silver flood, an emblem of perfect repose, moored by its rope-like stem to the central root. Let us hope that a larger tank may be afforded to this beauty to display her ample setting of emerald leaves. As it is, they crowd up and over the stone margin of their tank, and give the spectator a sense of the plant being crushed and crowded. But we must not, even by the grandeur of the *Victoria regia*, be prevented from noticing the extreme beauty of the under side of the leaves of another Lily close at hand—*Euryale ferox*. These leaves are not nearly so large as those of the *Victoria Lily*; but either by accident or by design one of them was twisted upon its stalk, so as to show its under side—a perfect marvel of colour. The leaf itself is like a piece of reddish-purple satin, whilst the prominent midribs are a rich amber. It seems a pity that such a beautiful sight should only meet the human eye by accident.

Not far from this tank the curious may note several varieties of the Pitcher Plant. The bottom of the deep pitchers, which are suspended from this singular tree, is generally filled with water; and as the inside edge of the pitcher is frilled round with a series of fine hairs pointing downward, it would seem as though nature intended it as first a lure to attract insects, and then as a trap to hold them, as they do not appear to be able to surmount the fringe of hairs which prevents their exit. The pitchers are therefore full of drowned insects. Some of these receptacles hold two quarts of water, and, notwithstanding the flies, are sought for by the thirsty traveller with avidity. Near this plant is another—*Nipa fruticans*—a low stemless Palm, bearing a large head of nuts, that grows in the tidal waters of the Indian Ocean. Dr. Hooker tells us in his *Himalayan Journal* that there is a particular interest attaching to this plant in a geological sense, inasmuch

as the nuts of a similar plant have been found abounding in the tertiary formations at the mouth of the Thames; and must have floated about there in great profusion till buried deep in the salt (silt?) and sand that now form the island of Sheppey. Young Palms of different species fill up the surrounding benches, and on the western wall the *Vanilla planifolia* is trained, yielding the famous flavouring fruit. The houses forming the two arms of this stove house are devoted to economic plants, both tropical and temperate. Of the growth of fruits and condiments we daily eat, how few of us have any knowledge; of the fibres that yield us garments, not one in a hundred is as familiar as it ought to be. Here we may find the Coffee tree grow, the Cotton plant bearing the Cotton pods, the Clove tree, the Ginger plant, the India-rubber tree, the Nutmeg tree, and a score of others that we have not space to mention. The teaching power of these stove houses is far beyond anything the public can gain from books, because here they have the facts printed, as it were, direct from Nature upon the inquiring brain, in a manner which is pleasant and rarely forgotten. Here and there Nature in her economy gives us products that are almost humorous in their character. Let us note, for instance, the Sack tree. By merely soaking and beating its trunk, the bark is sufficiently loosened to turn inside out, a section of the bark being left at the end to form the bottom of the sack. In the museum at the end of the herbaceous garden the visitor will see one of these sacks. This is an example of the application of these museums in giving to the public a view of the ultimate use of these economic trees.

In the northern wing of this cruciform house the visitor should not forget to see the *Venus's Flytrap*, *Pinguicula muscipula*, another enigma of Nature. The irritability of the lobes of the fringed blades of the leaf is so great that, upon an insect alighting upon them and touching any of the minute bristles upon the surfaces, they close upon it like a pair of sugar-tongs and imprison it—who shall say for what ultimate purpose this automatic engine of destruction was devised?

Striking northward towards the Palm stove which gleams in the sun, let us take in our way the Water-Lily house, or tropical aquarium. The small tank in this house is mainly occupied by the Papyrus, the first paper-making material of which we have any knowledge. The flowering stems contain a pith which is cut into strips with their margins overlapping; these strips are crossed by others at right angles, and by means of pressure are consolidated into the writing paper of the ancients. It seems strange that after so many thousand years we should have come back to a similar material for the manufacture of paper. Esparto Grass now forms the broadsheet of many London daily papers. Common straw is also largely used, and the woody fibre of the Norway Pine is now making its way into the market for the same manufacture. Among the graceful Papyrus float several beautiful species of Water Lilies, the most interesting of which is the *Nymphæa gigantea*, an Australian Lily whose flowers, of a most delicate blue, measure 12 inches across. Some of the Lotus tribe have red and white blossoms. A very curious plant to be seen in a tub in this house is the Water Lettuce of tropical countries, in which only the skeleton appears. The triangular tanks at the corners of the house are filled with the Sacred Lotus of the early Egyptians, and which is so often found delineated on their monuments. The graceful appearance of this plant immediately strikes the attention independently of its interesting associations with the past. We can liken the setting-on of its leaves to nothing more nearly than to that of the *Nasturtium*, only their colour is of a more tender green, whilst the flower is a most delicate pink, with seed-pods like a top, in the flat upper surface of which the seeds are set separately at equal distances. No more graceful plant could find a place in private tropical aquariums than the Sacred Lotus. Near at hand is the very remarkable Telegraph Plant of India, so called from the spontaneous jerking motion of the lateral leaflets, which are alternately raised and depressed. This is one of the curiosities of the Gardens, and seems to hold the visitors with a sort of mesmeric attraction. The Caricature plant is close at hand. The variegation of the colour on its leaves often assumes very curious forms, hence its name; but we confess that we have rarely seen any irregularity which could be said to take the character of a caricature. But from these frivolities of Nature, so to speak, the eye is irresistibly attracted by the lovely colour of the common Rice plant, the great food-producer of the teeming millions of Asia, India, and the Southern States of America. From the small seed-plots we see flourish-

ing here, of the colour of the heart of a Lettuce, we can imagine the delicious repose vast swamps of it must give to the eye in the torrid east and on the parched plains of the south.—(*Edinburgh Review.*)

PARIS NOTES.

"Bravo! John Bull," I doubt not many will say when reading my good friend Peach's letter on French gardening, and I hope, therefore, I may not seem to be out of place if I add a little of my testimony on the subject, for to my inexpressible delight we were for a couple of days doing Paris together. I had written to him after the Manchester Show saying how happy I had been in our intercourse together this year at York, Leeds, Bath, and Manchester, and now I said, "Good-bye for the season, and I am off to Paris next week." How I tossed up my hat and shouted when, in reply, I had a brief note to say, "After all we may meet in Paris. The Dr. (we all know who the only doctor is that we recognise as such), has persuaded me to go with him to Brie-Comte-Rebert." And so we did meet, and a pleasant close it was to our pleasant intercourse of the year.

I am glad that he has spoken out as he has done on the excessive laudation that has been given to the French parks, &c. I protest were we to believe some books that have been written on the subject we might believe Paris was one unbroken series of grand parks, &c. Now, I maintain they have nothing comparable to London. The Bois de Boulogne is extensive, but you have to drive three miles from the centre of Paris to get into it, and then you have nothing in grand trees or massive beauty to equal Kensington Gardens (I do not mean the R.I.S.); while, as Mr. Peach says, there is nothing—absolutely nothing, to compare with Battersea Park, the Regent's Park, or Hyde Park. The Parc Monceaux is pretty but very tiny, and the Duttes Chaumont is perhaps the most original and striking of all the Paris gardens. At the same time I would say one or two things to take off a little of the edge of my friend's polished rapier. In the first place, the Paris gardens are not what they were when Baron Haussmann was a dile and Napoleon III. Emperor. In my notes immediately after the war I noticed the employment of commoner plants and of annuals, and the same cause has doubtless prevented a complete return to the more expensive style of the Empire. This will not, of course, be any excuse for the glaring mistakes noticed by Mr. Peach, any more than the badness of the pen for false spelling. Then, I think, it is to be remembered that it was the French who first set us the example, and that, as we usually do when we really take a matter up, we go to it more thoroughly, and our landscape gardening is no exception to this. Nor can I divest myself of the notion (I hope it is not insular prejudice), that there is a funkiness about French decoration which has obtruded itself into their landscape gardening. As an example of this I may mention the Square Montholon, a place about the size of a quarter of Cab-bages in a good garden. Not contented with planting this, and then making it a pleasant place for those who live in the neighbourhood of the Rue Lafayette, they have made a small waterfall, horribly suggestive of the one in the large tent at Bath. Now when a good woodcut of this is made, of course it looks very pretty, but I fancy good taste revolts at it. I quite agree with Mr. Peach, too, as to the poverty of the mixed borders, and for all these large places I think there is nothing so suitable as the bedding-out system.

With regard to fruit and vegetables there is a good deal to be said as to the view he has taken. It was the time of year when the Pêches de Montreuil were fully in. These, be it remembered, are out of doors just now at Chevet's, Potal's, and other first-class shops. The best were a franc a-piece, while at the Halles you could obtain some very nearly equal at about eight for three francs. Well, I suppose one would not pay much more for out-of-door Peaches in Covent Garden in September. Moreover, I think those much lauded have a peculiar astringent flavour, or else I was unfortunate in those I bought. As to Grapes I must beg to differ from him. The Grapes from Montpellier were coming in; after them come those from the middle of France, and later on those from Fontainebleau and Thomery—these are mostly the Royal Mascadine, known there as the Chasselas de Fontainebleau, and very sweet and good they were. The bunches had evidently been thinned and cared for. They were, of course, not comparable to our hothouse Hamburgs or Muscats, but then you could get a pound for forty or fifty centimes; and I know for the ten days we were

in Paris our party enjoyed very much at breakfast a fair supply of these Montpellier Grapes. The black Grapes were not nearly so good, and after one trial were dispensed with.

And truly I may say with my good friend the Boulevards with their ranges of trees are surpassingly beautiful; and whatever bad taste may be shown, whether architecturally, as in the hideous New Opera House, or in the gardening, it is a marvellously beautiful city, and not even the commune has been able much to mar its beauty. One never tires of it as of other cities, and one need not wonder at the feeling which it stirs in the hearts of its inhabitants. One thing struck me as indicative of what many hope for—a Legitimist restoration: the far greater number of priests moving about, and the breaking-up old houses in the Faubourg St. Germain which I have seen for years shut up. Well, with these things we gardeners have nothing to do. Let us hope, whatever may be the issue of events, the gardeners of both countries may continue to learn from one another, and exchange those kindly courtesies which no class of men are more ready to show.—D., *Deal*.

FLOWERS FOR OUR BORDERS.—No. 20.

DELPHINIUM HENDERSONII.—HENDERSON'S LARKSPUR.

If a stately habit and magnificent flowers of the deepest blue are to be regarded as recommendations to notice, then



Delphinium Hendersonii.

is the *Delphinium Hendersonii* entitled to a prominent place in our list of choice subjects. It possesses in a high degree those characteristics for which the perennial Larkspurs are so deservedly esteemed. As one of the chief points by which it is distinguished from most other varieties is the large size of the flowers, we have preferred to give one or two detached blossoms of nearly the natural size (about two-thirds), rather than a reduced figure of the entire spike, which must, necessarily, have failed to convey a correct idea of their great beauty. The dark green glossy foliage cut into acute segments is strikingly handsome, as is that of most of the *Delphiniums*. In common with the other members of this showy genus, it delights in a rich light soil, in which it grows from 4 to 5 feet high, and is, as might be supposed, perfectly hardy. It is a hybrid between *D. cheilanthum* and *D. elatum splendens*, and was raised by M. Chauvière, of Paris, of whom Messrs. Henderson, of the Wellington Nursery, purchased the entire stock.

The size of the flowers is very remarkable; but it is, we

think, fully within the range of probability that varieties will, ere long, be raised with yet larger blossoms. By a very simple process all our perennials, and, indeed, every description of plant, might be greatly improved.

It must have been remarked by all observant horticulturists that the first few blossoms which expand on most plants are considerably the largest; and that even when the flowers are removed as soon as faded, the succeeding ones do not equal them in size. In such plants as the *Potentilla*, *Gnethera speciosa*, and many others, the flowers gradually diminish in size until, at last, they are scarcely more than one-half the dimensions of the earliest ones. It follows, as a matter of necessity, that the seeds ripened by the flowers first expanded will be much finer than those produced by the latest blossoms; and if, instead of permitting the whole of the buds upon the spike or raceme to reach maturity, all but the first two or three are pinched-off, a still further improvement will result; for the vital forces of the plant will be concentrated in the development and maturation of a very small number of blossoms. When the plant produces several flower-stems, one may be very well spared for this purpose. It is not advisable, we think, to cut-off the upper portion of the spike; we would simply pick-off the buds, and that at the very earliest period at which they can be removed, so that none of the strength of the plant be wasted in nourishing them. The plants raised from seed thus obtained may be subjected to the same process; and so on, for any number of generations, with increasing benefit. It would, however, be necessary to guard against cross-impregnation by any other species of an inferior kind present in the same garden, as this would tend to modify materially the character of the progeny.

To return from this digression to the *Delphiniums*, which we must not quit without a few remarks on the structure of the flowers. Like many other genera of the *Ranunculaceae* tribe, the Larkspurs are remarkable for their coloured sepals, the true petals being comparatively small. Of the five divisions of the calyx, the upper one is prolonged into a hollow spur, which varies in length in the different species. In the true *Delphiniums* the petals are four in number; two usually very narrow, and furnished with spurs, which are included in that of the upper sepal; the other two are much broader at their ends, and reflexed downwards over the stamens. In *D. Hendersonii*, and many other kinds, these two petals are covered with yellowish hairs about the centre, which communicate to the flower the appearance of being occupied by a bee, or other large insect, which may be supposed to have crawled in in quest of nectar, and thence the popular designation of Bee Larkspur applied to *D. elatum* and other species.

D. Hendersonii does not produce seed, but many other garden varieties being fertile, a considerable number of seedlings have been raised of late years, some of which are great acquisitions. Not to speak of the well-known *D. formosum* raised by Mr. W. Moore, of East Percham, the following deserve especial mention:—*D. Bella Donna*, of dwarf habit and light sky-blue flowers; *D. bicolor grandiflorum*, a seedling from *D. formosum*, but with a centre of pure white; *D. Le Mastodonté*, one of the largest yet raised, with deep blue flowers, the centre white; *D. Nahamah*, dark blue, in long close spikes; and *D. Madame Richalet*, with cobalt blue flowers, the centre nearly white. These are all single-flowered varieties, but a copious selection could easily be made of double and semi-double forms, of which *alopeuroides*, *Beatsonii*, *Herman Stenger*, *Keteleeri*, *Mons. Barral*, and *Ranunculiflorum* are among the best.—(W. Thompson's *English Flower Garden*, Revised by the Author.)

MR. ROBERT FISH.

In addition to our remarks on the death of Mr. Robert Fish which were made in our last publication, we wish to state that he was in the 65th year of his age, and that he was buried on the 27th of October in the churchyard of Lilley, in Hertfordshire. Besides the members of his own family, who came from distant parts in England and Scotland, his funeral was attended by George Sowerby, Esq., of Putteridgebury, by the manager of the estate, and other friends; and it is right to be mentioned that the whole expense was defrayed by Mr. Sowerby, who will also erect a suitable memorial—a graceful tribute to the worth of one who for so many years served his family so faithfully and so well.

In the last week's *JOURNAL OF HORTICULTURE* you gave an

account of Mr. Robert Fish, and you spoke in high terms of him as a man, and with much feeling of the long friendship, now brought to a close, which had subsisted between you and him. It may be gratifying to you to know how he used to speak of the Journal and its Editors.

I was very intimate with him, and not long ago when talking about these matters he spoke of the great pleasure it had been to him to have been connected with you for so many years; and he said, "You would be surprised if I were to tell you of the inducements I have had to leave the Journal, but it was of no use. The kindness with which I have always been treated by the Editors, and the gentlemanly bearing they have always shown towards me, render any separation impossible. Nothing shall ever disturb my allegiance to my idol. No! never, never!"—LITTON.

We were not without experience of Mr. Fish's attachment to us. It was one of real affection. Only a fortnight before his death one of the Editors visited him, and the affectionate embrace with which he was received brought tears in the eyes of both. He was indeed a noble-minded man. On that occasion he alluded to the efforts that had been made to "disturb his allegiance," and to the quarters whence these efforts came; but the effect of them was only to rivet him more closely to his old love. In the last letter we believe he ever wrote, he says, "I have not dared to look at my idol—the Journal, all my medical advisers say I will get right if I only keep quiet. I have got no end of ideas for the old Journal if ever I should be able to write them."

AND so our dear kind old teacher and friend has fallen asleep and gone home to his well-earned rest. May he rest in peace! I have now one friend the less. In all the future I shall miss the voice of one firm and faithful guide, who was ever ready to point out the way, and who also took care to warn the young travellers of the dangers of the road. I never saw my old friend, yet I seem to know him as well as if I had seen him every day for years. It has long been the great desire of my heart to be able to accept his kind invitation, often given, to go and see him. Now that is past, and on this side of the grave I shall never hear his cheery kindly voice. My loss is great. Fifteen years ago, at a most anxious period of my experience as a gardener, I was much bothered with some point in gardening; I forget what it was now, but it was, I thought, too insignificant to send to the Editors of THE JOURNAL OF HORTICULTURE, and so I violated the notice at the head of "Answers to Correspondents," and wrote to him; and instead of his answering me shortly and plainly, as any perfect stranger might reasonably have done, he replied to me at some length, going into all the details of the subject, making it all perfectly plain to me, and doing it all in that simple, loving, fatherly way which was such a part of his nature, that my heart warmed to him in deepest gratitude. I never can forget that act of kindness; as long as I live it will be for ever green in my memory.

Many times since then I have written to him, and no matter how he was surrounded by other most pressing duties, he would always reply, and always doing it wisely, lovingly, fatherly. He is now gone, and I shall never be able to thank him in person for all his kindly acts; but through you, who knew him so well, and who knew something of me too, I wish to make known my sorrow for his death, and my sympathy with all his friends and relatives at his loss. We must not grieve too much, for the Master has called His servant to Him, that servant who has made so good use of the talents committed to him.—N. H. POWSALL, *Ride-life-on-Trent, Nottingham.*

NOTES AND GLEANINGS.

THE great success which attended the Provincial Exhibition of the Royal Horticultural Society when held at the Lower Grounds, Aston, Birmingham, in June, 1872, and which again waited on the Horticultural Exhibition held in the same place in connection with the Warwickshire Agricultural Association in June of the present year, has induced Mr. H. G. Quilter, the spirited proprietor of the Lower Grounds, to arrange for holding in the coming year a GRAND MIDLAND COUNTIES HORTICULTURAL EXHIBITION, to commence on Tuesday, July 7th, and continue over the three following days.

It has long been known that the DABLIA was first bloomed in England at Holland House, but not until the publication of Princess Marie Liechtenstein's volumes, entitled

"Holland House," were the circumstances of the plant's introduction published. The imperious Lady Holland of George III.'s reign aimed at being first in everything—even her culinary productions were to be unparalleled. When in the south of France she first became acquainted with Palestine soup, a name wittily applied because its characteristic ingredient is the Jerusalem Artichoke. She obtained some tubers, which were believed to be of that vegetable, and they were sent the gardener at Holland House. Instead of the Artichoke they were tubers of the Pahlia, and she had the value of the acquisition impressed upon her by a London florist offering thirty guineas for a tuber. Another mode of its acquisition, however, is that she was at Valentia in 1801, and had it given to her as a rarity just arrived from South America. However, she was the introducer, and thus occasioned the graceful verses written by her husband—

"The Pahlia you brought to our isle,
Your praises for ever shall speak,
In gardens as sweet as your smile,
And colours as bright as your cheek."

MESSRS. SUTTON & SONS at their approaching SHOW at READING offer many very valuable prizes, in silver cups and money, for various farm and garden products. Messrs. Morris and Griffin, Messrs. Long & Co., and the Guarantee Manure Company, offer silver cups for roots to which their manures have been applied.

HIGH praise is given in foreign journals to the ST. AUGUST PLUM, of Belgian origin, closely resembling the Golden Drop, but ripening a month earlier, and superior to it in quality and productiveness. It is oval in form, rounded at both ends; skin greenish, suffused with gold, spotted and marked here and there with a crimson blush, and having flesh coloured and flavoured like the best Green Gage.—(*New York Tribune.*)

CHARLECOTE.

THE RESIDENCE OF H. SPENCER LUCY, ESQ.

AMIDST the host of old domains which England boasts, there are few which by their associations direct themselves more to an Englishman's heart than that of Charleote, associated as it is so closely with the rise of one of the greatest poets the world has known, one of the keenest and most accurate of observers of nature animate and inanimate, one who was as far before his time in natural science as he was before other men as a poet. But it is not of Shakspeare that we have to write but of Charleote, which, if history be true, was the scene of doings which led to his departure from Warwickshire and entering on a career which led to fame. There are many things in man's life which, viewed at the time and judged by our limited knowledge, seem misfortunes, but which looked at in the retrospect are clearly seen to be the reverse; and so with Shakspeare. Events probably drove him from bad companions, made him adopt a fresh, more energetic course of life, and gave a spur to that intellect of which the utterances are admired and repeated by all ranks from youth to age.

The little village of Charleote is about six miles from Warwick, whence there is a broad and remarkably well-kept road, with numerous seats at the sides; along this we travel for five miles or so, then there is a branch road to the right which leads to the village, and beyond this are the park gates.

In Domesday Book the parish is called *Cherleote* (Anglo-Saxon for Husbandman's Cot), and the earliest lord of its manor known to us is William, son of Walter de Cherleote, who about the end of the twelfth century assumed the name of Lucy. From him was descended the Sir Thomas Lucy, the generally believed prosector of Shakspeare, knighted by Queen Elizabeth in the eleventh year of her reign, and whom the poet satirised as Justice Shallow. The family then had assigned to them by the Heralds three laces (or fish known now as the pike); so this points the jest which is uttered by Slender that some other member of the family may have "the dozen white laces in their coat" when ancient Sir Thomas Lucy rebuilt Charleote House about the year 1559, and as then constructed the mansion remains. His body and that of Lady Lucy were deposited in Charleote church; and on their tomb no record of him is inscribed, but a feeling and graceful tribute to her memory is upon it, testifying by its concluding couplet that he was its author.

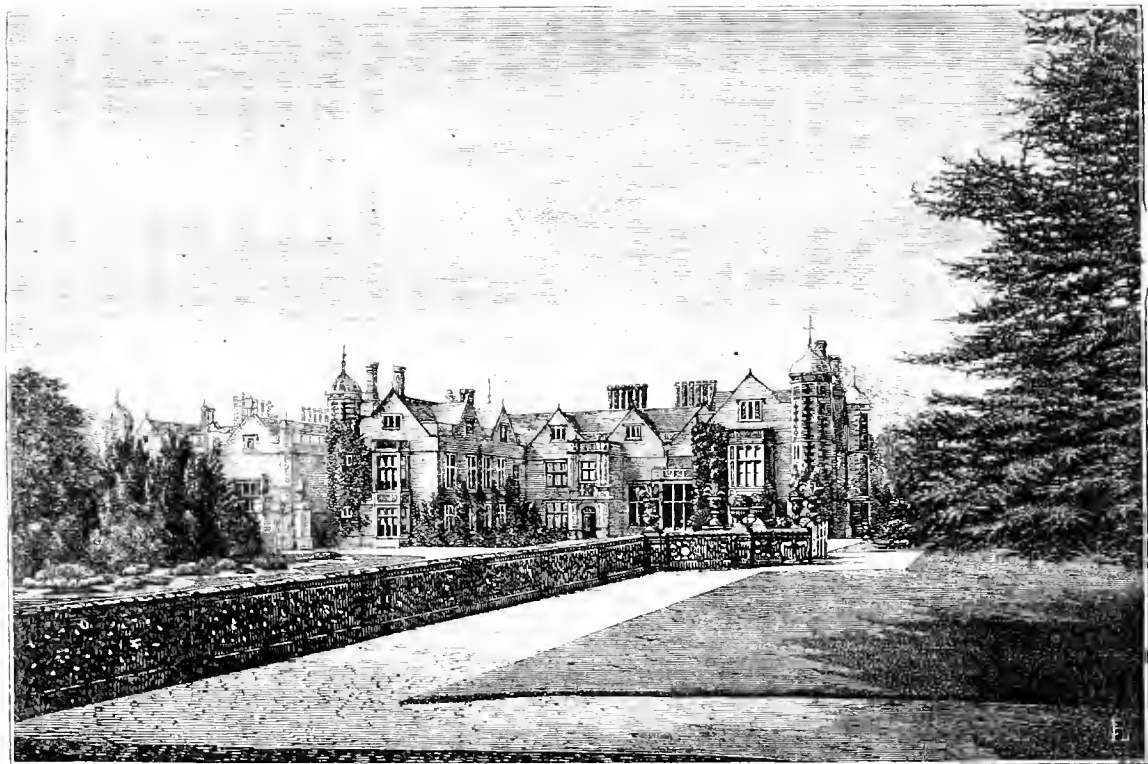
"Set down by him that best did know
What hath been written to be true."

That wife was Jocasta, familiarised as Joyce, heiress of the

Actons of Sutton in the county of Worcester. It is remarkable that her son, also a Sir Thomas Lucy, prosecuted various offenders for deer-stealing in the park at Sutton, and the record of that prosecution in the Star Chamber in the eighth of James I.'s reign (1610), within Shakspeare's lifetime, is still among our public records. The wife of the Rev. John Lucy, who possessed Charlote at the beginning of the present century, was lineally descended from Mrs. Lane, the preserver of Charles II. after the battle of Worcester.

From the park gates already referred to we pass by an avenue of stately Elms, some 250 yards in length, to the old lodge, which we are informed is the same as originally erected; and the mansion, of which we give an engraving from a photograph, also remains unchanged, save by the addition of a new library and dining-room, and restorations which the hand of time had rendered necessary; but these have been so executed that it is

difficult to tell the new from the old, such care having been taken to preserve the original character of the building, which is of red brick with stone facings. The principal front is to the east, and between this and the old lodge there is a neatly-kept flower garden, which is overlooked on its north side from the croquet lawn upon a higher level. The terrace wall bounding this is seen in our engraving, as well as one of the Cedars which are growing on the east and west sides of the lawn; but the trees, it must be remarked, are of no great size. At the extremity of the beautifully-kept croquet lawn there is a small stone conservatory containing some Camellias, Fuchsias, &c., but principally used in winter for sheltering bedding plants, of which about 20,000 are annually planted. Passing a rustic aviary, a walk leads northward to the Rose garden overlooking the park of between 300 and 350 acres, well timbered, and stocked with nearly as many deer as there



CHARLOTE HOUSE.

are acres. Here there is a summer-house with a circular bed in front, surrounded by a series of small beds converging to its centre. There is likewise a very old Mulberry here, in the last stages of decrepitude, but of its age and history we could learn nothing. The walk past the summer house is carried round and rejoins that on the north of the croquet lawn, the intervening space being occupied with "The Wilderness," consisting of ancient Yews, Box, and Scotch Firs.

The west front of the mansion overlooks the Avon, which is reached by a flight of stone steps, while on the south-west side a view is gained of a waterfall and bridge. To this probably Jago refers in his lines—

"Charlote's fair domain,
Where Avon's sportive stream delighted strays
Thro' the gay smiling meads, and to his hot
Hele's gentle current woos, by Lucy's hand
In every graceful ornament attir'd,
And worthier such to share his liquid realms."

Between the mansion and the river there is another flower garden on two levels, the higher being carried close to the house, and from this there is a fine view across the park. The south-west entrance is reached by the bridge just referred to, from which point an avenue 20 yards wide of nearly three-quarters of a mile in length extends in the direction of Stratford-on-Avon. The trees are Lime, those near the house are of great age and overarch the road, but nearer Stratford they

are quite young. It may here be remarked that a footpath runs from the little village across the park to Stratford, and the greater part of its length is nearly parallel to the avenue; indeed at this time of fallen leaves, and probably at all other times as well, its course is so faintly marked that the avenue has to serve as a guide to where the footpath is. It must have been an old right of way, saving something like half a mile in the distance to Stratford-on-Avon, and probably existed in Shakspeare's days, and with a herd of deer but 200 yards off one could understand how easy it would be to mistake where the right path lay.

The kitchen garden and forcing ground are situated a quarter of a mile from the house, being on the opposite side of the branch road leading to Stratford-on-Avon. The walled garden is about 2½ acres in extent, being about 130 yards long by 100 yards wide, thus presenting a good length of south-aspect wall. The ground for some distance from the south wall is nearly level, but it then slopes rapidly to the south. The soil is a sandy loam, 2½ feet deep, and in excellent condition for growing all kinds of crops. The principal walls are of brick, from 10 to 12 feet high, and surmounted with substantial stone copings projecting 4 inches beyond the wall's face, but towards the lower portion of the ground the height varies according to the slope. The Peach and Nectarine trees on the south wall are well trained, but several of them evidently

require renewing, and the same remark applies to many of the Pear trees; indeed there is considerable scope for rearrangement; and Mr. Ranson, the gardener, who has only been a few months in the place, will have heavy work before him in gradually effecting needful improvements, especially as, like most gardeners, he is not overburdened with help. Along the principal walks are espalier-trained Pear and Apple trees from which excellent fruit is obtained.

The forcing houses consist of two pinceries, four vineries, two Melon houses, and a small stove. The three-quarter span pinceries comprise 72 feet run, and contain an unusually good and very healthy stock of fruiting and succession plants, the kinds being Queen, Smooth-leaved Cayenne, Black Jamaica, and Providence; the last-named variety is grown in considerable quantity, as it is much desired for the dessert. A slate bed at the back is used for growing Melons and Cucumbers. Three of the vineries are lean-to's 15 feet wide, and two of them 20 feet long. The third house is 3 feet longer, and planted with Muscats and Black Hamburgs. The Vines show that in past years they have been heavily cropped, indeed too much so, and the canes are by no means strong. At the end of this range there is a small stove containing Ferns and fine-foliaged plants, among which are some very good specimens. The late vinery is a three-quarter span 42 feet long, and in this there is a very good crop of Muscats, excellent bunches of Alicante, a Vine or two of Lady Downe's, Mrs. Pince, and one or two others. The two Melon houses are at present filled, one with *Eucharis amazonica*, *Epiphyllum*, *Paneratium*, the other with Azaleas and an excellent strain of Chinese Primulas, of which Mr. Ranson has also a large stock in pits. Although we saw the garden at one of the most unfavourable times at which a garden could well be visited—the end of the gardening year, if such can be said to have an end at all, yet the cleanliness and good order of the houses and kept grounds were highly creditable to Mr. Ranson.

WORK FOR THE WEEK.

KITCHEN GARDEN.

Much as there has been written on the utility of trenching the ground in kitchen gardens, and bringing-up a portion of the subsoil to mix with the surface soil when the latter is said to be worn-out with constant cropping, some gardeners are still blind to its advantages. If the subsoil be stiff loam they are fearful of mixing a small portion of it with the surface soil, although the latter may be like an ash heap, and as rich as dung can make it. I am aware it requires some judgment as to the quantity of the subsoil to be brought-up, for the texture of the soil may be materially injured by a large quantity at one time, but it can rarely so happen with a small quantity; and as very many old gardens would be greatly benefited by this operation, I hope the present fine weather will be taken advantage of for the purpose. Immediate steps should now be taken to protect the roots of *Artichokes* from frost, if not already done, but it is best to be on the safe side. I have known a whole plantation destroyed by frost in what was considered to be a very favourable situation, and where it was thought quite unnecessary to protect them. All *Cabbages* that are sufficiently grown to earth-up should have it done before frosts set in. Red Cabbages for spring use may still be planted. These *Cauliflowers* now producing heads are very valuable, therefore the greatest care should be taken to preserve them from frost, either by digging them up and planting them in frames, or pulling them up and hanging them in a very cool shed. They are sometimes preserved by being buried in peat soil after the leaves are wrapped round the heads; but if great care be not taken in doing this the soil gets into the heads, and it is almost impossible wholly to remove it by washing. The *Cucumber* plants should be kept as near the light as possible; nothing can supply the want of it, while heat, air, and water can be given as required. Take-up *Endive* and plant in a frame some of the most forward, so that should severe frost occur there may be a supply. Add soil to the last sowing of *Dwarf Kidney Beans* as they grow, until the pots are nearly full. Keep those in bearing well supplied with water. *Radishes* are sometimes required all the year round. If so, it will now be necessary to sow on a slight hotbed; after they are up air should be given at every favourable opportunity. If they are sown immediately they will be ready to draw about the end of January. A few old roots of *Rhubarb* may be taken up and planted in boxes or pots, which may be placed in a Mushroom or forcing house where the heat is about 60°. Keep-up a succession of *Small Salad* by sowing in boxes twice a week. No vacant ground should now remain undug. It is a common practice with some gardeners to leave the whole of the digging till frosty weather sets in; by so doing half the benefit the soil would receive is lost, and, independently of this, it makes the garden look very untidy.

FRUIT GARDEN.

Remove all green laterals of Peaches and Appicots that the growth of the trees may be checked, and with a new birch broom gently switch-off the matured leaves, taking care not to injure the buds, repeating the operation at short intervals, so that the young wood may be ripened by exposure. To effect this still further cut-out any small twigs that will not be wanted, and as soon as convenient loosen from the wall those shoots intended for bearing next season. Where, unfortunately, the leaves are still green and adhere, no time should be lost in going over the trees and cutting all the stronger leaves in two. As no great nicety is required, a man will soon go over a wall by catching the leaves between his knife and thumb. This will tend to check luxuriance and hasten the maturation of the buds without the shoots shrivelling or the danger being incurred of gum or canker, which in some cases is the result when recourse is had either to indiscriminate root-pruning or a wholesale deprivation of leaves.

FLOWER GARDEN.

The business of this department is low in a great measure confined to the clearing-up of leaves, wormcasts, and other extraneous matters, and making the lawns, &c., look as tidy as the season will admit of. If the bulbs are planted—and if they are not no time should be lost in getting them into the ground—those beds which are unoccupied may receive their winter digging, and, where necessary, winter trenching, taking care if the soil is strong to expose it as much as possible to the action of the atmosphere. While, however, you dig the beds avoid touching the shrubby borders; for though custom, which too frequently makes us commit sad blunders, may show they look better after being dug, depend upon it plants do not grow any faster for being annually root-pruned, and such is the effect of annual digging. Worms are now very troublesome, especially in wet weather, when it is difficult to clear their casts away, but their ranks may be materially thinned by watering the ground with fresh lime water, or with water containing corrosive sublimate, though in the latter case they are merely driven out of the ground and require to be gathered-up by hand and afterwards destroyed. Corrosive sublimate is very quickly brought into a liquid state by mixing it with spirits of salt.

CONSERVATORY AND GREENHOUSE.

The stock of plants to bloom at Christmas, consisting partly of stove plants grown for that purpose, and partly of forced shrubs and bulbs, should now receive some attention, particularly the latter, which should be undergoing a slight amount of forcing to get them to bloom by that time. Chinese Azaleas and Oranges may be assisted by a little extra heat, being careful, however, to apply it gradually. At the same time, if a forcing house is at command a portion of the stock of Roses, Lilacs, Syringas, Deutzias and other hardy shrubs from the reserve pit may be placed in the cool end of it, or in a light situation in the early vinery or Peach house. If they can be afforded a slight bottom heat all the better. A few of the more early-forced American plants, including some of the earliest-flowering *Rhododendrons* should be added; they will greatly enhance the display in January. Bring forward *Hyaacinths* and early *Tulips* in a gentle bottom heat. Double Roman *Narcissus*, *Crocuses*, *Neapolitan Violets*, *Mignonette*, and *Cyclamens* bloom early without much forcing, and answer best placed on shelves at the back of vineries to catch every ray of light, and to insure them from damp.

COLD PITS.

Plants in cold pits that may have been excluded from light and air for a few days must not be too suddenly uncovered; on the contrary, they should be very gradually inured to exposure. Take advantage, however, of fine days to give air freely, and keep the plants very sparingly supplied with water at the roots, so as to prevent the production of weak, sappy wood. Look frequently over anything subject to the attacks of mildew; apply sulphur the moment this pest makes its appearance, and see that everything is free from insects. If there is any prospect of a scarcity of bloom next May, a portion of the *Achimenes* and *Gloxinias* should be repotted at once and placed in the warmest part of the stove, choosing such as have been the longest at rest, and a few *Clerodendrons*, *Allamandas*, and a plant or two of *Echites splendens*, and *Dipladenia crassinoda* may also be started; but unless there are plants of these with well-ripened wood and that have been some time at rest, nothing will be gained by starting them into growth at present.—W. KEANE.

DOINGS OF THE LAST WEEK.

We noted last week that the weather had been unfavourable for out-of-doors operations. If it does not rain the ground has no chance to dry, owing to the damp, muggy atmosphere and frosts at night, the thermometer occasionally falling to 22° and 23°—that is, to 16° and 9° below the freezing-point.

FRUIT AND KITCHEN GARDEN.

On referring to the bush and pyramid fruit trees last week, and the insect pests by which they are attacked, a very common

and destructive one was omitted—viz., *Aphis lanigera*, or *American blight*. This should be destroyed before the autumn rains and frosts set in. The insect is covered with a white downy substance, and owing to this, as they cluster together, they are readily detected. The trees should be looked over, and wherever the insects are observed a brush dipped in boiled oil should be applied to them; a man can go over a large number of trees in a day if they are not severely attacked. A large proportion of our young trees were affected with it last year; they were brushed over early in September, and this season it has not appeared.

The fruit was stored in good condition, and is keeping very well as a rule. Specimens which have been bruised or injured in any way speedily decay, and are removed as soon as decay is observed upon them. Apples have kept better than Pears; some of these have decayed at the core earlier than usual. *Beurré Bose* and *Triomphe de Jodoigne* seemed to go all at once, and *General Toddleben* is even worse. *Marie Louise*, *Doyenné du Comice*, *Beurré Superfin*, and *Chaumontel*, the last named from pot trees, are now ripe and very fine. Amongst the many fine varieties of new Pears grown by Mr. Green in Mr. Thomson's orchard at Ilford, we saw and tasted specimens of one of a very high order of merit; it is named *Beurré d'Espéren*. It is of medium size, and somewhat resembles *Beurré Hardy*; it is melting, sugary, and rich in flavour.

The Cauliflower plants should have been put in under the hand-lights early in October, but the ground could not be prepared at that time, and it is now so wet that it would not be wise to plant in it before it is dry and the weather more suitable. The plants which were in the open ground were lifted and placed in boxes where they can have the shelter of glass lights.

FRUIT AND FORCING HOUSES.

It is not necessary to allude to late vinerics, except that we must watch for any signs of decay in the berries where late Grapes are hanging. The heating apparatus has had to be put in action almost every day, being careful to have the ventilators open at the front and back; at the same time, when there were signs of a severe frost the heat was not allowed to decline quite so early in the afternoon. It is not desirable to allow the thermometer to fall much below 40° at night. No plants requiring water should be admitted into the house, although a few Vines, Figs, or Roses in pots, if they are denuded of foliage, will do little harm, as very little water is required for them. Soft-wooded plants of any description are objectionable, as the leaves frequently cause decay and mould in the house. Any description of plants may be kept in the earliest houses after the Vines have been made ready for forcing.

We have been at work in the *early vinerics* pruning, washing, and painting the Vines. After these are pruned, the loose bark removed, and all adventitious roots formed during the growing period of the Vine cut off close to the stem, the bark is thoroughly washed with warm water and soft soap, and then painted with a mixture of sulphur and soft soap. A little soot is added to it, and sufficient clay to make it of the consistency of thin paint. The inside borders next claim attention; insects injurious to the Vines are probably concealed in them. The surface is therefore entirely removed to the depth of 2 or 3 inches and replaced with rich compost; well-decomposed turfy loam and rotted manure in equal parts thrown in a heap and well mixed together are as good as can be obtained for this purpose.

Many correspondents complain of their *Grapes shanking* this season: this occurs both in early and late houses, and in nearly every case it is owing to the roots being in bad soil. In old vinerics, and in some new ones, the borders have been made too rich at first, and when the manure and other organic matters have decayed the borders become too close, so that the air cannot penetrate, and in a wet season a large proportion of the active rootlets are destroyed: in short, the outside borders are too wet and the inside borders not wet enough. Gardeners who have had a long experience of the requirements of Vines know how much water to apply to the roots that are inside the house; but where this is not the case, in many instances water is applied in mere dribbles enough to wet the surface soil to the depth of 3 or 4 inches, and underneath where the largest proportion of roots are the soil is probably quite dry. If this is the case there is no wonder if the *Grapes shank*. It is now a number of years since Mr. Pearson, of Chilwell, through the pages of this Journal, suggested that the summer management of the Vines in many instances caused the *Grapes* to shank, too large a proportion of the growing shoots being cut away at one time. No doubt such bad management as cutting a barrowload of leaves and shoots from a moderate-sized vinery when the Vines are in full growth, must be injurious to the health of the Vine.

PLANT STOVE AND CONSERVATORY.

In the stove many of the plants require a temperature of 65° at night all through the winter months, and a moderately moist atmosphere; others are better with a lower temperature and moderately dry atmosphere. Most of the *Vandas*, *Acrides*, and *Dendrobiums* flower more freely the ensuing summer if they

are wintered in a house where the minimum temperature ranges about 55°, with a moderate amount of moisture in the atmosphere and at the roots of the plants. All the plants requiring the above treatment have been removed to the back of a succession Pine house; the *Dendrobiums* and smaller *Acrides* are suspended from the roof, the larger and heavier pots and baskets being arranged on a stage at the back of the house.

Removed *Poinsettia pulcherrima* to the stove; the plants had been growing in the Pine house near the glass. Judicious airing and careful watering are necessary in the stove department. No water should lodge on the foliage of tender plants.

We have now got over the worst part of the year as regards a supply of flowers for the conservatory. *Chrysanthemums* will be abundant until Christmas, and for this purpose the Japanese are very useful; the earliest and latest blooms are to be found amongst them. *Cyclamens* will flower continuously until March. Tree *Carnations* of every shade—pure white, flesh colour, rose, crimson, brilliant scarlet, and deepest maroon—will not be wanting. Pots and pans full of the Roman *Hyacinth* are throwing up numberless trusses of flowers; but the chief attractions are the two varieties of *Lapageria rosea* and *alba*. No greenhouse or conservatory should be without these charming climbers. When the flowers open early in September *L. rosea* has them paler in colour; now the colour is intense and brilliant. *L. alba* at that time is of the purest white, now the flowers are flushed with pink.

Potted different species and varieties of *Lilies*. *L. speciosum* and varieties of this are the most frequently grown for greenhouse and conservatory decoration. *L. auratum* is also a most gorgeous and popular species, but *L. tigrinum* and varieties of it—particularly *splendens*, and the double *Tiger*, with the elegant *L. Leichtlini*, should not be omitted in the most select collections. There is considerable difference of opinion as to the best time and manner of potting *Lilies*; some growers pot in autumn, others in spring; one prefers to pot without disturbing the roots, another shakes the soil from the roots, and separates them one from the other. Autumn is certainly the best time for repotting, and when a large number of bulbs have been planted in one pot it is best to separate the roots and replant them in another pot, placing the roots equally over the soil in the pot, a little sand being placed under and over each bulb. They should be planted sufficiently deep in the pot to allow of from 1 to 2 inches of soil being placed over the crowns of the bulbs. The best spikes are obtained by planting one bulb in a 6-inch pot; it should be potted the following season in an 8½-inch pot; in this case the roots should not be disturbed much, only those which have grown from the base of the stalk should be removed. The potting material suitable for the largest proportion of *Lilies* is composed of equal portions of turfy loam and turfy peat of a sandy nature—not bog peat, which is often sour and unsuitable; to six parts of this add one of leaf mould and one of rotted manure. When the bulbs are potted remove them out of doors, and cover them with cocoa-nut fibre refuse, or some other light material. A little rain will do no harm to them, but when the soil in the pots has become wet through, some lights, shutters, or other protection should be placed over them to throw off the rains. Early in January all of them should be removed to shelves in the greenhouse, or be plunged in cold frames or pits.

Potted *Lily of the Valley* and *Hoteia japonica*. They were potted in the soil which was left from the *Lilies*, but they do well without any peat being added to the compost; the pots are likewise plunged out of doors, and taken into the forcing houses as they are required. Removed the earliest *Hyacinths* and *Tulips* from the material in which they were plunged out of doors into a low pit, where the lights are kept close over them.—J. DOUGLAS.

TRADE CATALOGUE RECEIVED.

John Jefferies & Sons, Cirencester.—*Catalogue of Nursery Stock, comprising Forest, Fruit, and Select Ornamental Trees and Shrubs, Roses, &c.*

TO CORRESPONDENTS.

* * We request that no one will write privately to any of the correspondents of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to *The Editors of the Journal of Horticulture, &c.*, 171, Fleet Street, London, E.C.

N.B.—Many questions must remain unanswered until next week.

LINNEAN SOCIETY (*Juvenile*).—No examination is required before election to be a Fellow.

PRESERVING WALNUTS AND FILBERTS (*Young Gardener*).—After removing the husks of both, let the nuts dry on their outside, and then store them in jars or boxes in layers, alternating with layers of dry sand.

HORTICULTURAL BUILDINGS (Z. G.).—The advantages of the houses to which you allude are, that being of iron they are very durable and afford good facilities for ventilation; but we are of your opinion, and prefer the ordinary method of construction: the house light, but sufficiently strong to insure stability, and well ventilated.

BUSH AND PYRAMID FRUIT TREES (S.).—Experience is opposed to your views. We repeat that we can only insert the results of practice on this subject.

TREE LEAVES (Capt. Preston).—The leaves sent are not those of a Maple, but of an Oak. They appear to be those of *Quercus coccinea* or *Q. rubra*. If they die-off a bright scarlet they are the former, but if a dull crimson they are the latter.

VALLOTA PURPUREA AFTER FLOWERING (J. H. B.).—Keep them in a light airy position, and repot now or between now and February, giving them a pot no more than 1½ or 2 inches larger, providing good drainage, and removing the soil that comes away freely from amongst the roots, using a compost three parts fibrous loam, and one part leaf soil or old dry cow dung, and a sixth of sharp sand. In potting do not remove the offsets, but let all grow together. They do not interfere with the larger bulbs, and in time they will flower. If you wish for more plants, then, of course, you will remove the offsets, and put them singly in small pots.

LIME WATER (Mirfield).—The proportion of lime to water to be employed for destroying worms, is 1 lb. fresh lime to three gallons of water, thoroughly mixed in a hoghead. Let the mixture stand forty-eight hours, and then water with the clear liquid, giving a thorough soaking in the evening, especially in moist weather. It will bring the worms to the surface, and they may be cleared off with a broom.

WINTERING SHOW PANSIES (Idem).—They will winter safely in an ordinary frame in a sheltered, dry situation. If in pots these should be planed to the rim in ashes. Keep only moist, admitting air freely, but shielding from rains, tilting the lights in wet but mild weather. Protect with mats in severe periods.

SPIRÆA JAPONICA IN FRAME (Idem).—It will succeed in a frame. It is a hardy herbaceous plant, but in a frame it will flower earlier than out-doors. To have it in flower early it requires to be gently forced.

CAMELLIA LEAVES BROWNED (A Subscriber).—The leaves have the upper surface or epidermis destroyed by the attack of an *Acarus* or red spider, of which there were numerous traces, as well as eggs clustered on the under side close to the edges. Thoroughly sponge the leaves on their under as well as upper surface, also the stems, with a solution of soft soap, 4 ozs. to a gallon of water, using it at a temperature of 100° to 120°.

VINE BORDER MAKING—VINES FOR FORCING (Amateur).—We should have liked your border arrangements better had it been partly within and partly outside the house, the front wall being on arches so as to allow of the roots going outside, planting the vines inside the house. We should not have less than 9 inches of drainage, and over that a layer of turf; 2 feet 6 inches of border formed of turf and old mortar will answer for the half ton of bones, the whole thoroughly mixed. Plant the vines in front of the house, at 6 feet apart, and when they reach the roof stop them, and securing two shoots take one to the right and the other to the left, and when they have grown 18 inches in that direction take them up the roof, which will cause the rods to be 3 feet apart, and with two rods, each vine will have 18 feet of rafter. We should have all the pipes in front, and clear of the vines. For early forcing we recommend Black Hamburgh, and Buckland Sweetwater.

VINEY AND CUCUMBER HOUSE (Stella).—The viney will need to be kept cool. If you have plants you should only give fire heat to exclude frost. The bedding-out and other plants would have been better in the viney than the cucumber house, which we presume you will employ so as to have Cucumbers in spring and through the summer. The vines will need to be pruned when the leaves have fallen, and ought to be cut back to within three eyes each of the bottom of the rafter, and you ought not to take more than two bunches from each vine next season. We should not apply fire heat before March, if we had no plants to protect from frost. We cannot advise you as to what would be best to grow. Fruit can always be disposed of, and flowers, especially in winter, meet a ready sale, but nothing is gained by attempting too much. To tell you how to treat the vines would be to rewrite the "Vine Manual," and the cucumber is treated of in "In-door Gardening."

GRAPES SHANKED (G. W.).—The grapes, as you suspected, are what gardeners term "shanked." The cause of the drying of the stalks is the deficient supply of sap, owing to the roots being outside the house. If the surface of the border over the roots is covered with fermenting dung, and a tarpaulin over this to protect from excessive wet and cold, the shanking would probably proceed no further. Retain the old vines. Muscat of Alexandria requires a higher temperature than you employ.

VINERIES, FERNERY, AND FORCING PIT HEATING—VINES FOR VINERIES (R. O. G.).—The aspect, south-west, will answer. The mode of heating you show in the plan will not do. In the early viney you will need four rows of pipes—two flows with their returns, and for the succession viney you will require two rows a flow and return, and they should be so arranged that each house can be heated independently of the other, i.e., either separately or together. We should have the flow main for the early viney as you show it, and take a branch from it for the later viney at the back of the fernery, and through the back wall of the viney as soon as that house is reached, thence across the end and along the front, and back again to the boiler. The pipe may continue round the fernery as you show it, but we should take a branch from the pipe going to the late viney immediately after entering the fernery, then across the end, up the side, across the other end, and down the other side, joining it to the return pipe from the late viney. In this case you will only need a valve for the flow pipes of the fernery and viney. The forcing house will need two pipes, as you show, for bottom heat for the bed; but two pipes will not afford sufficient top heat. You ought to have four rows, and employ the 3-inch pipes for bottom heat for the bed, and for top heat to the forcing house. The other houses we should supply with 4-inch flow and return pipes. There should be valves on the flow pipes, so that each house may be heated separately or along with others. The pits, we presume, are not to be heated. If you heat them, a flow and return 3-inch pipe would do well. The border for the vines we should make partly within and partly outside the house, planting in each case inside the house. The pipes for heating should be 2 feet 6 inches from the front wall, and 1 foot from the back plant the vines 3 feet apart, the end ones 18 inches from the ends. This will give you the vines for each house. For the early house we advise three Black Hamburghs, one Buckland Sweetwater, and one White Frontignan. For the late house two Muscat of Alexandria, one Malinesfield

Court Muscat, one Mrs. Pince, and one Lady Downe's; or, if you wish for a late-lunging white kind, Trebbiano may be substituted for one of the Muscat of Alexandrias. Train the canes up the rafters, not lengthwise of the houses.

ZYGOPETALUM INTERMEDIUM (H. T. E.).—The abnormal flower of the *Zygopetalum* is very peculiar, but we have seen similar forms before. In fact this genus is very liable to malformations.

CELERY THE SECOND YEAR (John H. B.).—The seedlings from seed sown in spring will not answer for next year's planting, as the plants will run to seed. They are of no use. You must raise fresh plants by sowing in February or March.

FRUIT TREES FOR SUSSEX (Lady C. T.).—Winter dessert Pears for espaliers—Duchesse du Comice, Durandean, Thompsons, Fontaine de Malin, Forelle, Winter Nellis, Beurre Sterckmans, and Bergamotte Esperen. Winter dessert Apples for espaliers— Cox's Orange Pippin, Adams' Pearmain, Cocks Pippin, Golden Reinette, Golden Russett, Blenheim Pippin, Manning's Pearmain, and Nonpareil.

MYRTLES CUTTING AND SHIFTING (C. M. M.).—We should not advise cutting back until February or March, and then prune-in so as to lay the foundation of well-formed heads. Shifting ought not to be done until a month or six weeks after the plants have been cut back. If you had had them in a heated house we should have preferred to have shifted now and cut back in spring, keeping the plants rather dry at the roots until they had broken, but sprinkled overhead twice daily. After breaking, encourage growth by copious supplies of water and a moist atmosphere; but as the plants are in a cool house we fear they would not root much during the winter, if at all, and therefore do not advise shifting until spring.

PLANTING LILIES OF THE VALLEY (A. B. C.).—The present is the proper time to move these plants. They like rich, light, loamy soil enriched with leaf soil or thoroughly rotted manure. An east, or north-east, or north-west aspect is for them preferable to a south-west aspect. Plant in rows a foot apart, and the plants 9 inches apart in the rows, planting them in clumps of three to half a dozen crowns each. They should be planted about 2 inches deep, the crowns just below the surface, and after planting be touched about three-quarters of an inch thick with partially decayed leaves. Water freely in dry weather after May.

EUPHARIS AMAZONICA TREATMENT (A Constant Subscriber).—It blooms at various times, but principally in summer. Grow it in the stove in a light airy position, encouraging growth for about three months by keeping the plant moist, and then keep it dry for a period quite as long, not, however, allowing the leaves to flag; and by this plan you may bloom the plant twice, if not oftener, in a season. Moderate pot-room only is required, and a compost of turf loam three parts, and one part leaf soil, and a like proportion of sandy peat, with a free admixture of silver sand. Good drainage is very essential.

INSECTS (H. B. W.).—Your *Cyclamens* have been attacked at the roots by the irremissible grubs of the *Otiorynchus vastator*. Nothing will eradicate them besides careful examination of the plants and repotting them if not too far eaten. The grubs must be looked sharply after, as they burrow deep into the bulbs, and must be carefully picked out and destroyed.—L. O. W.

NAMES OF FRUITS (Rev. C. Badham).—Pears—No. 1, Beurré Langueux; 2, Red Doyenne; 4, Dumore, Apples—1, Cobham; 5 and 6, Luceombe's Seedling; (M. A. M.)—1 and 4, Golden Winter Pearmain; 2, Dutch Magnoner; 3, Cox's Pomona; 5, Dumelow's Seedling. (E. S. H.)—25, Pearson's Plate; 16, Rose de Chine; 34, Russet Pearmain; 5, Scarlet Pearmain, 38, Kedleston Pippin. (Hogg's Wood)—2 and 10, Melrose; 9, Autumn Pearmain; 5, Winter Collin; 11, Yorkshire Greening; 4, Federal Pearmain; 60, Reinette du Canada; 1, Mère de M-nage; 0, Trumpington; 600, Golden Winter Pearmain; 8, Leadington. (L.)—March Bergamot. "Hogg's Fruit Manual."

POULTRY, BEE, AND PIGEON CHRONICLE.

POULTRY HAUNTS.—No. 1.

MR. R. B. WOOD'S, WOODLAND HALL, UTTONETER.

"I suppose you never read the other part of the Journal," quoth my good friend, the Rev. J. Handley, at the Tamton Flower Show. "Don't I, though?" was my response; "and what fowls do you go in for?" "Houdans," "So do I." And forthwith we were at it—a regular bill; and the different strains, the various breeders, the ins and outs of poultry shows, and the various items that interest the initiated, were merrily discussed across the hospitable board provided by the Committee.

It was in the month following that, being on my way home from the great Manchester Exhibition, it occurred to me that, as I had for many years been in the habit of noting in the pages of our Journal such places as struck me in their horticultural aspect, and as I had received many an intimation that such notices were profitable to many, so I might perhaps say something to poultry-fanciers in the same gossiping way that might interest them. When I see anyone taking a prominent position in flowers, poultry, or anything else, I like first of all to know what the man is like, and then I like to know his surroundings; and the same feeling that would induce me to look with interest on the garden whence some of our greatest achievements have come, makes me desire to see the places whence some of those wonderful birds have come which seem by right to occupy a foremost place in the numerous conflicts which now are almost universal.

It so happened, then, that Uttoxeter lay not much out of my way on my return; and as Mr. Wood has taken such a leading place for some years as an exhibitor of French fowls, and had supplied birds for my own little yard, I halted on my way home at the quiet country town which is so evidently connected with old Roman times, and on the following morning made my way to the pleasantly situated house where Mr. Wood carries on his cultures. After a pleasant walk across the fields of about a mile

and a half, the ground gradually ascending, I came on an old Roman or Danish tumulus, and thereby was suggested to my mind that some interesting Roman remains had been lately found there, but I could gain no information on the subject, and imagine I must have been mistaken. As I had recently seen the fine collection at York and Cirencester, I consoled myself with the belief that there was nothing likely to surpass what I had seen there.

Woodland Hall stands upon an eminence overlooking a wide breadth of woodland and pastoral scenery. The house is a modest, unpretending, but comfortable structure, and the appliances of the place were evidently brought to bear on the rearing and management of the poultry. Mr. Wood breeds Crève-Cœurs, Houdans, and Brahmas, but it is for the two former that he has become so famous. Who has not admired the marvellous specimens of gallic beauty that he has exhibited at the Crystal Palace, Birmingham, and elsewhere? He has attained this perfection, as every breeder must do, by a process of selection, not leaving the work to natural selection, which I look upon as a myth, for it is not always the strongest that makes the most desirable parent. Other qualities may be wanting, but the careful breeder marks those birds which exhibit good points, and by a system of crossing and recrossing attains his object; and it is no difficult matter for him to say from what parents his chickens are produced. Mr. Wood adopts no expensive plan in breeding his birds. The houses are plain; the runs are of some length, divided off by wire netting, while as the fowls grow they have some fine pastures to roam over. Like many breeders this year, his birds were not so forward as in former seasons, but I saw many of great promise amongst the cockerels and pullets, and some of his old birds were in fine condition. Here were heroes that, if they had not been in a hundred fights, had at least carried all before them wherever they had been engaged; while in some cases it would be told how either the odd fancies, or more probably hurried labours, of judges had passed by birds which in other places had won the highest honours. In connection with these breeds Mr. Wood holds the opinion, I believe now very widely entertained, that no fowl surpasses, if indeed any equals, the Houdan in general excellencies. Leaving aside its beauty, which I know many say is analogous to that of a Scotch terrier, and "ugly brutes" is one of the mildest terms I have heard some apply to both—leaving this question on one side, they are in the first place very hardy; second, they lay a large quantity of eggs; third, they never sit; and fourth, they arrive at maturity very early, and do not become after four or five months' care, like the Dorking, coarse and disagreeable. This rapid growth in their early stages is very desirable. To get good Dorkings for exhibition, breeders try for the very earliest birds, and unless they can hatch in February think they can do nothing. Now Mr. Wood says, "I don't care about these very early chickens in the French breeds. The beginning of April is time enough, and chickens hatched then will be in capital order for poultry shows in November." This is a great advantage, for it is hard work bringing young chickens through the cold March winds.

Mr. Wood is a young man; and as he has already done much for the French breeds, so much as to astonish Frenchmen themselves, so I believe he may yet do more. We are sure to hear of him again, and I hope to see his birds at our great Show at the Crystal Palace, and shall be very much surprised if he do not take a very high place both with Crève-Cœurs and Houdans.—D., Deal.

THE NARRAGANSETT TURKEY.

This is one of the largest and hardiest of all the breeds of Turkeys. It is raised in the greatest perfection in south-eastern Connecticut and Rhode Island, a region famous for its fine poultry. Turkeys do remarkably well along the sea-board, and almost every farmer remote from the village has his flock. It is not at all uncommon to find flocks of from one to two hundred birds, the product of about a dozen hens, under the skilful management of a poultry woman or boy. Of course they do some damage to the grain; but this evil is counterbalanced by the enormous destruction of insects secured. From June to September they subsist mainly upon grasshoppers, crickets, and other insects, ranging for the most part in the pastures and woodlands.

They are fattened in October and November, and it is not uncommon for a lot of early chicks to reach the average weight of 11 lbs., dressed at Thanksgiving or Christmas. The common run of Turkeys sent to the New York market do not average more than 8 or 9 lbs. The Narragansett is a very large healthy bird, and has been bred for size for many generations. Most of the birds sold in the Boston and Providence markets under the name of Rhode Island Turkeys, or Extra No. 1, are of this breed. The farmers are careful in the selection of their breeding stock, taking young gobblers that will weigh from 22 to 28 lbs., and hens that will weigh from 12 to 16 lbs. Where the birds are kept over, gobblers will sometimes dress 32 to 34 lbs. For making poultry for market the Narragansetts have no superior. The prevailing colours are white and black, with a large patch

of white upon the wing-bow, giving the general impression of a grey bird. They are not uniform in the shading, but with sufficient painstaking could be bred to a feather.—W. CLIFT.—(*American Poultry World*.)

OXFORD POULTRY SHOW.

The second annual Exhibition was held at the Town Hall and Corn Exchange, on October 29th and 30th.

The good management of the first Exhibition, combined with a liberal prize list, produced a very large entry, and an unusual number of exhibitors from all parts were present, doubtless from believing that they would here see many of the birds that would be brought against them at the two great shows that are so quickly to follow, and to calculate their chances of success.

The *Dorking* classes were satisfactorily represented in number and quality. In the Coloured class one or two pens well worthy of commendation escaped notice. The *Spanish* class contained seventeen entries, but we thought them a poor lot. The cockerels were very backward, and we saw no bird of any great promise. We liked two or three pens better than the winners, but the difference was not sufficient to give any violent cause of complaint. In the Buff *Cochins* Mrs. Tindal, an almost new exhibitor, had an easy victory; and the veteran breeder of Partridge *Cochins*, Mr. Tudman, came as clearly to the front in his variety. We are sorry the endeavours that have been made during this season to improve Black *Cochins* have not resulted in greater success; they were a miserable burlesque of *Cochin* fowls. Had they competed with the other varieties not one pen could possibly have obtained a commendation. There is no reason why they should not be raised to the same standard of excellence as other *Cochins*, and we trust that breeders will not be discouraged. Some good birds have been seen, and there is no doubt that with judicious crossing they can be produced again. The Dark *Brahma* class was a good one, but we did not like the awards of the prizes. The comb of the second-prize cock was very faulty, and with so many birds equal in all other properties, we think this must have escaped the Judge, or he would not have placed him in such a position. We thought Mr. Lingwood's pen should have been first, the first-prize pen placed second, and a highly-commended pen belonging to Mr. Bennett third. A very promising cockerel was also shown by the Hon. Mrs. Baillie Hamilton, but it should have been kept at home until more developed. The birds in the Light *Brahma* class we thought showed a general improvement on those exhibited last year, and here we consider a greater mistake was made than in the Darks, the best pen remaining unnoticed by the Judge. The *Game* classes were moderate, but condition being of all importance here, we have little doubt that many of the first-class exhibitors would not risk their best birds, but that they are reserving them for the great shows that are coming. The *Houdan* class was almost the largest in the Show, Mr. Dring, who showed the best cockerel, winning, closely pressed by Mr. Quibell, who had a little the advantage in the pullet. In the *Game Bantams* the Black and Brown Reds competed together, making a very large entry. A lot of handsome birds were to be found in this class, and an extra third prize was awarded. Some pretty neat birds were also to be seen in the Black *Bantam* class, and we were pleased to see an extra prize awarded to Mr. Braund in the Sebright class. This variety has so long been in the hands of Mr. Leno, that it is gratifying to find some one occasionally rewarded for contesting the honours with him. The *Bantam* "Any other variety" class was an unusually pleasing collection.

The entries in the *Duck* classes were large, especially the *Rouen*, and we think when the Judges arrived here they must have been exhausted, and hurried over the Blacks, for the awards were not here received with satisfaction, a very noted exhibitor feeling so much hurt as to offer his entire stock for sale.

Some good bargains were to be found in the Selling classes, which were quickly caught-up, the sale office being besieged immediately it was opened.

The *Pigeon* collection was a very fine one, many of our most successful exhibitors competing for the prizes. Mr. Fulton cleared the board in both classes of old Carriers. In the class for young, which was, perhaps, the most interesting in the Show, Mr. Ord obtained the first and second prizes, an extra second being judiciously awarded to Mr. Massey. Some superior birds were exhibited in the *Pouter* classes. The first and second prizes for *Barbs* again fell to Mr. Fulton. The first-prize birds were a grand pair well matched. They also most deservedly obtained the additional honour of a cup over four classes. The second prize pen contained a splendid cock, but the hen was unworthy of him. Both classes of *Tumblers* contained some pretty birds. The *Dragoons*, a variety that is daily becoming more popular, mustered in great force, the first prize going to a superb pair of *Yellows*. A hen in the second prize pen was also greatly admired. In the class for *Owls*, a pair of foreign succeeded in obtaining the first prize; an extra first being given to

MAGPIES.—1, C. G. Hitchcock, Oxford. 2, R. Fulton.
 ANY OTHER VARIETY.—1, H. Yardley. 2, S. Salter.
 LOCAL CLASS.—*Homing Antwerps*.—1, W. Tomlin, Oxford. 2, Powell & Crane,
 Oxford. 3 and *etc.*, W. K. Pratt.
 SELLING CLASS.—1, S. Salter. 2, A. Damarall. 3, L. Allen, London. *hc.*, W.
 W. Wootton, Headington (Priests); Capt. F. G. Coleridge (Blue Owls). 7.—
 Geary, Moreton, Bulford (Silver Owls); W. P. Keall, Wantage (Blue English
 Owls); A. Damarall; G. H. Gregory; S. Salter (2); Miss J. Milward.

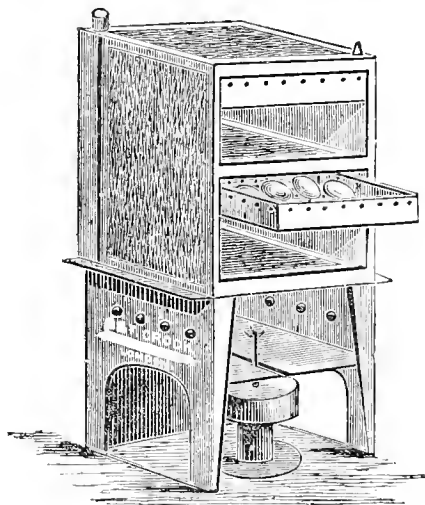
The Judges were—*Poultry*: The Rev. G. F. Hodson (who officiated for Mr. Hewitt), Mr. Teebay, and Mr. Tegetmeier.
Pigeons: Mr. Esquilant and Mr. Jones.

THE AGE OF EGGS.—The "Medical Press and Circular" quotes the following from a French book, to ascertain the age and consequent freshness of an egg:—Dissolve 120 grammes of common salt in a litre of water. If the egg is one day old it will sink to the bottom; if it was laid the day before it will not reach the bottom; if three days old it floats; and if more than five it comes to the surface, and the shell projects more and more according to the staleness.

ARTIFICIAL INCUBATION.

The following is in reply to "T. G. Wright." The temperature for hatching is 104°, but if it falls a few degrees lower occasionally, as it does when the hen is off her eggs, no harm is done. We know nothing about the need for turning the eggs, nor do we recommend any incubator, and we only reprint the following from a former volume to supply the information you need.

The accompanying engraving, for which we are indebted to Mr. F. Crook, of 20, Motcombe Street, Belgrave Square, is a representation of Crook's improved incubator, which, though

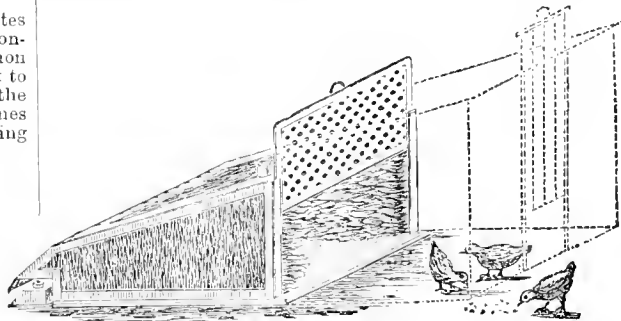


Crook's Improved Incubator.

not differing materially in principle and form from the older apparatus, nevertheless presents some important modifications. To show more clearly what these are it will be necessary to describe briefly the original apparatus. The size known as No. 2 was calculated to hatch sixty hens' eggs, or eighty-four Pheasants' eggs, was 22 inches high, 15 inches wide, and 11 inches from front to back. The trays of perforated zinc, lined with blanket, were enclosed each in a compartment, all the sides of which, except the front, were hollow, and served to contain water, by which the requisite degree of heat was communicated to the eggs. To heat the water, both in the old and improved apparatus, a lamp is employed, which burns a highly-rectified non-explosive oil, the burner being a brass tube pierced with five of the smallest holes which it is possible to drill, and filled with cotton threads to draw up the oil. In lighting the lamp a piece of burning paper is held against this tube till the vapour from the oil ascends and is lighted. Externally, the water-jacket is covered with blanketing to prevent loss of heat. The new apparatus, instead of being closed at the back, is open, so that there is always a current of cool air from front to back below the eggs, and these receive the heat principally on the upper side, as in natural hatching.

The alterations and improvements are stated by Mr. F. Crook to have "originated not from any inefficiency in the principle of our former incubator, but to avoid, as much as we are able, those disasters happening through inattention, the results of which are to dry-up the moisture necessary to the perfect development of the germ, and destroy the vitality of the chick. To describe our alteration it will be necessary to say that we are

now imitating Nature as closely as possible by radiating the warmth upon the top of the egg only, and allowing the under side to remain somewhat cool. Your readers will at once see that this is a natural method; and as the germ floats only at the top side of the egg, and remains so in whatever position the egg may be turned, we consider this beautiful provision of Nature to be our unerring guide, and our experiments have proved that this is the correct method for us to apply our heat. We have not in any way altered the configuration of the apparatus; each remains precisely the same.



Artificial Rearing Apparatus.

"The artificial rearing apparatus, of which the above is a representation, is very simple in its construction, and is, in fact, a more perfect carrying-out of the plan proposed by M. Réaumur, whose works upon the subject of artificial incubation are well worthy of the attention of poultry-breeders. The apparatus is a slanting casing of hot water, with a loose casing of perforated metal, and lined with lamb skins; a lamp is placed at the back end, which keeps up the required warmth for winter use. It is intended that this useful adjunct should be attached to a coop, as represented by the dotted lines in the engraving, which prevents the birds from flying on to the top of the apparatus; the oblique construction of the apparatus enables the chicks to nestle comfortably up to the top side, in imitation of Nature, as if the chick were nesting under the hen. There is no warmth applied to the feet of the birds, as we have found from experience that when they are warmed from the floor upon which they rest, they become weak and languid, soon have the cramp, and readily take cold. The warmth in this, as in the improved incubator, is only applied to the top or back of the bird."

SHORT-FACED TUMBLERS, AND PIGEON CLASSIFICATION.

I THINK "TURKEY QUILL," in "our Journal" for October 23, has hit a blot in regard to the above subject. All the varieties of Short-faced Tumblers are such thorough high-class fancy birds, are of such ancient lineage, and so exquisitely beautiful—a beauty all see well in an exhibition cage, unlike some varieties which show badly, that I think they deserve much encouragement. The sprightly Short-faced Bald and Beard, that lustrous gem the Black Mottle, and those striking-looking tines the Red Mottle and Yellow Mottles, must not be suffered to die-out. Let committees offer prizes, the birds will come; if not the first year, they will come the second and third years. I wish to see more attempts at breeding these birds. Those who can keep flying Tumblers, and have a small space for a wired-in Pigeon house as well (and who has not?), can manage these varieties, for they are so small, they require but little room. I hope, though too late this year, that the Crystal Palace Committee will alter their schedule in behalf of these birds another year.

I own that personally I do not like the exhibition of Pouters of "any colour or marking." I know they have great value for breeding, but they smite my eye, and do not please it when seen at a show. Perhaps there is one exception—viz., in that land of Pouters Scotland, they may fairly appear, but in England I would have them in the Selling class. The standard colours for show, the off-colours for use in the lofts of their owners, and to be bought. Of all things let not the high-fancy Tumblers lack encouragement—they were fancy birds a century ago.—
 WILTSHIRE RECTOR.

NORTHAMPTON ORNITHOLOGICAL SOCIETY'S SHOW.—"I beg respectfully to inform you that we have carried out our No. 4 regulation in the schedule to the letter, and the five birds detected as artificially coloured were sold by auction on Monday evening, and realised the sum of £2 5s.—an average of 9s. each—and it will be applied towards defraying the expenses of the Exhibition. The whole of the coloured birds were purchased by

their former owners, Messrs. Barwell & Sons. I beg, on behalf of the Society, to tender you their best thanks for the satisfactory manner in which you discharged your duties as Judge at our late Show, and for the liberality you have shown to us on this occasion.—C. HILLIER, Sec'.

The above is a copy of a letter sent to Mr. Hutton.]

BEARDS, BALDHEADS, AND MOTTLED TUMBLERS.

It was with no small interest I read the letter from "TURKEY QUILL," and I am very glad he has brought forward such an important and interesting subject. I think it very discreditable for a show with any pretensions not to have classes for all that are really distinct breeds, and not for those only where the committee are pretty sure of good entries. If these shows are really for the improvement of the different breeds, and not for profit, then I say let every distinct variety have a separate class, and not classes for mongrel-bred birds because the classes are sure to pay well.

"DEEDS SHOW" says, "Notwithstanding it is a merry meeting and unbegrudged expense on their side," &c. (the committee, I presume, he alludes to), my opinion is that the merry meetings are all very well while the show pays, otherwise there are more long faces than smiling ones. In the latter case if a class has not had sufficient entries to pay the prize-money it has been struck out from the next year's prize-list, and would only appear again if the committee could get some enthusiastic exhibitor to give a cup or the prize-money to have it in once more. I am sorry to say this was the case with the so-called "Great National Show," for in the year 1870 the classes referred to did not pay, consequently they were struck out instead of having another opportunity. The consequence is that as these varieties have not been considered worthy a place in the prize-list they have gradually disappeared from the show-pen, as no exhibitor will show them against the odd or off-feathered birds they have to compete with.

I would suggest that if "TURKEY QUILL" would offer, through these columns, a sum towards a prize or prizes at one of our leading shows for each of these varieties, he would be responded to by many who would gladly contribute and become exhibitors where they now have no chance.—A WOULD-BE EXHIBITOR.

A VISIT TO "SOMERSETSHIRE SQUIRE" AND HIS TUMBLERS.

As long back as August 29th, 1872, there appeared in the columns of this Journal a letter on Tumbler Pigeons signed "SOMERSETSHIRE SQUIRE," in which the writer spoke of having a capital flight of birds, thorough good performers, in colour chiefly Red and Black Mottles. At the same time came a kind private invitation for me to go and inspect these birds. Circumstances, needless here to mention, prevented my accepting "SOMERSETSHIRE SQUIRE'S" hospitality until Michaelmas-day this year. I had always treasured-up in my mind that some leisure day I should see a new fancier among his pets, see something and some one pleasant at the time, and leaving pleasant memories. It so chanced that "SOMERSETSHIRE SQUIRE'S" town is but a short run by rail from mine, and yet, strange to say, I had never been there.

Given, then, as fine a day in autumn as ever fell to my lot to enjoy, a breezy health-giving day, when the spirits perforce must rise in harmony with Nature's cheeriness—given a short journey by rail, and then came the station, and then who was I to see? A man old or young? a man surrounded by grandchildren, or with a troop of daughters? a little man with, as usual, a very large wife, or a large man with, as also usually is the case, with a wee wife? Now, between ourselves, good readers, I had made up my mind that I was to meet a middle-aged man like myself, so I walked up and down the platform, looking hard at every male who was just half way on in the journey of life. I looked at the fat, and I looked at the lean; I looked at the tall, and I looked at the short; but none of them looked a reply. When, lo! I was challenged by name by one whom I had passed and repassed, and in a minute my hand was in that of "SOMERSETSHIRE SQUIRE." Now, I am not going to let out any secrets of person or of place, but I will just say this, that "SOMERSETSHIRE SQUIRE" is a young man, not yet left his university. I gladly record this, for it is an admirable thing for a young man to start with and stick to a nice healthy hobby in life; it gives innocent amusement, it gives interest to a life in the country especially; but too frequently I only find elderly men as Pigeon-fanciers. So I always hail with delight a young recruit as either a Pigeon or poultry-fancier.

Soon we are down from the station, we have a link in the knowledge of a mutual friend, and now we are passing quickly through the streets of one of the many charming west-country towns, with three capital fox terriers, those sprightly, plucky

little dogs, scampering before us. The pony dog-cart, that very handy and fashionable vehicle, is soon through the town and on the country road. I have spoken of the west-country towns in high terms, and surely they deserve it. At their head stands Bath, "The Queen of the West," which with its surrounding country excels in beauty every other place in England; then, according to their degree, come Swiss-like Bradford-on-Avon, aristocratic-looking Devizes, Canon Kingsley's "pretty Chippenham," open airy Warminster, snug little Wells, down further to bright clean Taunton, &c. Surely this sunny Michaelmas-day made all the beauties of the west more beautiful.

Chatting about Pigeons and fox terriers, four miles are quickly passed, then a lodge, an approach, an old manorial dovecot, a flower garden bright with bedding plants, never brighter than on this day—it is a garden like a long bowling-green studded with gay colours—and a glimpse of a still longer garden beyond the house, and we pull up at the home of "SOMERSETSHIRE SQUIRE," a renovated manor house, venerable, yet very comfortable-looking, having an English near view of park and tree, and dense woods far away. Lunch there is soon to be, but meanwhile a look at the Pigeons. Many of them have been caught over-night, and placed in baskets for my inspection. To quote "SOMERSETSHIRE SQUIRE'S" own words, "they consist of feather-legged and clean-legged birds, with the exception of one or two, none of them heavily feathered on the legs. As to colours, they are chiefly Black Mottles, Black Splash, Red Mottles, and Red Splash, Duns with white flights, Blue with white flights, and a few white, or nearly so." Such of the colours. Some had pearl eyes, others bull eyes, and they are forty-four in number. The birds had been bought as flying Tumblers, for their flying and tumbling—many at Bristol, and those not found equal to their work were discarded. Thus they were a picked lot, picked for work, not for colour. I never looked at or handled a lot of birds more likely to distinguish themselves in mid air.

So I looked at and examined them. After luncheon is to be the performance—luncheon, that pleasant meal, particularly in a pretty place in the country with an agreeable family. I question if dinner parties ever give half as much pleasure. Often there is a heat and closeness, and always, of course, contractedness of view; but with a midday meal there is light within and without, flowers near you, and often a flower garden in sight, and, best of all, no uneasy night's rest, so often following the late heavy repast. Ladies have a belief that they look best of an evening; I half doubt it now that morning costumes are so charming.

I ascend the house, and from its roof I am to see the Pigeons take their exercise. But Pigeons will not do always what they should—they are seemingly perverse, though of the race of Doves. N.B.—Other bright-coloured though wingless doves are also said to be at times perverse. I have had friends to see my Tumblers, and have been obliged to keep saying, "If you had but come yesterday they flew so much better." But it is so through all animal creation. The dog that "begs" so well to his mistress will not "beg" at all before strangers. The bull-finch will not pipe when ordered for display. The child brought in for exhibition grandly dressed and ribboned has to be carried out, the naughty boy, kicking and screaming. And Tumblers are no exception to the rule. So on this fine day they would not gather and go up all together, but scattered and wanted to pitch, hence the fine sight of "the flight" in close pack and wheeling regularly at a vast height was denied me; but still, I never saw individuals tumble better. No birds could be better performers, neater clearer tumblers. Thus, seeing what as individuals they did do, I could well imagine what as a flight they could do.

Having watched the birds and enjoyed their performance, I am taken to see the remains of a Roman villa near. This was a rare treat. The pavement having been discovered some years ago, my friend's excellent father had carefully erected over it a low building of which he keeps the key; hence it is preserved from the rain and snow, and also from those who would pocket specimens. The pavement is in many places perfect in shape and also in colour; and the legend of a part, Orphans charming the beasts, is easily recognised. I was shown, too, the remains of the Roman baths, also in good and traceable condition. Then on we went through a winding woodland path to a keeper's house; then on and on where the pheasants in numbers ran or flew near us, through woods looking on woods all autumn-tinted: then back by a well-planted glade with a brook sparkling in sight here and there, and crossed by a picturesque bridge; back to inspect a kennel of harriers—right true hounds they are; then almost an equal number of fox terriers of every age from a day upwards. But I had not yet seen all. I go and look at Rouen Ducks of great length. One Duck really seemed as if she ought to have an additional pair of legs. Then pigs of vast fattened proportions. Then I stroll into garden and vineyard, and try all I can to photograph all I have seen on my mind—not a difficult process, for we easily remember what is very agreeable.

In conclusion, let me remark that a country life to be enjoyed

presupposes country pleasures understood and followed out. I lately heard of one who had grown utterly tired of living in one of the most charming houses and parks in England, and who observed, "I am so dull. I look out on trees, and the only difference is trees in sunshine and trees in rain, and therefore I am going to live in London." Such is a pitiful case; but, on the other hand, a country family interesting themselves in school and cottage, in garden, and stable, and kennel, in dovecote and all other country pleasures, at the same time fond of reading and observing—the mind employed and the body employed. Oh! what an enviable position such hold! How much more health-giving—health in its widest sense, reaching beyond body to the mind—than one which those have to occupy who are "in populous city pent."

A country gentleman's life, and that, too, of his family, in England, is the very picked life of all, embracing so many possible pleasures and excluding so many unpleasant circumstances. Such, if I mistake not, so enjoyed, I was witness of when I paid a visit to the home of my young friend "SOMERSETSHIRE SQUIRE."—WILTSHIRE RECTOR.

CRYSTAL PALACE SHOW.—We understand the total number of entries for the ensuing Show on the 17th-20th inst. amount nearly to 3600, being an increase of about 400 on the preceding year. The Dark Brahma class for pullets is the largest, the entries here exceeding 100. In the Pigeons, Dragons and young Carriers take the lead.

MIDDLESBROUGH CANARY AND BIRD SHOW.

(From a Correspondent.)

The Middlesbrough annual Show of Canaries and other birds was held in the Odd Fellows' Hall, Middlesbrough, on October 31st and November 1st, and was a great success. There were over eighty exhibitors and 352 entries.

Mr. T. Clarke, of Sunderland, officiated as Judge, and his awards, as a rule, were correct—albeit, he did not please everyone.

Belgians numbered seventeen in two classes. In Yellows, the first prize was won by a really beautifully "ugly" specimen; it was generally admired and was fully deserving its position, and was claimed at a good price. The other prizetakers had good birds—in fact, the class was so good that the remainder were very highly commended. Buffs occupied eleven pens, and they were also a real good class, the honours being taken with five birds; of the remainder, one-half were very highly commended and the other highly commended, an evident proof of the Judge's opinion of them.

In Clear Norwich, Messrs. Bemrose & Orme took all the prizes with their wonderfully rich-coloured birds; in fact, they were unapproached, and the general opinion in the Show was that they were *bona-fide* specimens. More than one fancier tried his tests, but with no result so far as altering their colour.

In Even-marked Jonques the first prize was taken with a nicely-marked bird which deserved its position. In Even-marked Buffs, the first, second, and third prizes were all won by the same owners with nicely level-marked and good-shaped specimens. In the Ticked classes the same owners were again the largest prizetakers. There were some good birds in the Crested Norwich classes, the first-prize bird having an immense-sized crest, although it had not the finish of the second bird. Coppies were an average lot.

Lizards were a very good lot, and Messrs. Watson & Ritchie took all the prizes. The awards were about right except it be in the Silver class, where, probably, Mr. Watson ought to have been placed higher, yet there was not much to choose either way, as the prize and commended birds were all of high class. In Cinnamon Messrs. Bemrose & Orme were again to the fore. Mr. Adams ran them close, and fairly split the Derby Jonques with an excellent bird. In Variegated Cinnamons, the first was a very rich bird, though far from being so evenly marked as the second.

The Yorkshire birds were a show in themselves, numbering seventy-two in the Clear and Marked classes. There were some magnificent birds among them, and the Manchester Cobby was evidently predominant in most of the specimens. It would appear that a Yorkshire bird cannot be too long if it is only close in feather and free from the frill on the breast. These classes were minutely inspected by the visitors, and generally admired. The Yorkshire Greens were well represented, and contained some fine specimens. One or two of the prizetakers had their wing-coverlets edged with brown, which ought not to be. In this class the awards were much criticised.

There were some nice birds in the Evenly-marked Mule class, and the awards gave far from satisfaction. The first-prize bird was much heavier marked on one wing than the other, and was shown in very bad condition. The second-prize bird was generally considered worthy of the highest honours; it is a nice six-marked bird. The third-prize bird was not eligible for a prize

at all, it not being an Evenly-marked bird, and having a cap, eye and wing marks. Mr. Rawnsley showed a fine Mule that should have been amongst the prizetakers. Dark Mules were a fair lot, and the awards correct. Linnet Mules were one of the very best classes ever seen in a show, and the prizetakers wonderfully fine birds. Goldfinches were an average lot, and many birds were far from being up in feather. Such a class of Brown Linnets as was here is seldom seen, and the Judge must have been a considerable time in separating them.

The Any other variety of British birds contained five Thrushes, one Missel Thrush, one Starling, one Chaffinch, one Bullfinch, one Brambling, and one Lark. In the Any other class of Mules Mr. Hawman was first and second with a Clear Goldfinch Mule and a nice Variegated Greenfinch and Canary Mule, a fair Bullfinch and Goldfinch Mule being third. The Judge awarded a goblet to the Clear Mule as being the most perfect specimen in the Show.

The Selling class had a large entry, and many birds were claimed out of it. There were some very fine stuffed specimens of the larger Hawks and Moor hen.

BELGIAN.—*Clear or Marked Yellow.*—1, J. Moorhouse, Little Horton. 2, J. N. Harrison, Belver. 3, R. Robinson, Middlesbrough. *Chc.* T. Cockerton, Ulverston; J. N. Harrison, W. Bradley, Ulverston. *Clear or Marked Buff.*—1, J. N. Harrison. 2, R. Hawman, Middlesbrough. 3, W. Crewdson, Ulverston. *Chc.* R. Robinson (2); W. Bulmer, Stockton; J. W. Harrison. *hc.* W. Jones, Ulverston (2); T. Cockerton; W. Bradley.

NORWICH.—*Clear Jonque.*—1, 2, and 3, Bemrose & Orme, Derby. *hc.* J. Adams, Coventry (2). *Clear Buff.*—1, 2, and 3, Bemrose & Orme. *hc.* Moore & Wynne, Northampton (2).

NORWICH.—*Evenly-marked Jonque.*—1, J. Adams. 2, G. Cox, Northampton. 3 and *Chc.* Bemrose & Orme. *hc.* 4, Greenfield, Stockton. 5, G. Wilson, Crook. *Evenly-marked Buff.*—1, 2, and 3, Bemrose & Orme. *hc.* J. Adams; Martin and Griffin, Northampton. *c.* J. Adams.

NORWICH.—*Ticked or Unevenly-marked Jonque.*—1 and 2, Bemrose & Orme. 3, J. Adams. *hc.* J. Devaney, Knaresborough; T. Cockerton. *Ticked or Unevenly-marked Buff.*—1 and 2, Bemrose & Orme. 3 and *Chc.* J. Adams. *hc.* T. Cockerton; B. W. Castelow, Sunderland.

NORWICH.—*Crested.*—1, Martin & Griffin. 2, R. Hawman, Middlesbrough. 3, J. Goode, Leicester. *Chc.* Bemrose & Orme. *hc.* J. Devaney; Bemrose and Griffin; B. Garbutt, Great Broughton. *Cobby Crest.*—1, W. Bulmer. 2, W. Hutton, Baldon. 3, L. Belk, Dewsbury. *Chc.* W. Cotton, Middlesbrough (2); J. Stevens, Middlesbrough.

LIZARD.—*Golden-spangled.*—1 and 3, W. Watson, Darlington. 2, R. Ritchie, Darlington. *Chc.* J. N. Harrison; R. Ritchie. *hc.* J. McNeal, Marske. *Silver-spangled.*—1 and 2, R. Ritchie. 3, W. Watson. *Chc.* J. Stevens; W. Watson; J. Goode. *hc.* L. Belk.

LIZARD.—*Gold or Silver-spangled, with Broken Cap.*—1, 2, and 3, R. Ritchie. *Chc.* W. Watson (2); W. W. Horton, Darlington. *hc.* Z. Howe, Middlesbrough; J. Fairclough, Middlesbrough; J. Taylor, Middlesbrough.

CINNAMON.—*Jonque.*—1 and 2, Bemrose & Orme. 2, J. Adams. *Chc.* E. Winter, Guisborough; J. Taylor; Moore & Wynne. *hc.* W. W. Johnson. *Buff.*—1, Bemrose & Orme. 2 and 3, J. Adams. *hc.* C. Holt, South Stockton.

VARIEGATED CINNAMON.—*Yellow or Buff.*—1, Bemrose & Orme. 2, L. Belk. 3, R. Robinson. *Chc.* J. Adams; J. Stevens. *hc.* J. Fryer, South Stockton.

YORKSHIRE.—*Clear Yellow.*—1 and 3, W. Hutton. 2, C. Holdsworth, Harrogate. *Chc.* W. Howard, Harrogate; J. Robson, Redington; L. Belk; J. Rowland, Skelton; T. Tommiswood, Middlesbrough; T. Irons, Northampton. *hc.* J. Moorhouse. *Clear Buff.*—1, J. Moorhouse. 2, J. Fawcett. 3, W. Bulmer. *hc.* G. Hudson, South Stockton (2); W. Bulmer; J. Fawcett; J. Garbutt (2); J. Moorhouse.

YORKSHIRE.—*Evenly-marked Yellow.*—1, J. Stevens. 2, P. Rawnsley, Ledge Green, Braford. 3, J. Moorhouse. *Chc.* L. Belk. *Evenly-marked Buff.*—1, P. Rawnsley. 2, J. Moorhouse. 3, L. Belk. *Chc.* M. Burton, Middlesbrough; T. Tommiswood; P. Rawnsley.

YORKSHIRE.—*Ticked or Unevenly-marked Yellow or Buff.*—1, W. Bulmer. 2, J. Garbutt. 3, J. Stevens. *Chc.* G. Johnson; J. Rowland. *hc.* J. Fryer; J. Easton, Bradford. *c.* H. Crossdale, Ulverston.

CANARY.—*Clear Green.*—1, J. Spence, South Shields. 2, J. Rowland. 3, E. Winter. *Chc.* E. & J. Williams, Guisborough. *hc.* R. Hawman; M. Jackson, Guisborough; R. Robinson.

GREENISH MULE.—*Evenly-marked.*—1, J. Moorhouse. 2, R. Hawman. 3, J. Spence. *Chc.* P. Rawnsley; Moore & Wynne. *hc.* W. Lister, Malton. *Dark.*—1, C. Holt. 2, W. Lister. 3, W. & C. Barniston, Middlesbrough. *Chc.* M. Burton; J. Stevens; G. Cox. *hc.* W. Hutton; J. Goode.

LINNET MULE.—*Variegated.*—1 and 3, J. Spence. 2, J. Stevens. *Chc.* W. Hutton; P. Rawnsley. *hc.* T. Nowell, Baldon.

ANY OTHER CLASS OF MULES.—1 and 2, R. Hawman (Clear Goldfinch Mule, and Greenfinch and Canary Mule). 3, W. Hutton.

GREENISH MOTTLED.—1, W. Hutton. 2, J. N. Harrison. 3, R. Wilson. *Chc.* R. Pearson. *hc.* W. Lister; R. Addison; P. Heurci, Middlesbrough; T. Tommiswood; P. Rawnsley.

LINNET MOTTLED.—*Brown.*—1, J. N. Harrison. 2, W. & C. Barniston. 3, R. Douthwaite. *Chc.* Z. Howe; W. Carrick (2); W. & C. Barniston; T. Young; J. Stevens. *hc.* E. Franks.

ANY OTHER VARIETY OF BRITISH BIRDS.—1, J. Fairclough. 2, J. T. Harrison. 3, W. & C. Barniston. *Chc.* C. Holdsworth. *hc.* W. Lister; R. Pearson; W. Addison, Darlington. *c.* R. Pearson.

SELLING CLASS.—1, M. Bulmer. 2, Bemrose & Orme. 3, J. Stevens. *Chc.* Bemrose & Orme; W. Addison; G. Cox. *hc.* T. Jobling, Middlesbrough; G. Cox.

JUDGE.—Mr. Thomas Clark, Sunderland.

SPECIAL CLASS FOR BLUE CARRIERS AT THE CAMBRIDGE SHOW.—I have to acknowledge the following subscriptions towards the above class at the forthcoming Show:—Mr. W. G. Hammock, 10s. 6d.; Mr. R. Cave, 10s. 6d.; Mr. R. Fulton, 10s. 6d. I will give 10s. 6d. myself, and shall be glad to receive any further donations towards the same object.—F. W. M'CALFE, *Hon. Sec.*

WHAT IS HONEY?—FEEDING BEES.

MR. FETTINGREW is a great authority in practical bee-management—far more so, and right gladly do we welcome his communications to our Journal. His recent advice on the subject of feeding bees was admirable: and very ingenious are his various methods of utilising empty comb and inducing bees to enter supers, with which he is now favouring us; but—I regret this "but" exceedingly—I cannot endorse his notions on the

subject of honey. I wonder how many of your apiarian readers ever heard before of this singular theory about the "re-swallowing" of the "sweet juice of flowers" by bees preparatory to their disgorging it into the cells after its conversion into honey in their stomachs. Still, its novelty would not prove it to be erroneous if it were only supported by sufficient evidence. But where is the evidence? In the case of butter and cream we should hardly believe that the one could come out of the other, even on "the evidence of our senses," were it not that we see the result of the milkmaid's churning continually reproduced, and there lies the proof. It is not the fact that here is butter and there is cream, as we see plainly enough, which convinces us that butter is the issue of cream. Now, will Mr. Pettigrew tell us that he has witnessed beyond the possibility of mistake the process of re-swallowing and disgorging of which he speaks with so much confidence, at least so as to produce the honey?

I have had as much experience as most people in the taking and tasting of honey at all times of the year from April to November. I have tasted the honey in the open cells which has been fresh-gathered during that interval from the early flowers of our gardens, including our bush fruits, and from all the fruits and flowers of summer and autumn, even to the honey which at times the bees gather in large quantities from the ivy blossoms at this time of year. I know the flavour of each so well that I could pretty nearly tell from what flowers such and such honey was gathered, even with eyes closed, but I have never seen reason to doubt that what the bees collected in any given day, or at any given hour of the day, was honey—neither more nor less—and that honey is the sweet juice of the flowers. At the same time I am well aware that this sweet juice of the flowers—honey as I believe it to be—varies greatly in consistency and quality, not merely as it is gathered from different flowers, but according to the state of the season and of the weather. It is in its prime of quality and flavour in May and June, richer, thicker, with more of saccharine and vinous matter than it possesses either earlier or later in the year. In July and August it differs greatly, and is poorer, with more acidity, and rarely keeps well. But, indeed, some years honey will not keep at all; even that which, according to Mr. Pettigrew's theory, has been re-swallowed and disgorged, is scarcely eatable. The honey of this year, for instance, is in many places of very indifferent quality. As to the test which Mr. Pettigrew proposes, I should certainly like to see it tried; perhaps next year it may be tried by several of our friends. I am confident, however, that it will prove altogether delusive, I mean as to the change into honey.

One word in reply to Mr. Pettigrew's correction of my statement of incredulity as to bees having "a power of sweetening honey from some source of sweetness inherent in themselves." I gathered that he believed in the existence of something of the kind from the language employed in his former paper, as where he writes, "On being swallowed a second time it undergoes a chemical change—a sweetening and thickening process." And now to another matter.

The bottle-feeder I have found inadequate this year to the exigencies of my apiary. It is too slow in its action where such extensive feeding is required as this season is necessary; I have therefore supplemented its action (as in fact I did also last year) by feeding in supers inverted at the tops of the hives, and so arranged that the holes shall coincide. These supers are filled with large pieces of empty comb, so carefully arranged as to allow of the layers of comb being piled one on the top of another by the aid of supports of wood or comb. These are filled with the syrup gently poured in so as equally to occupy the cells. Care must be taken that the combs are flat and on the level, otherwise much of the food will pour off them and be wasted, if it run out through the hole or holes at the bottom. From 3 to 5 lbs. of food can thus be given at one time, which will be taken down in one or two days, according to the warmth of the weather and the strength of the hive.

I have tried another plan with great success for feeding stocks in wood or straw hives, round or square, and of any size as the case may be. The same arrangements of comb are made in an inverted box which has no holes at bottom. A sufficiently large board is placed over it, with a large oblong hole at one side, so placed over the box that the bees can run up and down continuously from their own hive to the food below. The hives are placed at the top of it. Should the feeding box be of the same size as the hive itself the board can be dispensed with, and the bees will carry-up the food all the quicker. If all holes are carefully stopped so as to prevent the egress of the bees, the hives may be brought into the house and placed at night in a warm kitchen. In this way feeding can take place with advantage even in coldish weather. Let all bear in mind that good honey seasons are sure to come; therefore it is worth while to save all hives of moderate strength by careful feeding, which can be done up to December and even later.—B. & W.

LIME-WATER IN STINGS OF BEES OR WASPS.—M. Duvernois states as the result of numerous trials, that the pain and suffer-

ing caused by these may be immediately assuaged by the application of lime-water—a remedy which may always be prepared at once by the aid of a little quicklime and a glass of water.—(*Union Medicale*.)

THE HONEY SEASON.

HAVING read the letter of "A. T. W." in your Journal of the 16th ult. respecting the scarcity of honey this season, and the probable prejudice likely to ensue against the use of supers and improved hives of modern invention, allow me to offer a little encouragement by the following statement.

Last year I began bee-keeping, and used Taylor's cottage hive, with glass super made by Lee, of Wudlesham, Bagshot. I hived my swarm on June 4th, 1872, put on my super the 24th, and took it off October 30th containing 18 lbs. of honey. From the hive I have this year had three swarms, which I placed in the same sort of hives; these, with two other similar stock hives, are filled with honey, and on one I had a super, which I have taken, containing 16 lbs. of honey. In one other super, in which no honey is stored, the wax is neither brittle nor crisp, and will fetch a good price.

I trust this may induce apiarians to patronise this humane system of bee-keeping, and though some failures may arise to the "busy bee," let us with them learn the lesson they never forget—*Nil desperandum*.—M. W., *Rozel Manor, Jersey*.

CLEANING BIRD-FOUNTAINS.—I saw in your paper the other day an article on cleaning bird-fountains with soil. I find that there is nothing better than some shot put in the fountain with hot water and well shaken to take the green off. I use the same shot as is used for cleaning wine-bottles.—Q. H. B.

WARNING.

In our last number we inquired if any of our readers in the eastern counties had been cheated by cloth sold to them by a Scotch peillar. We had heard that he had so cheated some gardeners, pretending that he had garden net to sell, which he had not with him, but luring them to purchase the cloth which was in his pack. Our inquiry has induced the following:—

In answer to your inquiry about a Scotchman "selling cloth that proves useless," I beg to say that I was visiting at a house near Norwich in November last year, when one morn'g my good hostess received "an important announcement!" "extraordinary sacrifice of silks!" &c., "owing to the late war in France." Patterns were enclosed, and the ladies of the party were in raptures at the texture, the gloss, the everything about them, and especially the cheapness. I believe my wife, who is of a deeply sympathetic nature, almost shed tears at the terrible sacrifice of the poor trader. Beautiful silk dresses, "such loves! would almost stand by themselves," of 15 yards for about £1 a-piece. Suffice it to say my wife determined at once on eight of them, and our liberal-minded hostess on six, for various daughters or daughters-in-law. Well, whilst the ladies were congratulating themselves on their good fortune, and I was trembling in my shoes at what I deemed this unlucky *contretemps*, we beheld a big burly-looking man come up to the front door. Presently he was announced as the very individual who was so self-sacrificing. He brought very large bundles with him, and I felt it was all up with me, and that I had better produce my cheque-book like a man. He very politely said that he had not got the silks with him, for there was such an extraordinary demand for them that he had sold all he had in his trap, but that we should have the ordered goods in a day or two. He then produced some patterns of Brussels carpet, and said he was enabled to let us have this at 9d. a-yard. My sympathising wife whispered mournfully to me that our large drawing-room carpet was getting shabby; that the present one could go to the smaller drawing-room, and that to a bedroom, and so on, like those unfortunate people who have large families, and when the elder boys are refitted, their nether garments descend to the smaller fry. Our hostess's old servant here reminded her that their carpet was getting shabby also; and as old servants invariably get their own way, another was ordered. I believe the subject of curtains was mooted, but at this point I was getting faint and clammy, and so I daresay lost much; for it was drawing to the end of the year, and I had not a large balance at my bankers. Whether the poor, unhappy, self-sacrificing trader noticed my sad condition I do not know, but he certainly ran to the rescue, by throwing into my arms most unexpectedly a huge bale of cloth, saying he would let me have it for—I think, but am not sure, though I have his receipt—£2 12s. I was very helpless—I am a small man—and I stood with my arms outstretched, overwhelmed with this great quantity of cloth, vainly protesting that I had so many clothes I did not know what to do with them. Again I was silenced, not only by my wife's "My dear, you know black always comes in useful"—but by the man heaping another bale of equally large size upon my devoted head, saying, "I give you

this in." I do not know whether you are a married man; but of course the bargain was concluded, the man was paid. I remonstrated, and said I would pay him for the goods altogether; but his saying, "We always make up our accounts every day, sir, and you shall be sure to have the things on Friday;" and another look from some one, made me relent and give him the cheque. Suffice it to say, we never saw the silks or the carpet, and the cloth has proved the vilest old shoddy that ever came from Gloucestershire.—Yours faithfully, X. Y. Z.

PREVENTING RUST IN IRON.—The following mixture is stated to be an excellent brown coating for protecting iron and steel from rust. Dissolve two parts crystallised chloride of iron, two parts chloride of antimony, and one part tannin, in four parts water, and apply with a sponge or rag, and let dry. Then another coat of the paint is applied, and again another, if necessary, until the colour becomes as dark as desired. When dry it is washed with water, allowed to dry again, and the surface polished with boiled linseed oil. The chloride of antimony must be as nearly neutral as possible.—(*English Mechanic*.)

OUR LETTER BOX.

OXFORD SHOW (Blackbird).—You will see our report, and we think that readers further comment needless. Your remarks will always be acceptable.

WRIGHT'S ILLUSTRATED POULTRY BOOK (Rev. H. F.).—We are informed that Mr. Wright's Poultry Book will be published in volumes from this month, but that the issue in monthly parts will not be completed till February, and that cases for binding will then be provided, and duly advertised on the wrapper.

BANTAMS AT BRISTOL SHOW.—I should like to ask some one connected with this Show to state whether it is by oversight or design that all Bantams except Game, Black, White, and Sebrights are ignored in the schedule? I have no personal interest in the matter, not being a Bantam breeder; but as such a decision leaves no place for the beautiful Japanese Bantam, the Pekin, Nankin, White-footed, and others, which surely would fairly fill a class. I think it well to make the inquiry while there is still time to remedy the omission if desired.—L. WRIGHT.

PARTRIDGE COCHIN'S PLEUMAGE (T. S.).—We have no hesitation in giving a decision in favour of No. 2. The feather enclosed is exactly the colour the breast should be, whereas that from No. 1 has the tinge so much complained of by judges. No. 1 is pencilled, but No. 2 is not. The latter would be better if it were pencilled.

DUCKS BREEDING (J. C.).—Ducks require water in the breeding season. They do perfectly well without it at any other time. The Aylesburys are the best layers, but they do not sit. The Romans come next, and then the Buenos Ayres; these last lay and sit well; they are also hardy. Your Light Brahmans will not lay before December, and that will depend somewhat on the weather. When you speak of a shade of buff, do you mean a decided buff, or merely a faint cream? If they have any buff feathers, get rid of them. If they have only cream colour, keep them; they will likely moult out of it.

HENS PICKING THEIR MATE (Xantippe).—Are you sure the hens eat the cock because they dislike him? It may be their way of showing love, or it may be that, like the husband of two wives in the fable, the ladies do not agree as to the caudal appendage of their lord and master. Let it be as it may, we know from experience what an abominable propensity it is, and how hard it is to get rid of it. We have never known it to be continued after the fowls were turned out; but as we are by no means sure the cock objects to the operation, we advise you to try one of any breed. As your hens are crossed, you can do so with impunity. We have suffered much from this same complaint. Last summer we had a pen of Spanish, cock and eight hens. After a time they began to eat each other's feathers. At last only the wing and tail feathers were left. No one ever saw such a lot of hideous scarecrows. We sent them to the back slums, where they are barely sheltered from the weather, but have a tolerably good run. We asked after them from time to time, and the answer always was, "They are going on nicely." We saw them yesterday; the hens have moulted beautifully, so has the cock, only he has no sign of a tail; he is to all appearance a Rumpkin. We are seeking a cock of small value to try with these cannibals. We shall then shut this bird up till his tail is fully grown, and try whether they have forgotten the propensity. There is no cure for it that we are aware of. We should advise you to try a Game cock. He will not be particular who he hits, whether male or female, and his ideas of pleasure are likely to differ from those of his more placid and patient predecessor. Take your bird from the hens and let them run alone. Turn him among them every morning for half an hour before they are let out. Watch him and them. It is very likely there is only one offender. If it be so, take her away, and then let him run with the hens.

WHAT PIGEONS TO KEEP (E. B.).—As you want Pigeons for the table and also to please the eye, we say, Do not keep what are called most improperly "Blue Rocks," but are really Dove-house Pigeons, the true Blue Rock being a very scarce bird. Buy at any Pigeon shop a few pairs of variously-coloured Dragons, called vulgarly Dragons. They are cheap, are capital breeders, and all you want, as they are good-looking birds as well. Get some one who understands the matter to fit up your Pigeon house with nest-places. If you send us particulars as to what sort of a house it is, we shall be pleased to give you full information.

PIGEON DROOPING HIS WING (C. M.).—Feel beyond the quill of the wing feathers, and if there is a hot lump your bird has wind disease; if so, pluck the flight feathers out, and when they grow he will most probably be well. If no lump or thick-muzz, he is ill from moulting, and, perhaps, is a very old bird and will die. Move him into a warm place, and give hempseed with his food.

WARTS (A Subscriber, G. L.).—Your stocks weighing 35 lbs. each are not too heavy, though a few pounds less will keep the bees till spring. There is no better bar-frame hive than the Woodbury, but we cannot say that red cedar is the best kind of wood to make them of. Bees have no aversion to zinc feeders.

DEFICIENCY OF HONEY (An Old Bee-keeper, Kent).—It is owing to the past season having been so unfavourable for bees that the cottagers around you have so little honey to take now. You yourself have been comparatively successful in realising six-tenths of your usual quantity.

DEFICIENCY OF BEES (Idem).—"What has become of the working bees which are so greatly reduced in numbers?" We have to say that the bees stopped breeding this year a month sooner than they usually do, and doubtless the storms of wind and rain which they had so often to contend against brought many of them to the ground, where they were chilled to death. The death-rate amongst bees has been uncommonly heavy this year, and the birth-rate has been unusually small. Good coverings against frost and rain will be needed to preserve weak stocks. If your stocks are in a bee-house cover them well round with some soft dry hay or other warm material; if not in a house, cover them well with hay, and over all a good thatch of straw. This is of far more importance than the aspect in which they may stand, for we have found no advantage in one aspect over another.

KILLING AND PRESERVING INSECTS (A Subscriber).—The question is an extensive one. Various details in regard to what will be found in Green's "Insect-hunter's Companion," and Knaggs's "Lepidopterist's Guide;" but the subject to answer fully would require more space than we can afford at present.

SOFTENING SKINS.—"A. K." wishes to be told how to soften the skins of small animals after they have been cured with aim to keep the fur on them. We shall be obliged by a reply from some of our readers.

METEOROLOGICAL OBSERVATIONS, CAMDEN SQUARE, LONDON.

Lat. 51° 32' 40" N.; Long. 0° 8' 0" W.; Altitude 111 feet.

DATE, 1873, Oct. and Nov.	9 A.M.				IN THE DAY.				RAIN.	
	Barom. at Sea level.	Hygrom- eter.		Direc- tion of Wind.	Temp. of Soil at 1 ft.	Shade Tem- perature.		Radiation Temperature.		
		Dry.	Wet.			Max.	Min.	In sun.		On grass
We. 29	30.289	84.7	80.6	N.W.	deg. 42.8	deg. 48.6	deg. 27.1	deg. 76.8	21.6	—
Th. 30	30.004	80.3	80.1	W.	42.4	46.8	26.2	72.1	20.9	0.030
Fri. 31	29.640	43.0	42.6	W.	41.7	52.0	27.4	87.4	22.4	0.118
Sat. 1	29.179	46.6	46.6	W.	44.4	54.4	42.2	99.0	38.7	0.086
Sun. 2	29.396	37.0	43.6	S.	44.3	51.8	38.1	73.8	30.1	0.385
Mo. 3	29.457	37.8	37.8	N.	44.6	53.7	35.4	84.9	29.6	—
Tu. 4	29.577	84.2	84.1	N.E.	43.5	50.2	29.8	61.4	25.3	0.074
Means	29.636	38.9	37.9		43.4	51.1	32.3	78.1	26.9	0.693

REMARKS.

29th.—Very foggy, cleared off for a short time about 11 A.M., but came on again, and continued though the sun was shining brightly.
 30th.—Foggy and frosty in the morning, and more or less so all day, but not dark, as the sun continued shining.
 31st.—Rain in the night; fine morning; rather cloudy afternoon, slight shower about 3 P.M.; sharp shower about 9 P.M., and showery after.
 Nov. 1st.—Rain in the night; fine morning and much warmer; fine evening.
 2nd.—Cloudy morning, slight rain at 10 A.M., then fine till 2 P.M.; showers after; heavy rain from 7 to 7.25 P.M., and again at night.
 3rd.—Foggy morning, clearing off before noon, but foggy and cloudy at times all day.
 4th.—Fog in the morning, but cleared off soon after 11 A.M., continuing fine the remainder of the day.
 Temperature still falling, and would have been much lower but for the warm days at the beginning of the month. White fog very prevalent.—G. J. SYMONS.

COVENT GARDEN MARKET.—NOVEMBER 5.

We are still able to report a steady supply of all the out-door produce of the season; that from under glass consists only of Pines and Grapes, the former of which are unusually good for the season. The latter realise rather low prices from the competition with Dutch Hamburgs and Portugal varieties.

FRUIT.

	a. d.	s. d.		s. d.		s. d.	a. d.		
Apples.....	1	0	1	0	Mulberries.....	7	lb. 0	0	0
Apricots.....	doz.	0	0	0	Nectarines.....	doz.	0	0	0
Cherries.....	7	lb.	0	0	Oranges.....	7	100	0	20
Chestnuts.....	bushel	10	0	2	Peaches.....	doz.	8	0	12
Currants.....	1	sieve	0	0	Pears, kitchen.....	doz.	1	0	0
Black.....	do.	0	0	0	Pears, dessert.....	doz.	2	0	0
Figs.....	doz.	0	0	0	Pine Apples.....	lb.	3	0	0
Fiber.....	lb.	1	0	1	Plums.....	1	sieve	2	0
Cobs.....	lb.	1	6	0	Quinces.....	doz.	1	0	0
Gooseberries.....	quart	0	0	0	Raspberries.....	lb.	0	0	0
Grapes, bothouse.....	lb.	1	0	5	Strawberries.....	7	lb.	0	0
Lemons.....	7	100	8	12	Walnuts.....	bushel	10	0	16
Melons.....	each	1	0	5	ditto.....	7	100	2	0

VEGETABLES.

	a. d.	s. d.		a. d.	s. d.				
Artichokes.....	doz.	3	0	6	Mushrooms.....	pottle	1	0	2
Asparagus.....	7	100	0	0	Mustard & Cress, pinnet	0	2	0	
French.....	doz.	0	0	0	Onions.....	bushel	3	0	0
Beans, Kidney.....	1	sieve	2	0	0	pecking	quart	0	6
Beet, Red.....	doz.	1	0	3	0	Parsley per doz.	bunches	0	0
Broccoli.....	bundle	0	3	1	6	Parsnips.....	doz.	0	9
Cabbage.....	doz.	1	0	1	6	Peas.....	quart	0	0
Cassinoes.....	7	100	1	6	0	Potatoes.....	bushel	3	0
Carrots.....	bunch	0	6	0	0	Kidney.....	doz.	0	0
Caulliflowers.....	doz.	3	0	0	0	Round.....	doz.	0	0
Celery.....	bundle	1	6	2	0	Radishes.....	doz.	1	0
Coleworts.....	doz.	2	6	4	0	Rhubarb.....	bundle	0	0
Cucumbers.....	each	0	8	0	3	Salsify.....	bundle	1	0
pickling.....	doz.	0	0	0	0	Savoys.....	doz.	0	0
Endive.....	doz.	2	0	0	0	Scorzoneria.....	bundle	1	0
Fennel.....	bunch	0	8	0	0	Sea-kale.....	baeket	2	6
Garlic.....	lb.	0	6	0	0	Shallots.....	lb.	0	0
Herbs.....	bunch	0	0	0	0	Spinach.....	bushel	2	0
Horseradish.....	bundle	3	0	4	0	Tomatoes.....	doz.	1	0
Leeks.....	bunch	0	3	0	0	Turneps.....	bunch	0	0
Lettuce.....	doz.	1	0	1	6	Vegetable Marrow.....	doz.	0	0

WEEKLY CALENDAR.

Day of Month	Day of Week	NOVEMBER 13-19, 1873.	Average Temperature near London.			Rain in 43 years		Sun Rises		Sun Sets.		Moon Rises		Moon Sets.		Moon's Age.	Clock after Sun.		Day of Year.	
			Day.	Night.	Mean.	Days.	m.	h.	m.	h.	m.	h.	m.	h.	Days.	m.	h.			
13	Th	Royal Hort. Socy's Chrysanthemum Show	49.9	35.2	42.6	22	17	af	7	13	af	4	14	0	34	2	21	10	32	317
14	F	Entomological Soc's Meet. 7 P.M. closes.	48.5	34.8	41.2	21	19	7	10	4	14	0	34	2	21	15	22	318		
15	S		49.0	34.8	41.9	19	21	7	9	4	59	1	45	2	25	15	12	319		
16	SUN	23 SUNDAY AFTER TRINITY.	48.9	35.2	41.0	14	22	7	7	4	59	2	56	2	24	15	1	320		
17	M	Length of Day 5h. 43m.	48.1	33.9	41.0	19	24	7	6	4	10	4	7	3	27	14	49	321		
18	Tr	J. Camerarius b. rn. 1855.	47.9	32.9	40.1	29	26	7	5	4	23	5	20	3	28	14	56	322		
19	W	Twilight ends 6 P.M.	48.9	33.5	41.2	17	28	7	4		37	6	37	5	29	14	25	323		

From observations taken near London during forty-three years, the average day temperature of the week is 48.7; and its night temperature 33.9°. The greatest heat was 62°, on the 19th, 1819; and the lowest cold 18°, on the 15th, 1818, and 19th, 1818. The greatest fall of rain was 1.24 inch.

LEAF SOIL.

NO subject connected with the cultivation of plants has given me so much trouble as the advisability, or otherwise, of using leaf mould. It was a moot question in my mind for many years, my own experiments being uniformly unfavourable to its employment, whilst the testimony of others varied in the most remarkable manner. I have seen plants growing with great vigour in a compost one-third or one-fourth of which was leaf soil, and I have seen potted in soil exactly similar in appearance plants which looked wretched. Once, many years ago, I was shown a lot of Calceolarias which were potted in a compost chiefly of leaf mould, and which died-off as if they were poisoned.

In this case I had little difficulty in making out the cause. On inquiry, I found the gentleman had discovered in a thick wood a rich bed of leaf soil, which he had brought home and used at once for potting. Of course, in this case, a sour mass of vegetable matter was sure to prove unfit for the growth of tender plants. But my own leaf mould, made from leaves previously used for hotbeds, was repeatedly turned over till it had the appearance of rich black soil, and yet I never found any class of plants grow any better when it was mixed in the soil in which they were potted. So satisfied was I that leaf soil was of no use in the garden, that I have carted loads of it into the farmyard for the cattle to trample it into the manure, hoping it might at least benefit the Turnips.

There are few good gardeners with whom I have come in contact who have not been invited to give their opinions on this subject, and the majority of them have expressed their opinion as being, like myself, unfavourable to its employment. The few who spoke highly of it gave me no clue to the solution of the difficulty.

Here again I got on a wrong scent; the idea struck me, it must be the different leaves which had been employed; mine were chiefly Oak leaves, perhaps the quantity of tannin contained in them was the reason they did no good—indeed, appeared to do harm. But, again, of the few who spoke highly of leaf soil, some said perhaps the reason theirs proved so useful was that it was made of good Oak leaves. Again I was at fault: I gave my experience in the Journal (this was some years since), and I think my opinion was shared by most of those who took up the subject, but not a ray of light was shed on the question.

For years I eschewed leaf mould, till on examination of the soil in which Camellias were, and are, grown in Belgium, generally supposed to be peat soil, I found it was nothing but leaf mould and sand, without a particle of peat or any other soil in it. Here was the whole question re-opened. It is now proved that leaf soil is good or bad according as it has been prepared—that is to say, whether it has been fermented, or whether it has been the product of slow decay, "cremationis."

Those who know anything of chemistry are aware that

the products formed during fermentation, where a large mass of vegetable matter undergoes change with little access of oxygen, differ greatly from those formed during the gradual and slow decay that takes place when small quantities of similar matters are fully exposed to air and moisture. But the effect of different modes of decay in producing a more or less valuable manure from animal and vegetable matter is, I think, very little understood.

Many farmers know, or believe, that when a heap of manure has heated itself dry, and has become what is in this neighbourhood called "fire-fanged" (an old Saxon expression, intended to convey the idea of something being caught or taken by fire), it is much injured. Then, again, gardeners think manure that has been employed in growing Mushrooms of very little value. This may easily be accounted for by the loss of nitrogen where the crop produced has been considerable, but where the crop has been trifling we must seek some other explanation. I feel sure the whole subject merits further investigation, and would recommend it to the notice of the Scientific Committee of the Royal Horticultural Society.

Why should a mass of mould produced by the gradual accumulation of leaves in a wood be sour and unfit for the growth of plants? In other words, What is sour soil? It cannot be for want of oxidation in this case, unless sunlight is necessary to the process. It is quite certain that sun, air, and gradual decay are necessary for the production of good leaf mould.

In Belgium the preparation of leaf soil is a speciality undertaken by persons who sell it by the bushel to nurserymen. The leaves are laid in long heaps only a few inches thick, so that they may not heat, are turned over regularly till much reduced, and then put into large ridges which throw off the wet. This soil mixed with sand is employed for every kind of plant the Belgians cultivate in their glass houses, and costs more than their fuel every year. The soil near Ghent is a deep fine sand, and its horticulturists have not the choice of soils we have, but this mixture answers every purpose. The trees I saw growing in Belgium were mostly Poplars, Elms, and Alders. It is an interesting question—if made from those trees is better, or worse, than that made from the leaves of the Oak.—J. R. PEARSON, *Chilwell*.

PRIMROSES, COWSLIPS, POLYANTHUSES, AND OXLIPS.

Under these names I include all the garden varieties of three species of *Primula* indigenous to Great Britain, and which are distinguished by botanists as *P. acutis*, *P. veris*, and *P. elatior*.

Among the old-fashioned border flowers again becoming popular there are none that receive greater attention than Primroses and Polyanthuses. Long ago they were among the delights of almost every garden, and the memories of them still linger in the cottage flower borders, where simple beauty has always an abiding place; but in the parterres of the mansion they are only now beginning to re-occupy their ancient place. It is chiefly owing to the

introduction of spring gardening that the taste for cultivating these flowers has been resuscitated, and the important addition they make to the decoration of our gardens at that early season is likely to cause them to be again one of the most popular of the hardy decorative plants. We know of no flowers which keep up for so long a period such a mass and variety of striking colours. They may furnish either beds of distinct colours, or be used in an almost endless variety to produce whatever effects may be desired; while their hardiness and facility of propagation give no anxiety as to their cultivation, as is the case with most plants which are used for bedding purposes.

It is well known that there are varieties of the Polyanthus which are grown by florists as prize flowers, but of these we do not intend to treat, our observations will be confined alone to the hardy border varieties.

In the wild state there is a considerable difference between a Primrose, a Cowslip, and an Oxlip, and botanists have recognised this by calling them severally *Primula acaulis*, *Primula veris*, and *Primula elatior*.

The Primrose is at once distinguished by the flower-stalks being one-flowered, and issuing direct from the root-stock in the bosom of the leaves. The corolla is large and flat, the tube of the calyx cylindrical, and the blade of the leaf tapering into the winged footstalks.

The Cowslip bears its flowers in an umbel which is on the top of a tall scape, and they are small, concave, and sweet-scented, with an inflated calyx. The blade of the leaf terminates abruptly, and the leaf-stalks are not winged.

The Oxlip is perfectly distinct from either a Primrose or a Cowslip, and may be said to be intermediate between the two. It has a tall hairy stem like the Cowslip, bearing a many-flowered umbel of drooping flowers, which become erect when in bloom. The corolla is large and flatter than in the Cowslip, the lobes are deeply notched, and there are five deep yellow spots round the throat. The calyx is cylindrical, with sharp acuminate segments. The blades of the leaves are like those of the Cowslip, with the winged petiole of the Primrose.

These three forms are the parents of the garden flowers known as Primroses, Polyanthus, and Oxlips, which may be taken as the primary divisions; but these are again divided into the various forms known as Hose-in-Hose, Pantaloons, and Galligaskins.

L.—THE PRIMROSE.

In a state of nature the Primrose is not subject to any great variation. It is only in the size and form of its flowers that this is most observable. In the Weald of Sussex, where it grows in great profusion and luxuriance, I have had every

opportunity of observing the variations to which it is liable and I have remarked that there are the earlier and the later varieties, causing two blooming periods. The first, which commences in the beginning of March, and is sparing in comparison with the second, producing flowers which are generally small, have nothing remarkable in their appearance; but in the second season, which begins about three weeks or a month later, we have the full flush of the Primrose bloom, and then we find flowers of all sizes and forms, some perfectly round and of the diameter of a half-crown piece, others with six



Hose-in-Hose.

instead of five lobes in the corolla, some with fringed corollas, and I have seen them with the limb of the corolla nearly abortive. But the variation in colour is very rare. I have found in my fields a pure white with a large round flower, a deep red, a brick-colour flower, and a puce, but these occur very seldom; and I have never seen a wild one which throws its flowers on a scape like the Cowslip, although it is mentioned by authors, and I every year raise them from seed among my Polyanthus. The two periods of blooming are observable in the cultivated varieties as well as in the wild ones. Almost as soon as winter has disappeared, and even before if it should be a mild one, some of the early varieties already make the flower borders gay. The Single Paper White and the Single Lilac bloom very early, and are quite past when the great mass of other sorts are coming in. The Double Sulphur is also a very early and free bloomer, and there are two varieties of Double White, one of which blooms earlier than the other.

We do not obtain from the Primrose in a state of cultivation so great a variety of colour as we do of the Polyanthus. Primroses are always, or nearly always, self-coloured with the exception of the eye, which is always present.

The true Primrose varies in colour of all shades from white to dark maroon. But although the colours are less varied than in the Polyanthus, the varieties of double Primrose are much more numerous. I have in my collection Double White, two varieties; Double Yellow, Double Sulphur, Double Lilac, Double Crimson, Double Red, Double Purple, and Double Purple with silver fringe. The varieties in form of the Primrose are so far as I know Pantaloons and Galligaskins, but I have never seen a true Hose-in-Hose Primrose.

THE OXLIP.

Although this is not a common plant I have found several in hedgerows on my property, varying in colour from sulphur to a more decided yellow, and like the Primroses and Cowslips, some with thrum and some with pin eyes. I have cultivated it for several years, and never succeeded in obtaining any great variation. The only distinct varieties I possess are of the

Hose-in-Hose form, a dark crimson, and two fine yellows, one being the "Proliferous Oxlip" of old authors with a thrum eye, and the other pin-eyed. My opinion is, that the Oxlip is a true hybrid between the Primrose and the Cowslip. Wherever I have found it wild has been where Cowslips abound, and it also blooms at the same time as they do. The idea that it is a true hybrid is also supported by the fact that it seeds very indifferently, being all but sterile, and when I have found seeds they have been almost entirely barren.

THE POLYANTHUS.

When the Primrose and Cowslip are brought into cultivation and successive generations of them are raised from seed and grown in near proximity, they develop into a form we call Polyanthus, which partakes so much of the characteristics of both the Primrose and Cowslip, that it is difficult if not impossible to say whether it has come from the one or from the other. I have found in a seed bed of Polyanthus every gradation of form and colour, from the common yellow Primrose and common Cowslip to the most highly-developed Polyanthus—so much so, that it is impossible to say where the former terminates and the other begins.

I am inclined to think that the Polyanthus comes originally from the Cowslip, for if seed be sown a very large proportion of the plants when they bloom prove to be the common Cowslip in various stages of development towards the Polyanthus, and very rarely is it that a true Primrose occurs. Among the many thousands I have raised there has never been an Oxlip among them. Those which have large flat corollas and a cylindrical calyx-tube partake most of the character of the Primrose, and may have been produced by it having impregnated the Cowslip. On the other hand, there are those plants which are Primroses in the early part of the season throwing up their one-flowered stalks, and then later on pushing up a stout scape bearing a bunch of one-flowered peduncles, and becoming a Polyanthus. This may be due to the Primrose being fertilised by the Cowslip.

Although Polyanthus seeds produce so large a proportion of Cowslips and so few Primroses, the Polyanthus has more of the character of the Primrose than of the Cowslip. The large decurrent leaf-blade, the cylindrical calyx-tube with deep acuminate teeth as long as the tube of the corolla, and the large flat limb of the corolla, are all evidence of this. It is singular that a Polyanthus is never seen with an inflated calyx like the Cowslip.

The varieties of the Polyanthus are endless as regards colour, but in form we have not so great variation as in the Primrose. As yet we have but two that are double—the old Double Purple, and the Belgian variety called Arthur De Smet, purple, with a yellow fringe. I have some very large yellows and also a magenta-coloured one which show a tendency to become semi-double, but as yet I have not seen any that are perfectly so except the two mentioned above. There are several take the Galligaskin and Pantaloon forms, but I do not know of any that are Hose-in-Hose.

HOSE-IN-HOSE.

The Hose-in-Hose are all Cowslips or Oxlips, the calyx of which has become an exact-coloured *fac-simile* of the corolla, and has the appearance of one flower being inserted in the tube of another. Hence they are called Hose-in-Hose, a very old name, having been used so long ago as by Parkinson, who lived in Shakespere's time.

My original plants of Hose-in-Hose I got from Mr. Webb, of Calcut, near Reading, a gentleman well known as a great cultivator of the Polyanthus, the Primrose, and the Cowslip, and who very kindly presented me with all the varieties of Hose-in-Hose in his collection. These were yellow of various shades, brownish red, and dark red. Since then I have by careful crossing succeeded in raising a great variety with much larger flowers, and embracing a great range of colour from pale lemon to deep yellow, and from pale brick to the richest maroon. Last year I raised a very fine variety of Hose-in-Hose, produced by a cross from one of the large-flowered Polyanthus, as the corolla is of unusually large size, and the calyx equally so.

There is a very fine variety of this form which comes from the Oxlip. It has a large sulphur-coloured corolla, and blooms in great profusion, forming a charming spring bed. Of this I have the thrum and pin-eyed forms. These are all I have ever seen in this country; but last spring when I was in

Brussels, I found in the flower market there a fine rosy lilac, which makes a pleasing variety.—PHILANTHOS.

(To be continued.)

ERRORS IN EXHIBITING FLOWERS.

I ALWAYS notice that more persons are interested in the matter of Roses than any other subject touched upon in your pages, and, with many others, I was much pleased with the communications of Mr. W. Farren and "D. D.," of Makerston.

It is high time, especially in country exhibitions, that a stop be put to some of the practices Mr. Farren alludes to, particularly, I may say, those of putting duplicates into a stand and adding leaves. It is not merely in Roses that duplicates come to the fore; but in stands of Verbenas, Dahlias, Hollyhocks, and other florists' flowers, where dissimilar blooms are to be shown, it is the most common thing possible for duplicates to be put in with the hopes of their escaping the judge's eye; and, what, perhaps, is worse, the practice has become in some places so common that judges do not disqualify because they cannot find any stands that are free from the dishonesty. What I complain of most is, that by this practice honest exhibitors are often excluded from their proper place in the prize list. For instance, one exhibitor has ten varieties of Verbenas, and makes up his stand of twelve by adding two duplicates of his best sorts; another exhibitor shows twelve, but has to put in two inferior varieties to make up the number. Other exhibitors, again, do not show in the higher numbers because they find they are short of one or more varieties to make-up their stand, while the dishonest exhibitor steps in without any qualms of conscience, and carries off the prize by means of duplicates, which the other would not contend for. As regards the addition of leaves, I think it ought to be more definitely stated in the schedules, and the committee should ask the judges to be particular in seeing the rules carried out. In many cases the schedule says, "Buds and leaves allowed," and country exhibitors think this means that additional leaves may be tied on. At one show, I remember, this year where I was judging, my co-adjudicator and I started with the full intention of disqualifying every stand where leaves were added, and it ended by our disqualifying none, because we could not find a single stand in which it was not more or less done.

With regard, however, to duplicates, borrowing blooms, and other dishonest practices, the authorities at flower shows cannot be too particular in doing all they can to put a stop to them. Shows are too often looked upon as the means of putting money into the pockets of exhibitors rather than for what they ought to be intended, the encouragement of horticulture and the spread of horticultural knowledge; and with the idea of what is called obviating unpleasantness, dishonest practices are winked at. I have known gardeners exchange plants, one gardener lending one or more ornamental-foliaged plants in exchange for blooming plants, and *vice versa*, in order to help each other to win the premier prizes, and divide the spoils afterwards. I have also known nurserymen buy plants at one show and take them to another show the next day or next week, and exhibit them as their own growing. However, the subject of dishonesty at shows opens out too wide a field for discussion, but it is one which requires to be taken in hand by all horticultural societies.

I am very glad that "D. D." has called attention to striking Briar stocks from cuttings; this does away with one of the greatest evils of which I complained in my notes on the Manetti. I am also glad to hear from Mr. Farren that the Manetti has succeeded in the stronger soils of his garden as well as the lighter, and I fully agree with him that much injury is often done from overfeeding the Manetti stock in its infancy. It is not a wise plan to apply all the manure to a bed when first planting, but good food should be added as the plants acquire strength.—C. P. PEACOCK.

HYBRID AGAVE.

AMONGST the numerous results of hybridisation which from time to time crop up, few are more singular and interesting than one which recently came under my notice, obtained by Mr. Taylor, of Highgate, so long and so well known in connection with the famous collection of Cycads at Landerdale House, the property of J. Yates, Esq. It appears that some time previous to the death of Mr. Yates a very fine plant of *Agave geminiflora* produced a flower-spike. The flowers of

this plant were impregnated with pollen from *Agave densiflora*, then blooming in a neighbouring collection. The result from this cross is a plant with somewhat narrow leaves, entirely destitute of spines saving at the apex, but profusely ornamented with long, broad, silvery-white filaments, and the edges have a continuous white marginal border; indeed, saving in the somewhat narrower leaves, these hybrids resemble the plant known in our collections as *Agave Schidigera*, and it therefore becomes a question whether the last-named kind has been obtained by this same cross at a former period, instead of being introduced from Mexico, as is generally supposed. The plants, I understand, will be exhibited at the next meeting of the Royal Horticultural Society, when those interested in this tribe of plants will be able to inspect them.—**EXPERITO CREDE.**

EXHIBITING ROSES NOT GROWN BY THE EXHIBITOR—BRIAR STOCKS.

Your impression of October 30th was of a character to gladden the heart of every rosarian. Not only "More about Roses," but "Much More about Roses," and by very able pens; and, in this month of all others, especially welcome. Even Sombrenil, that most persistent of all autumnals, has at last given over blooming; and Roses must be talked about, for they can no longer be gathered. There is a negative character in general about November. Some of your readers will remember Hood's famous lines. For those who do not I will venture to quote them. It is the experience of a Londoner, but almost of others.

"No sun, no moon,
No moon, no moon,
No dawn, no dark, no proper time of day;
No sky, no earthly view,
No distance looking blue;
No road, no street, no other side the way,
No shade, no shine, no butterflies, no bees,
No fruits, no flowers, no leaves, no buds on trees.
November."

Like Mr. Farren, I am tempted to ask you to let me say my say; and first about exhibitions. I imagine all your readers will endorse what he says most emphatically. It is inconceivable to me how anyone with any self-respect can condescend to contend, much more to take a prize, with a flower in his box that does not fairly belong to him; but I incline to hope that the practices Mr. Farren alludes to are comparatively rare. I have been on the committee of two Rose associations for the last seven years, and I do not recall any flagrant case of the kind; and certainly we should have made "things" very "unpleasant" if we had met with such. We have had to make our rules more stringent to meet exceptional cases, but the new rules have always been readily accepted. I have been told that it is considered quite fair to get flowers anywhere for a table-decoration, though even to this allowance I have always demurred.

I most heartily hope the Crystal Palace authorities read "our Journal." I also, like Mr. Farren, fasted from 7 to 1 P.M. on the morning of the last Rose Show. In answer to some anxious inquiries I was told I could have spirits, but nothing else; and breakfast deferred added to hope deferred on such occasions is really trying.

May I venture to remark further that "P. D.," of Kelso, makes a most valuable suggestion? There are good, bad, and indifferent among Briar stems, and the latter two predominate. It is quite time that our nurserymen turned their attention to finding out the best kind of Briar and also to propagating it. Seedling Briars are not very easy to obtain. I sowed a large number of Briar seeds last year with the poorest possible results. Seedling Briars may be the coming stock, but I think it will be very long before they out-throw those of the hedges. A well-rooted two or three-year-old Briar will give a branch to bud on that cannot easily be equalled. As to Briar *versus* Manetti, Sir Roger de Coverley would have remarked with his wonted wisdom, "There is much to be said on both sides." A batch of Roses on Briars is more likely to have some bad plants among it than an equal number had in from a nurseryman on the Manetti. But until the general public begin to plant the Manetti properly, and until people get the idea that all that comes up is not to be kept, Manetti will betray, and purchasers will wonder. I hardly ever inspect an inexperienced person's garden without having to point out a huge plant towering in triumph, with the poor budded Rose all but suffocated. Sometimes in spring such plants will have been pruned, moreover,

and are looked after most carefully. It is, perhaps, best for each person to state his own experience. Mine is that there is nothing like the Briar even on light soil such as my own, when it likes the situation, but that Manetti stocks are safer in the winter and give less trouble. I also incline to agree that when once started they will stand very heavy manuring.

I should like also to say that I think all Rose-growers must feel gratitude to Mr. Hinton for the great trouble he has again taken in the Rose election. Many of us want some educating into what are each year's Roses.—**ALAN CHEALES, Surrey.**

PHYLLOXERA VASTATRIX.

THE number of THE JOURNAL OF HORTICULTURE of December 19th, 1872, contains a most interesting and valuable article, giving all the details at present known of the new Vine pest, *Phylloxera vastatrix*. As one of the members of the Bath Microscopical Society, who were anxious to render their *société* worthy of the visit of the members of the Royal Horticultural Society at their recent visit to this city, I wrote to a friend in Bordeaux, asking him to procure me specimens to exhibit that evening, as we had not been able to procure any specimens among our friends or in the ordinary course of trade. My friend, writing on June 4th, states, "The *Phylloxera vastatrix* which has destroyed so many Vines in the Rhone wine country, and more especially in the vineyards about Nîmes, Montpellier, &c., is, happily for us, completely unknown in the Médoc districts. On the vineyards opposite Bordeaux, on the other side of this river, in what is called the Côtes and Palus wine district, this insect has made its appearance, and has done even a good deal of harm. Of late, however, it seems to be less frequent. These effects, unlike what has happened in the south-east of France, have not been general, attacking only a few estates and vanishing without injuring the very neighbours of its victims. My cousin will only be able to find them in a month, when the effects of the *Phylloxera* will be apparent on the attacked Vine."

My friend M. de Luze sent me a map showing which parts of the Bordeaux wine district had been specially injured by the *Phylloxera*. In a letter dated August 4th he stated that the *Phylloxera* had been found in some parts of the St. Emilion country, where it had never been seen before.

M. de Luze kindly sent me a bottle containing the roots of some affected Vines; part of these I forwarded to Professor Westwood, but, unfortunately, the box sent to him was smashed in transit. The other part was safely delivered to the Rev. M. J. Berkeley, of Sibbertoft. His letter is so full of interest, and so condenses all that is known at present of the mode of increase of this pest, that it is worth copying. "Sept. 28, 1873. With some difficulty I at last found the female *Phylloxera* on the roots which you sent, differing in no respect from what I have seen in specimens from British Vines. So far as the females are concerned the history is well known. The female attaches itself to the under side of the leaves, in which it produces a protruding sac, within which it emits a multitude of eggs. These hatch and produce lively mite-like young, which run about in every direction. Other females attach themselves to the roots, in which they cause a slight depression; but whether the active young are first produced on the roots and then go upwards to the leaves, or whether from the leaves to the roots, has not, I believe, been ascertained. The curious point is that the male has never been observed in this country. The *Phylloxera* has been destructive in many of our gardens. Mr. Malcolm Dunn, when at Powerscourt, sent a paper on the best mode of destroying the plague to the London Horticultural Society, which is published in the Journal. I am not aware that any certain remedy has been discovered."

To this lucid description I can add nothing. The small portion of the affected roots I kept for myself gave me some specimens, which, unfortunately, I did not at once preserve, for on going to my bottle for specimens to exhibit to our Microscopical Society I could find none, part having become mildewed, which would be fatal to these insects. I may, however, say that the drawing given in the Journal of December 19th, 1872, is very correct. My impression was when examining the roots whereon I found the insect, that having made an entrance or found a gap in the bark, that they to some extent burrowed their way, and so separated the outer thin bark from the woody central portion of the root, thus destroying its power of properly transmitting the juices from the terminal fibres. I may mention that in plate 24 of Smee's "My Garden" is a very clear drawing of the terminal fibres

pierced by the insects, with the protuberances formed in consequence of these punctures. Mr. Smee tells me these drawings were copied from a pamphlet published at Montpellier. In page 124 he states that the disease was first noticed in America, then in Ireland.

What a marvellous source of thought is opened up by the statement made—that hitherto no males have been found! If the insect has already been very destructive in our gardens many new observers will be on the look-out for the males, as well as for the winged state, which hitherto has been unseen in England, though so frequent in America.—JOHN G. BARRETT, Bath.

Since the first appearance of Phylloxera in France, it is estimated that of 2,500,000 hectares devoted to the cultivation of the Vine, more than a million have been doomed to sterility or been threatened by it. The subject continues largely to engage the attention of the French academicians and others. Sulphide of carbon applied about the roots has been successful against the insect; but it is now stated by M. Lecoy de Boisbaudran that it acts injuriously to the plant, the leaves quite withering, though continuing to adhere to the branches, which are still green within. He thinks, besides, it is a too expensive remedy. It is affirmed in *La Nature* that only one plan has hitherto succeeded—viz., that of sprinkling wine containing a little sulphide of potassium. Ammonia is at once a poison for the insect and a manure for the plant. Captain Bertrand distinguishes three distinct periods in the disease, corresponding to so many years; it is in the second that the insect should be attacked. M. Max Cornu has been studying the production of galls on the tendrils and petioles of Vines attacked by Phylloxera. M. Balbiana has presented an important memoir on the mode of reproduction of the Phylloxera of the Oak. He finds that the pairing of the sexes of the Phylloxera in autumn, apterous or winged, gives birth to females which afterwards multiply *ad infinitum* by parthenogenesis. M. Panchen, who has returned from studying the Phylloxera in America, makes three observations:—1, The American Phylloxera and that destroying the French Vines are absolutely the same. 2, Certain varieties of American Vines resist the attacks of Phylloxera. 3, There is an *Aecurus* which pursues the Phylloxera down into the ground, attacks it, and feeds on it. He thinks it might be useful to acclimatise this *Aecurus*.—*English Mechanic*.)

ANOTHER POTATO DISEASE.

In the article headed "Another Potato Disease," in No. 629, page 313, Mr. Vilmorin says for some years past in France several kinds of Potatoes have been known to produce a certain percentage of tubers, which are unfit for seeding purposes on account of their shoots being slender, almost thread-like, instead of being strong and thick as usual. The same disease was known in New Zealand, in the North Island, before 1855, in which year I planted some Potatoes at Wellington. I was at that time just beginning my experience of gardening in New Zealand, and the Potatoes which I planted were sound and good to look at, but when they came up they had a stunted weak look, and on the crop being taken up the tubers were small and undesirable. I found out afterwards that the tubers which I planted were some which had been thrown aside as unfit for the purpose, although I paid for them £1 per cwt. They were an early sort, and were very scarce at that time. The early sorts of Potatoes were subject to this disease, and at planting time those with thread-like shoots could be sorted from those which had strong shoots, and only those tubers with strong shoots were planted.

It will be well that I should state when Potatoes are planted here; the early kinds are planted in August, the late in December. The late sorts had none of the so-called blind seed or thread like shoots amongst them; this induced me to try to find some plan, if possible, of getting good tubers of the early sort suitable for planting. I before remarked that the late sorts had none of the so-called blind seed amongst them, and this fact induced me to reserve some tubers of the early kinds for planting later than usual. These were planted about the first week in November, and produced a good crop. There were only a few tubers with thread-like shoots. From that time I have made it a practice to plant some of the early sorts for seed purposes later than those which are grown for food. I am not aware if this disease still continues in the North Island, as I have for some years past resided in the Middle

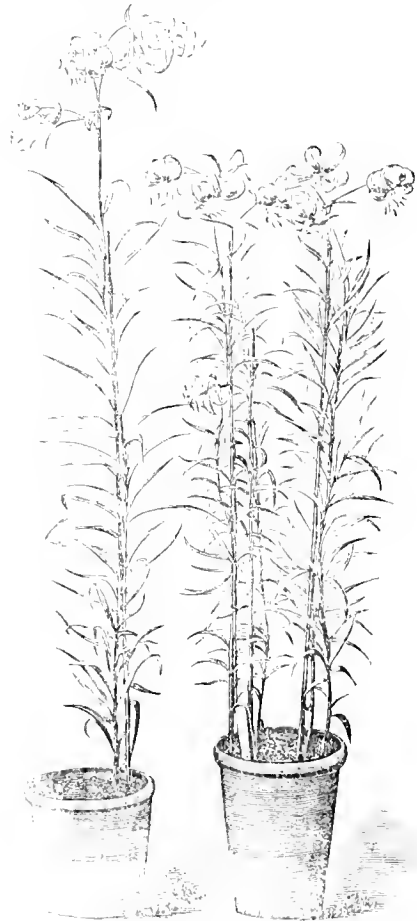
Island. During my practice here I have seen only a few tubers with thread-like shoots.

Mr. Vilmorin has asked for information to help to find means to prevent this disease—that is, tubers having thread-like shoots. This is caused by the plants having received some check during their growth, perhaps from the hot days and cold nights of our early summer months. To prevent this disease it will be seen from what I have described, that the way is to plant the early varieties for seed purposes later than has been the practice.—JOHN PITTON, *Gardener, St. Alban's, near Christchurch, Canterbury, New Zealand.*

NOTES ON LILIES.—No. 6.

LILIUM LEICHTLINII MAJUS.

This is a most beautiful Lily; its large, yellow, richly-spotted flowers and graceful habit have little to be desired. Our first bulb was bought as *Lilium callosum*, and the disappoint-



Lilium Leichtlinii majus.

ment felt when the growth showed this to be a misnomer, vanished when the bloom came, and it proved to be *L. Leichtlinii majus* magnified in all its parts, growth, flowers, spots, and leaves. The plant photographed was 5 feet high from the soil of the pot, had four blooms to the stem, and had leaves 7 inches long. When the importer of the first bulbs visited us, he believed the bulbs sent him as *callosum* were only *Leichtlinii*; but on seeing the two *Leichtlinii* in their pots side by side in the north conservatory, he at once recanted this heresy. We have not yet grown *L. Leichtlinii majus* in the open border, but as *L. Leichtlinii* succeeds perfectly, there is little doubt that *L. Leichtlinii majus* will before long be a great addition to the out-door Lily beds. We showed it before the Floral Committee in July, 1872, when it received a first-class certificate.—GEORGE F. WILSON.

THE ROSE ELECTION.—I see I have made an error in stating that had the Rev. A. Cheales's revised list been accepted it

would have made Etienne Levet equal to Comtesse d'Oxford. This is correct as regards the number of votes, but it would really have placed Etienne Levet at the head of the poll, as that Rose would have received the greatest number of first-class votes.—JOSEPH HINTON, *Warminster*.

ROYAL HORTICULTURAL SOCIETY'S SHOW AND COMMITTEE MEETINGS.

NOVEMBER 12TH AND 13TH.

At this season it was hardly to be expected that there could be an extensive exhibition at South Kensington, but on entering the conservatory, where the flowering plants are grouped, we were agreeably disabused of this impression, and on passing into the adjoining corridor we were surprised at the array of fruits and vegetables that met the eye. We have seen better individual specimens of Chrysanthemums, and much larger cut blooms; but, as a whole, the Show is large, and it is also good, the greatest fault being that many of the specimen plants are not sufficiently forward, a fault that must be laid to the season; and as the Show was originally fixed a week earlier, the Society may be congratulated on having postponed this date.

In Class 1 prizes were offered by the Duke of Buccleuch for collections of Chrysanthemums. Mr. Rowe, gardener to Viscountess Clifden, Dover House, Roehampton, was awarded the first prize for a magnificent group, chiefly of large-flowering kinds, with some Japanese giving a pleasing variety, together with Pompons. The blooms, too, are of the largest size. Second comes Mr. Forsyth, Brunswick Nursery, Stoke Newington, with a group in which are many excellent specimens, some of which, however, have not yet reached their best. Messrs. Dixon & Co., Amhurst Nurseries, Amhurst Road, Hackney, are third with a very good group, in which is a fine specimen of Mrs. G. Randle. Messrs. Jackson, of Kingston, Mr. Herrington, gardener to J. Price, Esq., Thornton Road, Clapham Park, and Messrs. Cutbush, of Higgate, also exhibited in this class, the latter having a very even lot of well-bloomed plants.

In the next Class, 2, Messrs. Dixon are first with a very good group, in which Dr. Sharpe, Mrs. Rundle, Alma, and Guernsey Nugget are conspicuous. The second prize went to Mr. A. Forsyth; the third to Messrs. Cutbush for Prince of Wales, Gloria Mundi, Lord Derby, Empress of India, and Alfred Salter, fine, with good specimens of other varieties.

Class 3 is for six large-flowered. Here Mr. A. J. Coote, gardener to W. R. Morris, Esq., Deptford, is first with large plants in free bloom. Second comes Mr. Whittaker, gardener to S. Williams, Esq., Putney, and Mr. Rowe is third.

In Class 4, for twelve Pompons, Messrs. Cutbush are first with a fine group, in which Lilac, Brown, Golden, and White Cedo Nulli are remarkably fine. Messrs. Dixon are second; and Mr. Forsyth also exhibited a group.

For six Pompons Mr. Butcher, gardener to R. A. Glover, Esq., Hadley, Barnet, is first. Rose Trevenna, Cedo Nulli, and its lilac sport are fine.

The best single specimen large-flowered Chrysanthemum in the nurserymen's class is Prince of Wales, about 4 feet in diameter, and with a profusion of bloom, from Messrs. Dixon; Mr. Forsyth being second with Mrs. G. Rundle. In the corresponding class for amateurs Mr. A. J. Coote is first with the last-named variety, and Mr. Whittaker second with Prince of Wales. An immense plant of James Salter is shown by Mr. J. Croucher, gardener to J. Peacock, Esq., Hammersmith; this took the third prize.

The best specimen Pompon Chrysanthemum comes from Mr. A. Forsyth, and is a beautifully-grown plant of Cedo Nulli, 3 feet in diameter. Second come Messrs. Dixon with the same variety, and third Messrs. Cutbush with a very good plant of the brilliant-coloured Bob. In the amateurs' class Mr. Whittaker is first with Cedo Nulli, and Mr. Butcher second with Madame Martha.

In the nurserymen's class for twenty-four cut blooms Messrs. Veitch, of Chelsea, are first with splendid examples of Princess of Wales, Guernsey Nugget, Empress of India, Prince of Wales, Jardin des Plantes, John Salter, and other kinds. The same firm also exhibit a stand of Japanese kinds, in which Erecta superba, Elaine, Red Dragon, Chang, and The Sultan are conspicuously ornamental in a fine stand. Messrs. Jackson & Son are second. In the amateurs' class for twelve Mr. J. Hinnell, gardener to F. A. Davis, Esq., Surbiton, is first, and Mr. Clark, gardener to J. M. Robertson, Esq., Roehampton, second with good even stands.

For six Bouvardias, Messrs. J. Standish & Co. take the first prize with B. jasminiflora, Vreelandii, and a recent variety with reddish-tinged flowers named Bridal Wreath.

For nine decorative plants bearing berries there are three competitors. The best come from Mr. E. Smith, gardener to T. D. Galpin, Esq., British House, Putney Heath, and comprise *Crotagnus pyracantha*, *Solanums*, *Pernettya mucronata*, and *P. microphylla*. Mr. J. George, Putney Heath, is second, and has

a nice *Skimmia japonica*, *Solanums*, *Pernettyas*, &c. Mr. J. Aldous, of South Kensington, is third.

For collections of Potatoes the first prize was awarded to Mr. James Betteridge, nurseryman, Chipping Norton, Oxon. He has 125 varieties of rounds and kidneys. The examples are very clean and well-developed. Amongst the most useful sorts are the old Cobbler's Lapstone; Birmingham Prizetaker, a fine, large, well-shaped kidney; Oxfordshire Kidney, Pebble White, Welsh Kidney, Early Emperor, red, round, fine shape. Excellent examples of Bresee's Climax, and Bell & Thorpe's Model; there is a fine dish of this, showing what an exhibition Potato ought to be. Mr. P. McKinlay, Beckenham, is second with a good, neatly-arranged collection. Mr. Richard Dean, seedsman, Ealing, showed a small collection, but it contained some splendid specimens of both round and kidney kinds, many of them the seedlings of Mr. Robert Fenn. Some of the unnamed seedlings are very fine. The third prize was awarded to him. Messrs. Carter & Co., of High Holborn, exhibit a select collection not for competition, and a large collection comes from the Society's Gardens at Chiswick.

For the prizes offered by the Messrs. Carter for the best ten sorts, to include five round and five kidney varieties, Mr. P. McKinlay is first, and Mr. F. Miller, gardener to J. Friend, Esq., Northdown, Margate, second.

For a collection of Celery, Mr. C. Lidgard, Albion Road, Hammersmith, takes the first prize with some splendid specimens. Wright's New Giant White is enormous. Williams's Matchless White and Manchester Solid Red are good varieties for exhibition.

Messrs. Carter also offered a series of prizes for collections of vegetables, which brought out a fine collection from Mr. W. G. Pragnell, gardener to G. D. W. Digby, Esq., Sherborne Castle, Dorset. James's Keeping Onion and White Spanish are fine indeed. In all there are about fifty dishes in the collection. Mr. C. Osman, gardener, South Metropolitan District Schools, is second.

Among miscellaneous exhibitions we must especially note a group of Dracenas, a beautifully-arranged set of Palms, *Dracenas*, and one of Cycads, Ferns, and Palms from Mr. J. Wills, Onslow Crescent, Brompton, who had an extra prize. Numerous collections of Cyclamens in fine bloom come from Mr. R. Clarke, Twickenham, and Mr. Smith, Ealing Dean Nursery. Mr. Scott, Merriott, Crewkerne, sends very large collections of Apples, Pears, and one of ornamental Crabs; Mr. Jack, gardener to the Duke of Cleveland, Battle Abbey, and Mr. Kinghorn, Sheen Nursery, receive extra prizes for collections of Apples; Mr. Gurney, gardener to Lord Lawrence, Brockett Hall, Welwyn, also sends a collection. A similar award was made to Mr. Jones, gardener to Her Majesty at Frogmore, for truly magnificent Smooth Cayenne Pine Apples, the produce of suchers planted November 15th, 1872; also to Mr. Meredith, of Garston, for fine bunches of Gros Guillaume, Alicante, Mnscait, and other Grapes. Messrs. Ewing, nurserymen, Norwich, contribute collections of Apples and Pears.

FRUIT COMMITTEE.—Alfred Smece, Esq., F.R.S., in the chair. Messrs. P. J. Perry, of Banbury, sent specimens of Banbury Onion. Mr. Miller, the Gardens, Clumber, sent fruits of a seedling Cucumber which the Committee considered to be the same as Telegraph. Mr. Jack, the Gardens, Battle Abbey, sent a brace of handsome Cucumbers, which were supposed to be a form of Telegraph. Mr. Hepper, gardener to C. Ledward, Esq., The Elms, Acton, sent fruit of a new Custard Marrow, "The Shah," some of the fruit of which was cooked, but the Committee did not consider it a desirable novelty. Messrs. Carter & Co. exhibited the Yokohama Squash, a large, ribbed, oblate fruit of a dark green colour. Mr. Muir, the Gardens, Oulton Park, Tarporley, sent two bunches of a large black seedling Grape, which was not in a condition for a favourable opinion to be formed of it. Mr. Wells, Southend, sent a basket of Black Hamburgs, cut from ground vineries; they were very well flavoured. Mr. John Pearson, of Chilwell, sent three bunches of a seedling Grape of great excellence, to which a first-class certificate was awarded. It was named Golden Queen, and produces a long tapering bunch like the White Muscat of Alexandria, and shouldered. The berries are long, oval, large, and of a fine bright amber colour when ripe; the berry-stalks are short, stout, and warty; the skin is hard and membranous, and indicates a long-keeping fruit; the flesh firm, crackling, and with a rich saccharine flavour. It was raised from the Alicante crossed by Ferdinand de Lesseps. It is an early Grape, and ripens with a moderate heat.

Lady Hemiker, a culinary Apple in shape like the Beauty of Kent, was exhibited by Mr. Perkins, Thoruham Hall Gardens, Suffolk, and was awarded a first-class certificate. A dish of Beauty of Hants Apple was exhibited by Mr. Dean, Ealing. It was the opinion of the Committee that it was identical with Blenheim Orange. A dish of seedling Apples was sent by Mr. Drewett, Denbies, Dorking. The local name is Lee's Russet. A dish of seedling Apples from Mr. C. Turner, Slough,

lotte I over like a Downton Pippin, was also shown. Mr. Lee, Cleveley, Bristol, sent three dishes of Apples; among them was the Apple of Amissa. A series of seedling Apples came from Messrs. Lane, Birkhamstead. One of them, No. 1, a very pretty red-streaked Orange Apple, was put at its time, and the Committee wished to purchase it. Another, the Orange du Comice from Mr. G. Wilson was very fine and well-flavoured; another, from Mr. Dancer, Chiswick, was rather better in flavour. A dish of Cox's Orange Pippin, very large and fine, came from Mr. Dancer; a dish of Quince is in the same. A cultural commendation was awarded for these.

Two dishes of Oranges for naming came from Mr. G. Parr, East End House, Fulham. These were very large, rind very thick, and rather bitter, and a perfect absence of juice. Fruit of the *Taesonja quitensis* was also exhibited; it is said to make an agreeable preserve. It was grown from seed sent by the late Professor Jameson, of Quito. Referred to the Scientific Committee. A collection of Apples came from Mr. J. Preston, Cottam Nurseries, Lancashire. A collection of eight dishes of Apples, grown on cordons on the French Paradise stock at Hayward's Heath, Sussex, was sent by Mr. H. Shepherd, gardener to N. Laurie, Esq. A cultural commendation was awarded.

FLORAL COMMITTEE.—W. B. Kellock, Esq., in the chair. The subjects exhibited on this occasion were few. *Vanda cœrulea*, with four spikes in beautiful bloom, and of a deeper blue than usual, was exhibited by Mr. Smith, gardener to C. Lane, Esq., and had a cultural commendation. First-class certificates were awarded to Mr. Tomkins for a fine double white Chinese Primula, called *P. sinensis flore-pleno magnifica*; to Mr. Murrell, gardener to W. B. Hume, Esq., for *Batemannia Burtii*; and to Mr. E. C. Waters, for *Chrysanthemum Golden Mrs. Rundle*, a pale yellow sport of Mrs. Rundle, and equally good in its colour.

Messrs. Veitch sent *Dracana Baptistii* with broad deeply-bronzed foliage, and a species of *Cymbidium* from Assam with a white lip spotted with brown. From Mr. Williams, of Holloway, came *Agave Taylori*, a hybrid between *A. geminiflora* and *densiflora*, noticed in another column.

STOKE NEWINGTON CHRYSANTHEMUM SOCIETY.

THE annual Show of this old-established Society was held on the 11th and 12th inst. Unfortunately there was a clashing of dates between this and the Royal Horticultural Society's Show in consequence of the latter Society having altered the dates originally fixed, so that there was a diminution in the number of exhibits. The Show was held in the New Assembly Rooms, and we are pleased to say was arranged with excellent effect; numerous fine-foliated plants were introduced, and there was no lack of fruit, collections being furnished by Mr. J. Monk and Mr. E. Smith, fruiterer, Stoke Newington.

For four specimens of large-flowering kinds Mr. J. Rainbow, nurseryman, London Road, Clapton, took the highest position with excellent plants of *Gloria Mundi*, Mrs. G. Rundle, Beethoven; second came Mr. J. Monk, gardener to H. Head, Esq. For four standards Mr. Rainbow was again first, and Mr. Howe second, both having fine specimens of Prince of Wales and Mrs. Rundle; and Mr. Rainbow was also first with a fine half-dozen plants grown as border blooms. For six Pompons the prizes went to Mr. Monk and Messrs. Ponsford of Brixton; and for four standards the first place was taken by Mr. Howe, whose *Lilac Cedo Nulli* and *Bob* were very fine. Mr. Rainbow was second.

Of cut blooms there was a good display, though they did not run very large. Messrs. Howe, Sanderson, Goodwin, Smith, Monk, and Dixon & Co. were the principal prizetakers.

FOREIGN POTATOES.—An official document just issued shows that the declared value of Potatoes imported this year was £1,931,105, against £923,766 in the preceding year.

AUCTION OF BOOKS in 1791.—At "the Great Hall in Conduit Street, opposite the Chapel, Harrower Square," 619 lots were sold in March of the year above-named. Among the lots and the prices they realised the following are thus noticed in "Notes and Queries":—

No. 93, plants, painted in miniature by Aubriet, realised £153, and was bought by — Barrow. The thirty illustrations were painted on vellum, from Nature, by Claude Aubriet, painter of plants, &c., in miniature style, and draughtsman to the gardens of the King. The works of this artist are rare, so says the descriptive note, "as the greatest portion of his drawings were made for the King, and are deposited in the Royal Library." This volume realised at the La Vallière sale 1109 livres; at that of M. de Liman, 1209 livres.

Aubriet also painted the fifty-three illustrations to Lot No. 110, a folio of butterflies, plants, and flowers, which was bought by Mr. Turner for £112 7s. This work had fetched at the La Vallière sale 3,000 livres, and subsequently 3,450 at the auction of M. de Liman's collection.

Another book of birds by the same hand, Lot 116, was disposed of for £85 1s.

£117 was paid by the Duke of Marlborough for Lot 102, a treatise on fruit trees by Pârisseau du Monceau, Paris, 1768, 2 vols. in 4to., with illustrations, painted from Nature, by M. Paroel, the elder, who signed each drawing; and the same nobleman disbursed £173 5s. to secure Lot 134, which is described as a "Recueil de tableaux peints par Agricola," in folio, the subjects being different objects of natural history, catalogued as "a work for the highest appreciation." It contained twenty-six drawings of shells, insects, and plants.

DESTROYING WASPS.

"SUBSCRIBER" may not have seen or may have forgotten a very easy way of destroying wasps' nests without injuring the comb or nests, merely by placing a piece of sponge tied on a stick, or a piece of tow, dipped in a saturated solution of cyanide of potassium (or the cyanurate, as it is sometimes called) in the mouth of the hole. This may be done any time, night or day; but it is curious to watch the effect on a hot sunny day: A wasp either returning to its nest or coming out of the nest comes within range of the fumes from the cyanide, staggers, and falls down dead in a few seconds, and within twenty minutes you may dig the nest out, and find all the wasps either dead or dying inside the comb; they may be brushed-off the comb and a few drops of the cyanide solution scattered on the heap; they never recover this. If the cyanide is pushed into the hole at night, and the whole covered up and then dug-out the next morning, no grub will ever recover it. It will destroy all insect life, and is the safest thing to use for hornets' nests. Has anyone ever tried the effect of a weak solution on plants? —C. P. P.

WITH some brown paper and a piece of cane or stick, about one-quarter of an inch in diameter and 9 inches long, I make some cases similar to those used for fireworks, which I fill with the following composition:—Gunpowder one part, charcoal dust one part, and flowers of sulphur two parts. I then make some touchpaper by soaking brown paper in saltpetre, and drying, and insert a bit in the end of each squib. In the evening, at dusk, I take as many of these squibs as there are nests to destroy, light a squib, hold it in the mouth of the nest until it is burnt-out, stop the hole with a elod, and let it remain a few minutes, then dig them out. I may add, my employer gives me 1s. per nest destroyed, and within the last three years I have dug-out sixteen nests, and have never seen one of the wasps move. The same cases can be filled several times.—J. F. G., Gardener.

KEW GARDENS.—No. 3.

It is but a step to what seems to the public the central sun of the gardens—the Palm stove. This is, we believe, the largest tropical house in existence, its entire length being 362 feet by 100 feet in width, and 66 feet in height. What a noble prison-house it is for the captured forest trees of the tropics, and how healthy and luxuriant the captives look! The visitor is transported to the torrid zone, and finds the blaze of light shadowed by the curved leaves of the Palms, which make dim arcades of shade as he pushes through them, whilst the humid heat helps to carry out the deception; only one thing seems wanting—a few bright-coloured birds to make the picture perfect. But we forget: mere illusions, however delightful, are not sought after here, but facts, and they are sufficiently pleasant and enticing to need no adventitious help. Graceful as is the foliage of these Palms, they may be termed economic plants in the highest degree, as many of them provide food and wine, water, clothing, and cordage to the inhabitants of the arid country in which they grow. In many cases, indeed, they may be said to be the tree of life, affording at once shelter, food, and drink to those who seek them. Visitors who enter these houses to seek information will find each plant duly labelled, so that they have no difficulty in ascertaining their names and the class and order to which they belong. They may, therefore, be considered living picture-books. Indeed, this may be said of the whole garden, from the meanest weed that grows in the herbaceous grounds to the noblest trees; and, in this sense, the value of it as a public

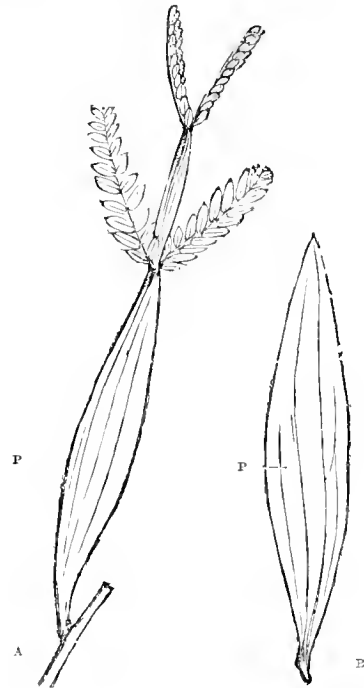
instructor is inestimable, and the more so that the knowledge they afford is given insensibly, whilst indeed the loungee thinks he is merely enjoying himself. Among such a tangled mass of verdure we have only space or time to refer to a few of the more graceful or valuable in an economic sense; and in doing so we cannot avoid availing ourselves of the valuable and interesting guides to these gardens by Daniel Oliver, Esq., the keeper of the herbarium. They are models of what such guides should be—clear in description, full of facts, and without one superfluous word.

Arenga saccharifera, as its name implies, is a Palm yielding abundant saccharine matter, which by fermentation makes an excellent wine—red and white—each tree yielding on an average three quarts daily. Marco Polo says, "When they want wine, they cut a branch of this, and attach a quart pot to the stem of the tree, at the place where the branch was cut; in a day and a night they will find the pot filled." Its fibrous integument makes incorruptible cordage, and the cellular pith of the trunk affords abundant sago-meal. Close beside this wine and meal-giving tree is a Brazilian Palm—*Astrocaryum rostratum*. The sight of this tree of ferocious habit reminds one of the fierce tiger that lies in wait amid the verdure of tropic climes. Every leaf is beset with powerful spines, which mark the midribs of the leaves, and are arranged in rings around the stem. Any traveller making his way in the forest would certainly feel the force of these talon-like projections, which justify its classification among the ferocious genns. *Caryota urens*, another Palm, is a native of India, remarkable for its divided leaves and wedge-shaped leaflets. This is another wine-giving tree. It would seem as though Nature in very hot climes compensated mankind for the extreme heat by affording natural fountains of refreshment to the inhabitants. Roxburgh, in his "Flora Indica," says, "This tree is highly valuable to the natives of the countries where it grows in plenty. It yields them during the hot season an immense quantity of toddy or Palm wine. I have been informed that the best trees will yield at the rate of a hundred pints in the twenty-four hours. The pith, or farinaceous part of the trunk of old trees, is said to be equal to the best sago; the natives make it into bread and boil it into gruel." Thus bread and wine may be said to be the fruit of this beautiful Palm. We cannot fail to recognise the tall and beautiful Cocoa-nut tree (*Cocos nucifera*), which lifts its head crowned with graceful plumes above the other trees. This Palm, which is universal in tropical countries, perhaps yields a more varied produce to mankind than any other tree; indeed, it is popularly said that its uses are as numerous as the days of the year. The gigantic leaves of the Talipot Palm of Ceylon and the Indian Archipelago, which casts such a shade, naturally suggested one of its principal uses—the construction of tents. The West Indian Fan Palm (*Sabal umbraulifera*) is another specimen of the broad-leaved class of Palm, the leaves measuring from 4 to 6 feet in diameter, and growing to a height of 60 to 80 feet; in this stove it is comparatively short, but the breadth of foliage contrasts richly with the more plume-like class of leaves. A very beautiful Palm is *Phytelephas macrocarpa*—the Vegetable Ivory Palm. The peculiarity of this Palm is that the stem, instead of being erect, trails along the ground, sometimes for 20 feet, before it begins to rise, and then it lifts its head barely more than 3 or 4 feet. The seeds which produce the vegetable ivory are found in hard clustered capsules. This ivory is used for turning purposes, the cheaper kinds of chessmen being made from it. The beautiful fan-like arrangement of *Urania speciosa*, the Travellers' Tree of Madagascar, draws attention to one of the most valuable trees of the tropics—a tree yielding pure water. Ellis in his "Madagascar" tells us—

"This tree has been most celebrated for containing, even during the most arid season, a large quantity of pure fresh water, supplying to the traveller the place of wells in the desert. Having formerly been somewhat sceptical on this point, I determined to examine some of the trees. One of my bearers struck a spear 4 or 5 inches deep, into the thick firm end of the stalk of the leaf, about 6 inches above its juncture with the trunk, and on drawing it back a stream of pure clear water gushed out, about a quart of which we caught in a pitcher, and all drank of it on the spot. It was cool, clear, and perfectly sweet.

We are not aware whether in the Palm stove this water, which to the thirsty traveller must seem like a direct gift from God, is yielded; if so, and the tree was not injured by it, a trial now and then before the public would be deeply interesting. At each end of the stove there are staircases, which lead to and from the gallery, from which a view of the heads of the

Palm trees is obtained. Near the ascent staircase is a very remarkable group of Screw Pines, so called from the likeness of their leaves to that of the Pine Apple. The great peculiarity of these Palms is the manner in which they throw out adventitious roots above ground, which serve as buttress-like supports to the tree. The *Bambusa vulgaris*, close to the staircase, is a specimen of the rapidity of growth of this cane, which, like the *Bambusa gigantea*, is rapidly reaching the glass roof. It has been observed to grow at the rate of 18 inches per diem; and this very specimen has reached to the gallery from the ground in three months! The uses of the Bamboo are almost too numerous to mention; and in the Museum No. 2, at the end of the ornamental water, opposite this building, hundreds of specimens of articles manufactured from it may be observed. Among the smaller specimens in this house, the magnificent *Doryanthes excelsa*, an Australian Lily, which, like the country of its birth, is on a magnificent scale, throws up flowering stems of 20 feet in height, having clusters of crimson flowers 12 to 18 inches in diameter. Let us notice also *Girardinia Leschenaultiana*. This is a most virulent Indian Nettle. The late Curator of the gardens was stung by it on one occasion, when his hand swelled to double its normal size, and he was disabled for at least a couple of hours, when the inflammation gradually subsided. Before ascending the stair-



Acacia pentadenia.

B, Petiole forming the flat leaf-like phyllode. | A, With leaflets.
1, Without leaflets.

case we must not forget to notice *Antiaris toxicaria*—the deadly Upas tree. Dr. Horsfield says:—

"This is one of the largest in the forests of Java; the stem is cylindrical and perpendicular, rising completely naked to the height of 60, 70, or 80 feet. Close to the ground the bark is, in old trees, more than an inch thick, and upon being wounded yields plentifully the milky juice from which the celebrated poison is prepared. In clearing new grounds near the tree, the inhabitants do not like to approach it, as they dread the cutaneous eruption which it is known to produce when newly cut down. But except when the trunk is extensively wounded, or when it is felled, by which a large portion of the juice is disengaged, the effluvia of which mixing with the atmosphere, affects the persons exposed to it with the symptoms just mentioned, the tree may be approached and ascended like the common trees of the forest."

Thus it will be seen that the popular notion as to the deadly shade of the Upas tree, which the poets make so much of, is by no means to be taken as literally true. As long as its stem remains intact indeed, it appears to be harmless; it is only the juice which contaminates the air with poison. Ascending

the spiral iron staircase, we have a full view of the crowns of the Palm trees, and the manner of their being thrown off from the main stem. The unfolding of some of the leaves may be observed, showing the tender green of that portion of them which has just seen the light. Some of the creepers which ascend the staircase and surround the gallery show the prolific nature of these plants; and some of the flowers are magnificent in colour. High, however, as we have ascended, it will be seen that the tropical trees have shot still upwards, and the flora of the warm latitudes is threatening to touch the glass roof. Since the introduction of glass as a protection against the weather, there has been a struggle to lift it high enough to keep pace with tropical growths. Like the contest between guns and armour-plating, there has been an incessant struggle between Art and Nature in the stove-houses. At first the old orangery was employed to preserve the plants and trees requiring heat, but the Palms and Pines speedily shot up to its comparatively-speaking low roof, and had to be cut down to suit the capabilities of the house. Decimus Burton lifted this roof to 66 feet; but we now see the Bamboos lifting up their verdure to the glass, and some of the Palms will shortly touch it, and then—but here the contest is ended by the triumph of the trees. It may be asked, Why may not the glass roof be made to lift so as to accommodate these tropic growths? This, no doubt, would be easy of accomplishment by means of telescopic columns that could be lifted by machinery; but when we remember that some of the trees now in this Palm house acquire an ordinary height of from 100 to 180 feet, we fear the victory must be left with Nature and the flora, inasmuch as lifting the roof to anything like this height would involve difficulties in sending heat to such altitudes. Such, at least, is the present view; possibly a few years may enlarge our ideas and our capacity for action in the matter, as it has in so many other cases. Meantime, we must submit to see the glorious leaders of the Palms cut down and their beauty spoiled, or, when they are at their greatest beauty, they must be removed from the house and destroyed, in order to give place to younger trees, which, in their turn, will be nursed at great expense to fall treehood to be in like manner degraded—a result, we must confess, greatly to be deplored, and most of all by the learned Director of the garden, who of all men must most regret to see a limit put by art to the vigorous powers of Nature, which his skill has done so much to foster in these gardens.

If we leave the Palm house by the middle door looking towards the Sion vista or northwards, we see, radiating west and east of us, two others: the vista leading past the temperate house towards Sir William Chambers' pagoda, and the so-called Cedar vista. These long avenues are not yet completed, but it is sufficient to say that they are lined with Deodars and with deciduous trees, those of the old world facing as a rule those of the new. The Sion vista right before us was cut so wide that it admits a torrent of cold air from the north, and the Deodars that were planted here, for this reason or from the poverty of the soil, have failed to make any growth. If we follow the Pagoda vista a few hundred yards we come into the pleasure-ground or new arboretum, in which the new temperate house is situated. This building was built after a design by Decimus Burton in 1861. The building consists of a centre 212 feet long by 137 broad. There are two octagons 50 feet in diameter, which it is intended to connect with the main building by terminal wings, but as yet the plan is not completed. The glass is tinted a light green by oxide of copper, in order to intercept some of the heat-giving rays of the sun. This arrangement is also adopted in the Palm stove.

The planting of this house, so far away from the more cultivated part of the garden, is appropriate to the flora it contains, dedicated as it is mainly to Australian forest trees, and other countries in the far distant South Pacific Ocean. If we ascend the staircase and look down upon the vegetation we see at a glance the distinctive nature of the Australian flora, so different from the vivid verdure of the tropics, or the deep green of the vegetation of the northern latitudes, where Nature, clothed in her dark Pine forests, seems to be in solemn mourning. The flora of Australia, to begin with, is remarkably uniform in its character. The Gum trees, including the iron and stringy-bark trees, and the blue, white, swamp, and other Gums, have all a uniform complexion. We are told that the *Acacias* have a remarkable peculiarity in their leaves also, which aids in making them colourless. "The compound, and often greatly divided blade of which usually remains undeveloped, so that the leaf is reduced to a stalk, which, however, to compensate

for the want of a blade, is so much flattened as to resemble an ordinary leaf. These flattened leafstalks (phyllodia) may be recognised as such by their vertical direction, being attached as it were edgewise to the stem." The accompanying figure from Figuier's "Insect World" represents this description of foliage.—Ebs. Near the staircase, an excellent example of this curious character of the leaf, and the method of its setting-on, may be observed in the *Acacia melanoxylon*. It can easily be conceived that the vertical position of the leaves to the stem, different from the horizontal arrangement so common in trees, goes a great way to produce the shadowless aspect of the flora in Australian woods, which Darwin thus notices in his "Voyage of the Beagle":—

"The extreme uniformity of the vegetation is the most remarkable feature in the landscape of the greater part of New South Wales. Everywhere we have an open woodland, the ground being partially covered with a very thin pasture, with little appearance of verdure. The trees nearly all belong to one family, and mostly have their leaves placed in a vertical instead of, as in Europe, in an horizontal position. The foliage is scanty, and of a peculiar pale green tint, without any gloss. Hence the woods appear lightless and shadowless."

One of the blue Gum trees of Australia has been planted out at Kew, near the house, and is flourishing. We question, however, whether it will stand the severity of an English winter. But in the south of France, and more especially in Portugal, these *Eucalypti* have been introduced and cultivated with extraordinary success. We have seen as many as two hundred varieties of them in the Botanic Garden at Coimbra, and the importation of this tree is a national benefit to the Peninsula. It grows very fast even in a dry and hungry soil; it affords excellent timber; it acts as a disinfectant for unwholesome places; the bark contains an alkaloid febrifuge; the leaves may be smoked; and its uses appear to be innumerable.

Interspersed with these shadowless trees we have mentioned are many, however, in this house growing in the same temperate zone of a totally different character. Let us note, for example, *Araucaria Bidwilli*—the *Bunya-Bunya* Pine. This is really a beautiful tree with dark green glossy leaves, growing to from 100 to 150 feet high, and producing large cones, the seeds of which are eaten by the aborigines of Moreton Bay, Australia. This Pine flowered for the first time in Europe, in this house last year, and the cone may be seen in No. 1 Museum, at the bottom of the ornamental water by the Palm house. It is said that these trees form the only hereditary property which any of the aborigines are known to possess; each tribe possessing its own group of trees, which pass on from generation to generation.—(*Edinburgh Review*.)

ERRORS IN ROSE CULTURE—SELECTIONS FOR EXHIBITION AND BORDERS.

THAT too much cannot be said about roses is my excuse for troubling you with this letter. It is impossible to find a heavier soil than mine. It is a soil *par excellence* for the Briar, as anyone would say who saw the way my stocks take to it, and the vigorous growth they make. Out of seven hundred last year I do not think I had twenty that did not grow well and prove fit for budding; but, with all that, I must say I prefer the *Manetti* as a stock. The *Roses* I cut from the maidens are as a rule finer than those cut from the maiden Briar, and the second season there can be no comparison.

I have grown *Roses* here for five seasons, and I now think I have hit upon the secret of success. At first I lost many plants in the way my friend Mr. Cann describes, and I thought my ground too rich and heavy for the *Manetti* and nearly discarded it; but I must own the fault was entirely owing to what Mr. Peach says in his letter on pages 333 and 334—I over-mulched and coddled.

Last year I planted a bed mostly with *Manetti* stocks budded by myself in my own soil. I put but very little manure, but a very large quantity of burnt clay. I kept the soil constantly pricked-up so as to admit the air, and from that bed I picked all my best blooms, and had scarcely any fungus or mildew, which prevailed to a great extent with the others. I believe the secret of growing the *Rose* on the *Manetti* in a heavy soil is to keep the ground open, and to avoid much manure when the plant is not in active growth. I believe constant lifting and redigging the beds imparts fresh life to the plants, and is followed by a strong healthy growth. So satisfied am I that the *Manetti* is the stock, that I shall use nothing else this next season for Perpetuals.

But one word about my friends the Teas. They certainly will not take kindly to the Manetti. I have given special attention to this lovely, and I think hitherto much neglected class of Roses; and my experience is that when a Tea budded or grafted on the Manetti is found to be doing well, it is because it has discarded the stock and has made its own roots. I have hitherto had nearly all my plants on the Briar or on their own roots. I believe, however, that the Briar cutting, as lately described in the Journal, will be the stock, as I have some plants so worked which I planted this spring, and they have done more in one season than those on either the standard or their own roots have done in two.

One word on the Tea Rose border. We hear too much about a southern aspect. I believe it to be almost the worst that can be chosen. I have seen Teas in such a position exposed to the full heat of an August sun, scorched to death, and not a bloom bigger than a Buttercup. My Teas are planted under an east wall in a border 8 feet wide, and here they do all I could wish. They get an equal share of sun and shade; and many varieties which fall almost as soon as open in hotter positions, mature into fine flowers fit for the exhibition box. I do not say that flowers of substance and strong growers, such as Maréchal Niel, Gloire de Dijon, and others, will not give magnificent blooms on a south wall, but as a rule they are early and late when the sun has not so much power. There are many varieties of Teas which should be much more grown than they are both for exhibition and decoration. No Rose is so perpetual. I have gathered blooms this week, and there are plenty of buds now ready to open if frosts will allow them. I append a list of kinds I grow, should you think it worth while to insert it.—EDWARD HANDLEY, *Baltonsborough Parsonage, Glastonbury.*

FOR EXHIBITION.

Maréchal Niel	Comte de Paris
Devoniensis	Niphotos
Triomphe de Rennes	Catherine Mermet
Céline Forestier	Madame Falout
Gloire de Dijon	Madame Willermoz
La Belle Lyonnaise	Madame Jules Margottin
Madame Berard	Marie Van Houtte
Souvenir d'un Ami	Moiret
Souvenir d'Elise	Bougre
Souvenir de Paul Neron	Alba Resca, or Madame Bravy
Tubus	Jean Perret
President	Madame Margottin

BEAUTIFUL AS GARDEN ROSES.

Madame Charles	Archimède
Adrienne Christophe	Sombreuil
Madame de St. Joseph	August Vauher
Triomphe de Luxembourg	L'Enfant Trouve
Abricot	Pauline Labont

ROYAL HORTICULTURAL SOCIETY.

I ask permission to call the attention of your readers to a possible means of putting the Royal Horticultural Society on a more satisfactory footing than its present one, in the hope that some one with time and energy at his disposal may be induced to come forward, take the lead, and work out this or some other practicable plan of reorganisation. It is a melancholy fact that, even under the late Council, strong as it was horticulturally, and hard-working and persevering in its attempts to forward the interests of horticulture, a large part of the great body of horticulturists throughout the country, including many of its best members, held aloof from the Society, and neither thought, felt, nor spoke kindly of it. Under the new Council, which came in after the Kensingtonian *coup d'état*, the fact of the small proportion of horticultural members, and the loss of the valuable Assistant Secretary, Mr. Richards, have alienated not a few of what horticultural friends the Society had. There is no doubt that the Society has done, and is doing, much good work at Chiswick, at the Committee meetings, and at the country shows, but even the late Council had almost overwhelming difficulties with which to contend. If for a moment we consider the constitution of the Society this will at once be apparent. A very large proportion of the Fellows have joined the Society in order that their children and they may enjoy the large open space and conservatory at South Kensington, and for these objects they pay an admission fee and an annual subscription of two or four guineas; this may seem a fair consideration, but unfortunately the South Kensington garden stands under rather peculiar circumstances. The money which bought the land came from the surplus of the 1851 Exhibition, principally consisting of the people's shillings. This land, some twenty-two acres, has become im-

mensely valuable; it has been estimated at £300,000. Property bought from such a source, and of such value, ought to yield, in some way or other, a much larger sum than it does, to be spent on public objects; as it is, with the debenture debt (£2000 a-year), which must be paid, with rent (£2400 a-year), which ought to be paid, and with that part of the cost of Chiswick garden which goes to nursery work to beautify the South Kensington conservatory and garden, and with South Kensington rates and taxes, there is no great amount left for the great public object of spreading and helping horticulture. The late Council almost concluded an arrangement with the 1851 Commissioners, by which, in consideration of the Exhibition visitors being admitted free to the gardens, the Commissioners would clear the Society of the debenture charge of £2000 a-year, of the rent £2400 a-year, and give what was estimated to amount to £1000 a-year more for horticulture (a settlement with life Fellows was understood). This would have enabled the Society to carry on vigorously, and would have fairly utilised the land. Then the Kensingtonian compact vote turned out the Council. It has been more than once said that the Council made "a very poor fight." It might have been put still stronger, and said, made no fight at all. This last was not to be wondered at. When people know that they have laboured earnestly with the single object of doing their best for a Society, and devoted much time, spared with difficulty, it is not they who are likely to lift up a finger to keep themselves in a troublesome post. If there was to be any fight, the horticultural Fellows, who did not take the trouble to come up and outvote the Kensingtonians and the few horticulturists who sided with them, ought to have made it, and by their vote have kept in the Council, and have given the country Fellows the power of voting by proxy.

Now, for the future, it is my firm conviction that a state of the Society is possible, free from the dead weight and inert matter which clogs the present one. Consider what a vast number of well-to-do people, fond of their gardens, there are now in the country; very many of them would be willing to help horticulture if it did not cost them much money or trouble. I would make the annual subscription a guinea, and have no admission fee. I can speak from my experience of a Society where, simply because they think it useful and active, many members have joined, and go on subscribing to it, without ever going near any of its meetings; and I believe a very great number of Fellows would join at this small subscription. The Society ought to have the old Chiswick Gardens as a home, and to make arrangements with the Commissioners, and undertake, for a fixed consideration, to furnish the conservatory, and to hold Committee meetings and a certain number of shows at South Kensington. I believe the money from this source, with that from the numerous guinea Fellows, would give more free funds for horticulture than the Society has ever yet possessed, and the Society would be a real horticultural society.—GEORGE F. WILSON, *Heatherbank, Weybridge Heath.*

COLOUR ARRANGEMENT.

A FEW simple rules in the arrangement of flower beds will materially enhance the effect produced. Among these are—

1. Avoid placing rose-coloured next to scarlet, orange, or violet.
2. Do not place orange next to yellow, or blue next to violet.
3. White relieves any colour, but do not place it next to yellow.
4. Orange goes well with blue, and yellow with violet.
5. Rose colour and purple always go well together.—(*Canada Farmer.*)

NOTES AND GLEANINGS.

AN invitation has been addressed through the President to the members of the Royal Horticultural Society, by the President of the "SOCIETÀ TOSCANA D'ORTICULTURA," to attend a grand International Exhibition at Florence, which is to be held from the 11th to the 25th of May next. Members are also invited to exhibit at the said Show, that the horticulture of this country may be represented.

RED-SKIN FLOURBALL POTATO (SUTTONS').—In reference to the remarks of your correspondent "W.," page 328, my experience is the same as his in regard to its freedom from disease but quite different as to its cooking qualities. I had some the other day baked (the only way in which these large Pota-

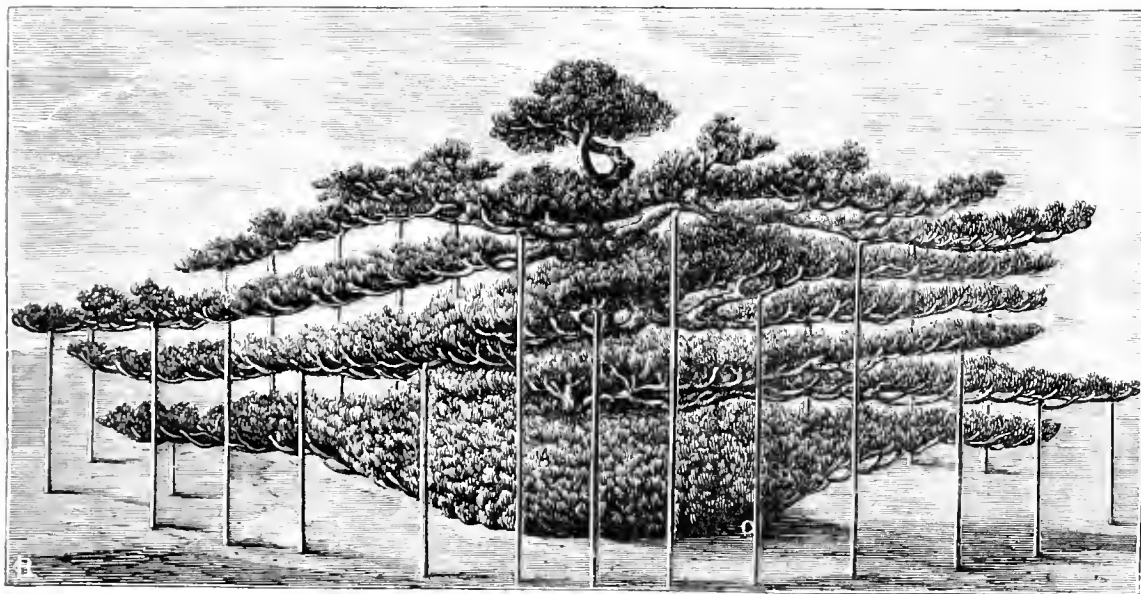
toes ought to be dressed), and a more perfect ball of flour it is impossible to conceive. Where did "W." get his seed from? Alas! there are many sold as it which are worthless. —D., Deal.

EXTRAORDINARY CONIFER IN JAPAN.

[THE Editor of the *Yorkshire Gazette* has obligingly sent us the following note and a Japanese drawing, which we have had copied.—EDS.]

I WILL give an account of a most remarkable tree. It is to be seen about half-way between O'Kayama and Onomichi, and I send you a couple of large Japanese drawings of it, which will give you a very correct view. It is a Pine tree, called in Japanese Gar-lu-no-mar-se, and is growing between the two cities above mentioned, in the province of Bizen. The height of it is 20 feet from the ground; the length from the extreme point of the spreading branches at the one side to that of the other is 250 feet. The branches, fourteen in number, are supported from the ground, as shown in the drawings I send you, by bamboo supports. Above the fourteen lower branches

abundance of the interesting *Hydnum auriscalpium*, growing from moss-covered Fir cones; and *Phlebia merismoides*, and other commoner plants. On Merryhill Common, where the carriage was again left, *Marasmius caulicinalis* was found growing on the Fir cones, as indeed it was subsequently in Mynde Park. It is a very rare and local plant, and many specimens were gathered. Here, too, was *Hypomyces lateritius* growing on *Lactarius deliciosus*, a "find" so exciting that, in north-country fashion, it was forthwith solemnised by a hearty shake of the hands. At Haywood Forest *Coprinus lagopus* was found, and in the next field to it Mr. Moore gathered *Lactarius uvidus*, of which the white milky juice turned quickly on bruising to a delicate lilac. A special "hark back" was made to hunt for more specimens, and rewarded at the time by a single find. Later in the day, however, it was gathered again under an Oak tree on Bryngwyn Hill. Here also Mr. Plowright gathered *Merulius tremellosus*; and *Agaricus sinuatus* was met with amongst other discoveries. A shower of rain at this point of time, if it did not damp the ardour of the party, at least counselled a return to the carriage, especially as it was near one o'clock, and a friendly shelter was in store at Mynde Park, where they were hospitably and kindly received and refreshed by the owner, Mr. Hudson Lutwyche. Before two o'clock the rain had



Japanese Conifer.

there are three extra ones on the top. The age of the tree in May last was eighty-three years seven months, it having been planted by the grandfather of the party that now lives in the house adjoining. I can assure your readers it is a wonderful tree, and the trouble taken to train it must have been tremendous. I also send you a view of one of the largest temples in the south of Japan. It is situated near Harisuri, which is three ri south of Fukuoka, on the main road to Saga and Nagasaki. It is called Dar-dar-i-fu-no-ten-gin. The number of fish in the sacred ponds are thousands, and the pilgrims (for we have pilgrims in Japan) feed the fish when they visit the temples. The temple itself is much the same as all other large temples, but the situation, the laying-out of the grounds, and the view surpass those of any of the others I have yet seen. Near it there is also another large temple, containing four large images, one being gilt, 16 feet high, seated and on a pedestal. They are worshipped by all the Japanese near the place.—J. TASKER POSTER.

THE FUNGUS FORAY AND FEAST OF THE WOOLHOPE CLUB.

OCTOBER 21 24.

Of the rarer Fungi found in the first day's excursion the following may be mentioned. In the Fir plantation near the pro-cathedral at Belmont, where the first halt was made, *Agaricus cirrhatus*, a rare and elegant little Fungus, growing from a *Sclerotium*, was at once pointed out by Dr. Bull; then an

ceased, and the hunt was resumed in the park. Here an abundance of the warm, richly-tinted *Hygrophorus puniceus* was found studding the turf in shades varying from apricot to blood-red, and along the slopes of the Mynde and of Bryngwyn Hill were gathered *Lactarius glycosmus* and *L. pallidus* by Mr. Broome; *Sphinctrina turbinata* by Mr. Phillips; *Hydnum nudum* and *Polyporus Schweinitzii* by Messrs. Renny and Plowright, as well as many others.

Along the brow of the hill it may be stated that the poisonous *Lactarius torminosus* and *L. turpis* were particularly plentiful, the one as inviting perhaps by its colour as the other was forbidding by its hues of dirty, dusky brown. The lovely *Agaricus muscarius* was also particularly abundant beneath the Birch trees.

Wednesday morning (October 22nd), was devoted to a close examination of the Funguses collected for the exhibition and to their arrangement on the tables of the Club-room; but in the afternoon a foray was made in the beautiful grounds of Belmont, where *Licea applanata*, *Peziza succosa*, *Hydnum alutaceum*, *Geoglossum viscosum*, and *Typhula erythropus* met the quick eyes in search of them, though the chief prize of this foray was made by Mr. Plowright—to wit, the rare and local *Marasmius Hudsoni*, growing on fallen Holly leaves. It is an elegant little *Agaric* studded all over with delicate purple spines.

On Thursday—the general field-day of the Club—though himself unavoidably absent, Mr. Stanhope had placed his herd gardener at the service of the Club, to show them the diverse beauties of the trimly-kept gardens and grounds of Barr's Court of which—to say nothing of many curious deciduous and ever-

green trees—the clean-clipt Yew hedges are a conspicuous feature. It was too late in the year to see the effect of the tasteful arrangement of the flowers to harmonise with, and not inore and disown, these old-world topiary triumphs, as also to realise the success of a cordon Pear-wall, of which the abundant fruit had been gathered. But within the precincts of these charming gardens every lawn and slope was rich with dainty fungological treasures. Here Mr. Berkeley quickly found *Geoglossum glabrum*, *G. olivaceum*, and *G. difforme*. Mr. Brooke gathered *Clavaria curta* under the Yew trees—the elegant little *Agaricus* (*Mycena*) *flavo-albus*; *A. (Pleurotus)* *tremulus* and *applicatus*; *A. eumefolius*; *A. corticolor*; *Anthina flammea*; *Pistillaria quisquiliaris*, &c. Mr. Vyse detected *Puccinia strioli* growing on *Carex*; and there were many other discoveries. The mycological successes of the day, however, were a species of *Nolanea* and *Hygrophorus fornicatus*, both new to Britain. The *Hygrophorus* grew also on the Moccas Park lawn. There should have been a general hand-shaking here, but a shower of rain, though it lessened not the joy and enthusiasm at finding these treasures, dispersed the naturalists rather summarily; not, however, before a goodly number of them had inspected the magnificent Oaks of the Park, the gigantic denizens of Price's Walk, and the Holme Lacy Wellingtonia described by the Woolhope Commissioner in the Transactions of 1870. Several arbo-reicultural curiosities—among them an American Scarlet Oak—were noticed by the Club despite the rain, which somewhat interfered with leisurely contemplation, but no member of the party deemed his outing a failure.

At the repast, *inter alia*, were served-up the Vegetable Beef-steak (*Pistulina hepatica*) and the delicate *Hygrophorus pratensis*, admirably cooked, and *Dindon aux truffes* was one *pice de resistance*.

TOMATOES.

I HAVE read Mr. Record's papers on the culture of the Tomato with much interest. I do not agree with all he says, so I offer these notes.

I am well aware that Mr. Record can grow Tomatoes out of doors, as I know his garden well. Living as I do in the north of England, I cannot plant them out with any degree of certainty as to what crop I shall get, and as I require a great many, I devote a house entirely to them. It is a span-roofed house, about 20 feet long by 12 feet wide, with a walk in the centre, and a flat stage on either side, where I kept all my bedding Geraniums during the winter. These I had removed in March into a vinery, and on the stage I placed some stable litter, quite dry, to keep the soil from falling through. I placed it about a yard wide from one end of the stage to the other. On this I put some good maiden loam with plenty of fibre. I used no dung. There was a barrowful of loam to each light; over this I scattered plenty of soot. The plants like soot. That is all I used. I gave them at every alternate watering liquid manure made from sheeps' droppings. On one side I had the Trophy, on the other Orangefield. Trophy came in about ten days earlier than the Orangefield. So pleased am I with the former that I shall grow no other variety. With me it is a splendid cropper, all that I can wish. I grew the plants on a trellis, and one could almost see them grow. I kept them well pinched back, and when the trellis was furnished with robust short-jointed wood I gave them a check, and kept them short of water for a time. I gave them plenty of air. Very soon they were full of bloom and fruit. Unfortunately I did not keep an account of the quantity produced, but I had bushels of splendid fruit.

What is prettier than a good house of Tomatoes? I have to send them to table every day, and yet I gave away basketful after basketful. Financially speaking, they can be grown and made to pay, and are always saleable. The secret to grow them is to give them plenty of soot, plenty of pinching, and when they have made enough wood starve them a little. I have heard the remark made, "How rank your Tomatoes are! they are all wood!" I find it an excellent maxim, "A stitch in time."—P. P. LOCKHURST, *Mill Bank Hall, near Warrington.*

I AGREE with Mr. Record that Hathaway's Excelsior is a fine variety. I have grown several sorts, and in 1872 had the Large Red very good. This season I have had Hathaway's Excelsior, and to my satisfaction it is the best I have yet cultivated. It grows very strongly in the first part of the season, for I thought I had all plant and no fruit, but with frequent stopping I obtained at last a fair crop as large as Ribston Pippin Apples, but rounder. I find the Tomato likes fresh soil like most other crops. I grew mine in a border made anew this time last year after pulling down an old vinery, and no manure was

added to it. I gathered just a bushel from five plants, besides a small gathering or two before.—C. M.

WORK FOR THE WEEK.

MITCHEN GARDEN.

THERE are but few gardeners who are unacquainted with the value of leaf mould; it is of all soils the most useful in the flower garden, and it is scarcely less valuable in the kitchen garden and forcing department. One of the best practical gardeners we have known used it mixed with a small portion of cow dung thoroughly decomposed in the forcing of culinary vegetables, and also for Peach trees, Raspberries, Melons, &c., and I can aver I never saw more abundant crops; it was also used largely in the kitchen garden, which was equally productive. Now, although the value of leaf mould is more or less generally known, it is rarely that a greater quantity of leaves is collected in one season than is actually wanted for the purpose of forcing. This, I have no doubt, arises in some measure from the expense of cartage; but by the plan I am now about to recommend it will be, as far as regards collecting leaves for leaf mould, a mere secondary consideration. In extensive parks there are usually many hollow places where leaves collect in large quantities. In a central part of these hollows a hole should be dug sufficiently deep and large to hold the leaves near at hand, but not so deep as to endanger the lives of any cattle which might by accident get into it. The leaves should then be raked into it and firmly trodden. During the summer they should be turned twice or thrice, and have a small portion of lime mixed with them each time, when they will be fit for some purposes the following winter; but, if convenient, it is best to let them remain in the hole two years. Thus there will be a great saving in cartage, as it takes many loads of leaves to make one of mould. Another bed of *Asparagus* should be prepared at the end of the week if a succession is required. The frames already planted may remain covered-up night and day during cold weather until the heads begin to appear. It is necessary to take advantage of every favourable opportunity to earth-up all the *Celery* that requires it; rather let it remain as it is than attempt to do so while wet, as it will afterwards rot in a very short time. The *Cucumber* plants require constant attention in stopping and tying to the trellis. During very dull weather the plants should not be excited to so great a degree by heat and water as in clear weather, neither should they be allowed to swell-off so many fruit at one time. If the herb beds are not yet cleaned and done-up for the winter they should be attended to without delay; a slight coat of very rotten dung should be laid on them, for the double purpose of protecting the roots from severe frost and to enrich the soil. The Cabbage varieties of *Lettuce* planted in frames intended for winter use will not require much air if the soil is light and dry. Should they require a little water, give it to each individual plant from a watering-pot without a rose; never expose the plants to heavy rains. A little leaf mould, tan, or cinder ashes should be laid over the crowns of *Sea-kale* plants; pots may then be set over a portion of the plantation, and be covered with leaves as they are collected; if required for use in a short time stable dung should be used. In gathering the leaves of *Spinach* the beds should be trodden upon as little as possible, as the growth is injured by having the soil so consolidated about the roots; where it is sufficiently light and dry for the purpose the surface of the soil should be loosened-up. The past week the weather has been very unfavourable for out-door operations. As little as possible should be done on the ground when wet, as stiff soils are greatly injured thereby. Look over Onions and other culinary roots, and pick out all that are any way decayed. Remove all decaying and damaged Carrots, &c., from the root-house. Prepare suitable places for a supply of Turnips, *Celery*, &c., being stored-up on the first approach of severe weather. Potatoes, if kept in a house, and especially if raised in rather a wet state, should have flues formed of faggots, &c., passing through the heaps. When sufficiently dried, the draught of air may be stopped or regulated at will. When the flavour of newly-raised Potatoes is preferred to having them like a ball of flour, a quantity of earth, neither dry nor wet, may be sprinkled amongst them.

FRUIT GARDEN.

Prune and nail Vines and other fruit trees as before recommended. Fig trees in some situations will require to be protected. This may be done in a variety of ways, but I prefer gathering the shoots into several bundles after being unnailed, and then wrapping mats round them. The present changeable weather will furnish an opportunity of examining and removing all decaying fruit from the fruit-room. Those slightly specked should be taken out and reserved for present kitchen use, as otherwise the atmosphere of the room would become so tainted as to hasten the decomposition of all the stock.

FLOWER GARDEN.

Chrysanthemums will now be in perfection in most places, therefore take every means to preserve their beauty as long as

possible. For some of the very tenderest kinds of Roses some protection will soon be necessary. Also get in a stock of Briars for budding upon next year, for unless these are planted before spring they seldom furnish strong shoots for early budding. With weather like the present all new work should be pushed forward with vigour, and if the soil has been properly prepared by draining where necessary, as should always be done before planting, there will be much fewer failures from planting now than if the work is delayed until March. Where, however, the ground to be planted is of a harsh clayey nature, and in an unkind state at present, it will undoubtedly be better to defer planting until spring. Soils of this nature should always be dug or trenched some considerable time before planting, as neither draining nor anything but exposure to the action of the frost will bring them into a fit state for planting. Roll walks and lawns occasionally to keep them firm and smooth. There will be comparatively little to be done in the flower garden at present, except sweeping and cleaning, and any spare time will be well spent in going over the stock of plants in pits for next season's use, removing every decaying leaf, and where the surface soil has become green, removing this and top-dressing with sandy loam. There is nothing so unfavourable to these plants at this season as damp, therefore take every opportunity you can of admitting fresh air. Beds of choice bulbs should be protected by a coating of leaf mould; also cover the roots of Erythras, Alströmérias, and similar plants. Continue to plant, prune, and dig as before recommended.

STOVE.

Where plants are placed on a trellis within 2 or 3 inches of the flue, they should be examined carefully every day, as they often want water, although they appear moist on the top; very small plants in small pots should never be placed in such a situation. I have before adverted to this subject, and I do so again, knowing that many plants are lost by having the roots at the bottom of the pot dried-up.

CONSERVATORY AND GREENHOUSE.

These departments should now be gay with Chrysanthemums, after which forced flowers and autumn-sown annuals will come in. It is too often the case that a quantity of useless plants are harboured here to the exclusion of those which are far more serviceable for decoration.

PITS AND FRAMES.

Commence forcing Roses and other shrubs; smoke them about once a fortnight to keep down green fly. Open the frames containing plants when the weather is favourable, but never have the lights off when wet.—W. KEANE.

DOINGS OF THE LAST WEEK.

FRUIT AND KITCHEN GARDEN.

The weather still continues very unfavourable for out-of-door operations. The ground is saturated with wet, and is not in a condition to be moved by digging, trenching, or taking up roots. Some persons leave such roots as Parsnips, Beet, &c., in the ground and dig them up as they are required, but it is much better to lift them in fine weather and store them in sand in a back shed or some cool dark place. By doing this much trouble will be avoided in the future, such as digging up the roots in very wet weather, or when the ground is hard with frost.

We dug-up the *Sea-kale* roots, selecting the large and medium-sized ones for forcing, and laid the small roots in the ground to plant out in the spring. A dozen roots, more or less, are planted in an 11-inch pot; the pots are placed out of doors and covered with cocoa nut fibre refuse; they are then ready to be removed to the forcing houses as required. Any house will do where the night temperature is from 50 to 65°. In the lower temperature the roots will be longest in starting, and will grow more slowly, but the *Sea-kale* will be of much better quality. We have tried different methods to blanch it. One is to stop the holes in the bottom of an 11 inch pot, and to invert it over that in which the *Sea-kale* is planted; but the preferable way is to plunge the pots in cocoa-nut fibre refuse, placing it over the crowns of the plants to the depth of 9 inches. This is a better and more cleanly way of forcing *Sea-kale* than the old one of placing boxes over the crowns, and then making a dunghill on the bed. This last-named method is very uncertain, and involves a vast amount of labour, especially when, as is sometimes the case, the heating material has to be dragged a considerable distance. The method should only be adopted when no other means are at command.

Pruning and placing sticks to *Ros. hirsuta*. Where these are trained by a single stout stick being placed to each plant, the sticks very soon decay at the surface of the ground, and generally require to be looked over every year. If it were not for the trouble of looking over the plants to renew the sticks, and the difficulty in some parts of obtaining sticks at all, this is a good way to train Raspberries. A better and more economical way is to plant in rows 4 feet apart, and 15 inches between the plants. The canes can be trained to wires fixed in a horizontal

position by being strained to iron supports at each end of the rows, and kept at a uniform height from the ground by means of sticks placed at intervals along the rows. There ought to be two wires—one at 2 feet 9 inches, and the other 1 feet from the ground line.

FRUIT AND FORCING HOUSES.

It may be just necessary in passing to allude to the *orchard-house trees*. They are now in an exposed position out of doors, placed on a hard bottom, so that worms are excluded. The pots are plunged in cocoa-nut fibre refuse up to the rims first, as, though they are not removed outside before the first week in October, it is very often necessary to water them for a week or two after; but on the first appearance of frost some fresh material is placed over the surface of the soil of the pots, in such a manner that it slopes from the stem of the trees to the rim of the pots, and will throw off the water which falls in the form of rain or snow. Notwithstanding this precaution, the roots become saturated with wet, yet after seven or eight years' experience we have not failed to obtain a good crop of fruit every year. More orchard-house trees are injured by excessive dryness at the roots than excessive wet.

Cucumbers are looking very well and bearing handsome fruit. A minimum temperature of 65° can be kept up in the houses in the coldest weather; the plants are trained about 10 inches from the glass; there are also ample means for ventilating both at the front and back of the house. The means employed to ventilate the houses are not always satisfactory; in some cases the front sashes are arranged so that they cannot be opened without admitting too much air, and in cold weather it is deemed prudent not to open them at all. The best way is to have the sashes hung on centres, and open them all at once with a rod and lever, so that they can be opened to admit the smallest chink of air—just enough to cause a circulation. The plants have been fortunately free from thrips, but red spider has attacked them; this is kept in check by occasionally syringing the plants with water which has been warmed by being in pots placed against the hot-water pipes during the night. The best time to syringe them is in the morning just before the ventilators are opened.

Pine Apple plants, especially those just throwing-up fruit, require careful treatment; where the plants are in large pots they will seldom require water—that is, if they are plunged in a tan bed. Some growers prefer to place the pots merely on the surface of the bed without plunging them, and where this is done, owing to the evaporation from the pots more water will be required. In all cases better give too little rather than too much water. Our plants are watered sparingly, and the atmosphere of the houses is kept comparatively dry. Where fruit is throwing-up and swelling, many Pine-growers would have a night temperature of from 65° to 70°, and where this is the case more atmospheric moisture would be necessary. In cold nights the houses here fall to 55°. Dessert *Oranges*, such as Tangierine, Maltese Blood, and St. Michael's, ripen well in the same temperature, and are of excellent flavour. When our Orange trees were bought-in from the nursery they were infested with brown scale, and until quite recently this had been a constant source of annoyance. The trees were repeatedly washed with soft soap and water, and this, with a thorough syringing twice a-day during the summer months, has seemingly eradicated it.

PLANT STOVE AND CONSERVATORY.

Allusion was made some time ago to the usefulness of the winter-flowering *Calanthes* for decorative purposes. They should be in every collection of stove plants. The different varieties of *C. vestita*, in which white predominates, contrast well with the gorgeous spikes of pale red to crimson flowers of *C. Veitchii*. This last is a hybrid raised by Mr. Dominy, and introduced to the public by the Messrs. Veitch, of Chelsea; it can now be obtained at a cheap rate, and is by far the best of the *Calanthes*. They may be grown three bulbs in a pot, or thirty in a 15-inch pan or pot; if very large pots are used these should be filled rather more than half full of potsherds. The *Platanus* are also very pretty; at this season, like the *Calanthes*, they lose their leaves before the flowers expand. A lower temperature suits them, and they should have abundant supplies of water during the period of growth. As this is the time to repot them, a few words on this essential point in their culture may be useful. They begin to grow immediately the flowers fade, and that is the time to repot. The pots should be half full of crocks, over these should be placed some sphagnum moss; the compost to consist of turfy peat two parts and one part of sphagnum, with some potsherds broken small mixed with it to keep it open. All plants requiring a good supply of water should be potted in an open compost, and have plenty of crocks put in for drainage. *P. maculata* is the most beautiful. *P. liginaria* and *P. Wallichiana* are also very handsome. Potted *Cypripedium*; and some other terrestrial Orchids, including the beautiful *Cape Disas*. *Cypripedium spectabile* is one of the most beautiful of the *Lady's Slippers*, and is very easily grown as a pot plant; like most of the Orchids it requires plenty of drainage, the pot should be filled half full; very fibrous loam and a little

fibrous peat added to it is the best potting material: some sand is added to it to keep it open and porous, a few lumps of sandstone mixed with the soil are also beneficial. The surface of the soil should be covered over with moss, which is kept in a growing state by being frequently sprinkled. The plants are placed in a heated span-roofed pit from which frost is excluded during winter.

Chrysanthemums which are grown for the quality of the flowers have required some attention, the florets have been very liable to damp and decay. These have to be removed as soon as they are perceived, to prevent the decay from spreading. Care must be taken in tying and training the specimen plants, and dusting with sulphur wherever mildew appears.

FLOWER GARDEN AND SHRUBBERY.

In this department there is plenty of work waiting to be done when the weather is suitable. The weather, which would not permit work on the flower beds, was very suitable for removing shrubs from one part of the garden to another. Many amateurs and some gardeners are not careful to save the roots of their plants when digging them up. All deciduous and evergreen trees will pay for a little extra labour in digging round and underneath the roots. The best way is to form a circle round the plant to be removed; if the plant is large the radius must also be large. Then with digging-forks throw-out a trench outside the circle formed round the roots, and when the trench is sufficiently deep, work underneath the ball of earth. If the trees or shrubs are choice species and difficult of removal, mats should be wrapped firmly round the ball to keep the mould from parting from the roots. The place where the plant is to be put in should have been got ready previously, so that it will not be necessary to further injure the roots by placing the tree on the surface of the ground, and then have to wait until the hole is dug-out.

Have finished lifting the *Gladiolus* roots, and have put them away in a dry place for the winter, at least those roots that are dry. It is necessary to thoroughly dry the roots first. Where this has not been done thoroughly they have been injured. When the corms are lifted, cut the stalks off at once close to the crown of the root, and place each sort separately in a flower-pot. The pots can be taken into a vinery or dry shed, where the old corms and small ones may be separated. If the small bulbs are required for increase they may be saved and potted afterwards.—J. DOUGLAS.

TO CORRESPONDENTS.

* * We request that no one will write privately to any of the correspondents of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to *The Editors of the Journal of Horticulture, &c.*, 171, Fleet Street, London, E.C.

N.B.—Many questions must remain unanswered until next week.

NORWEGIAN FIRMS (Norway).—We are sorry we cannot give you the distinctive character of the Norwegian and Swedish houses; but if you write to Hansen of Christiania, or Lundsrom of Frosunda, you will obtain all you require to know.

HOT-WATER ENGINEERING (E. Smith).—We know nothing about books on the subject.

BLACK FUNGUS ON ROSE TREES (Cota Beta).—If your Roses are budded on the Briar we fear your soil and situation are not suitable; if on the Manetti stock we should advise you to lift and replant, adding good well-decomposed manure. Black fungus and orange fungus seem much on the increase. Syringing with a solution of soft soap, and sulphur is one of the best remedies; and as fungus generally arises from deficient root-action, watering with liquid manure will be of great service in checking its spread.

STORING APPLES AND PEARS (E. J.).—The Apples would keep in barrels quite as well without as with the packing in sand; thoroughly dried straw is much better, as in sand the fruit is apt to become insipid. They may be packed in casks without straw, in either case looking them over at the end of two or three weeks, and removing any that show symptoms of decay. They may then be repacked, and will keep plump until fit for use. Pears keep very well in boxes if stored in silver sand or in dried straw.

POTTING BEDDING PLANTS—PLANTS FOR LOW WALK (Idem).—Leaf soil is preferable to rotten manure for mixing with the soil for bedding plants, but well-decayed stable manure is good. We use both—one-third of leaf soil and one-fourth of well-decayed dry manure. For covering a low wall we should prefer Ivy to Virginian Creeper, as the former is evergreen. Employ the small-leaved kinds of Ivy, as *Hedera tatarica*, *H. rhomboides variegata*, and new Silver-variegated or elegantissima. The Virginian Creeper you had named to you was probably *Ampelopsis Veitchii*, a very neat growing sort, adhering to the wall with the tenacity of Ivy. It is very pretty, especially in autumn, when the leaves are about to fall. There is an advantage in placing silver sand around and over the bulbs of Hyacinths, &c., for it saves them from decay.

IVY NOT THRIVING (A. B.).—The most probable cause of the wall becoming bare at the bottom is want of attention in the early stages of growth to securing shoots for the lower parts of the wall. If you cannot bring down some shoots we should plant young plants and train the shoots as they grow so as to cover the lower part of the wall, enriching the soil with some leaf soil or thoroughly-rotted manure pointed-in with a fork. Water freely in dry weather, and sprinkle the wall every evening in hot weather with water,

so as to encourage the growth of the Ivy on the bare parts. Keep the old Ivy well cut-in every spring, cutting-in closely every part, and nail the shoots to the wall as they grow.

MICE EATING CROCUSES (J. B.).—Wet the Crocuses, place them in a shallow box containing red lead, and thoroughly coat them with the lead before planting. It is said that placing pieces of the Crown Imperial bulb near where the corms are planted will save the Crocus from the depredations of mice.

NEWLY-PLANTED ROSES (E. P. B.).—Melt the ground about the plants with littery manure 3 inches thick, and in February cut each strong shoot back to six buds, the moderately strong, to three or four, and the weak shoots to two eyes each. The Roses in pots should be potted at once, and placed in a cool house or cold pit, and in January should be placed in the cool greenhouse, or now if no fire heat is employed. Prune them at the time of introducing them, or in January, limiting pruning to the removal of the points of the shoots, and cutting-out the old weak wood.

WINTER CUCUMBER CULTURE (H. P.).—Plants from seed sown now will not fruit at the end of January, or will only bear indifferently, but they will come into bearing in February or March. The distance apart will vary with the extent to which the shoots are limited; 2 to 3 feet will be sufficient. The depth of soil also varies with the width of the bed, 15 inches to 24 inches being a suitable depth. There is no exhaustive work on Cucumber treatment; but the subject has from time to time been fully treated of in our pages.

CYCAS REVOLUTA CULTURE (J. B.).—It requires to be grown in a stove, or will succeed in winter in a warm conservatory. Repot in spring when it begins to grow, and encourage growth with a moist heat, copious sprinklings overhead, and thorough supplies of water at the roots. After the growth is complete avoid wetting the fronds, keep the plant moderately dry at the roots in winter, and perfectly so overhead after the growth is complete. We consider the cause of the leaflets now turning yellow is moisture on them, either from condensation or sprinkling overhead. Good drainage is necessary, and a compost of rich, turfy, light loam, and a third of sandy fibrous peat. It is possible that the leaflets may fall from a deficiency of moisture whilst they are being formed.

FUNGUS IN TAN BED (Wm. C.).—Frequently stir the parts infested with a small fork, and sprinkle with quicklime. The moving of the tan about is, however, the best remedy.

HEATING FROM ROOM FIRE (L. W.).—The cheapest plan would be to have a flue running along one end and the front of the greenhouse, the fire or chimney from the fire rising about the height the fire is from the hearthstone, including the depth of the fire, and then along the flue in the greenhouse. A shield of sheet iron to close the part above the fire in the room, and coming down to the grate, would give you more draught when you wanted to increase the temperature in the greenhouse, as in a cold frosty period, and with a damper in the chimney from the greenhouse flue, the heat could be regulated at will. Another plan, but not so economical, would be to have a boiler at the back of the fire, with a 3-inch flow and return along the front and one end of the greenhouse. This would be the safest and best mode of heating, having a flue under the boiler, which could be used in severe weather to give the extra heat required. You would need a flow-box or feeding-cistern—better the latter, which should be directly over the boiler or near to it, and the supply should be regulated by a ball-tap.

VINES FOR LATE VINERY (W. H.).—The Vines planted against the back wall of your leaf-to vinery will not ripen well, and they kept badly late in the season. White Tokay and Black Hamburg have succeeded well with us. The White Muscats do badly, nor should any shy-bearing sort, like Gros Guillaume, be planted. We also grew some very fine, well-coloured fruit of Alicante on pot Vines trained to the back wall of a vinery, where the rafters were nearly covered with Vines.

ROSE-TREE PLANTING (S. C.).—The Roses planted after wet weather on a fine day, succeeded by a week of rain, need not be taken up and replanted in dry weather.

MR. E. FISH (J. G.).—Mr. Fish had promised us to have his photograph taken, but his sudden death prevented the fulfilment of the promise.

VARIOUS (H. G.).—*A. Stipa pennata*, Feather Grass. *c. Stellaria media*, *Mercurialis perennis*, Dog's Mercury. Your specimen is a male plant. We do not know the Pelotas berry. The specimens you inquire for can be obtained through any of the chief nurserymen and seedsmen who advertise in our columns.

DISA GRANDIFLORA CULTURE (Highfield).—The great object to be secured is luxuriant growth with abundance of bloom. To obtain this it requires liberal treatment. Give it a plentiful supply of moisture; do not even allow it to become dry during the period of rest, which is short compared with that of growth, and to prolong it by artificial means greatly injures the plant. This is the season when it requires our special attention. November, as a rule, is the spring-time of the *Disa*—that is, for healthy plants; those in a weakly state may be somewhat later, and, on the other hand, strong plants a little earlier. To make the treatment as plain as possible, we will suppose the plants to be healthy and vigorous; in this case pot at once, if needed at all. In the after-treatment we must take a lesson from nature. Coming from the Table Mountain, of which it is spoken of as the pride, it is at once evident it does not require a hot temperature; as long as frost is excluded that will suffice. Where there is no cool house it will do well in a cold pit or frame.

CLUB ROOT (J. H. E.).—Your Cabbages and Broccolis are attacked by what gardeners call "club root." The small clubs or knobs on the roots are caused by the female of a small weevil (*Curtulio pleurostigma*), which punctures the roots and deposits in each puncture an egg. The chief cures for it are examining the plants before planting, removing all the small clubs or knobs, if any, and killing the small grub weevil; then dip the roots in a thick paste formed of soil, lime, and soil, three parts of the latter to one of each of the former, before planting, and use good in the first watering afterwards. If a little soot and lime are put on the ground after the plants begin to grow, all the better. This weevil seems to shun all extraneous matter and ammonia. It will also be a good policy to change the Cabbage ground every year. If so looked over at planting time, and the ground is freshly and well dug, and well manured, and if soot and lime are used in watering, there will be little of the club in old or young plantations. In places where the weevil has become very numerous, it is a good plan to let the plants grow to a fair size, and to well examine them before final planting.

BEST FIFTY GLADIOLUS (—).—In his work on the *Gladiolus*, our correspondent "D. Deal," marks the following as the best flowers for exhibition:—Adolphe Brongniart, Antigone, Beatrix, Celimene, Delicatissima, Edith Dom-

brain, Eugene Scriba, Enrydice, Horace, Horace Vernet, James Veitch, Jupiter, Legoure, Madame Furrado, Madame Desportes, Madame Dombroin, Marie Stuart, Meyerbeer, Michael Ange, Mohere, Nestor, Norma, Orpheus, Phobos, Phidias, Minerve, Primatrise, Robert Fortune, Rosa Bonheur, Rosa Perfectum, Schiller, Sir J. Franklin, Ulysse, Virgile, Virgine, and Princess Mary of Cambridge. To these may be added—Benvenuto, Figaro, and Octavie of this year's seedlings. To these may be added to make up the fifty—Adanson, Arnicle, Dr. Lindley, Fulton, Hoinice, Ireme Victoria, Shakespeare, Le Poussin, Antiope, Aramis, and Ossian. The fleshy roots underneath are the old corns, and must be detached and thrown away. The small white things are the young bulbs, which should be kept for increasing stock.

PROPAGATING PIT HEATED BY HOT-WATER PIPES (A Constant Water).—As you say your pit, 8 feet by 3, has two double rows of pipes passing through it, we would advise, if one of the sets of pipes passes close to one of the side walls, that it be boarded-off, so as to impart a little top heat in midwinter if you want to do so; at the same time some contrivance ought to be adopted by placing a board or something over it, and covering it with sawdust or other plugging material after top heat is no longer wanted, which is not likely to be after the end of January. If the pipes are not at the side, the same effect may be produced by placing a draining pipe or two, or something of that kind, upon the pipes, and letting it pass through the plugging material; and this pipe could be stopped-up when not wanted by a bag of sawdust or any other material easily taken out again. Then as to the bottom of the pit and plugging material there are various opinions. Some like a hollow chamber underneath with a slated floor; while some are content to cover the pipes with coarse rubble stones, with finer ones at the top, and over that a layer of moss or something that does not decay very fast, and then the plugging material, which may be 10 or 12 inches thick, and may be tan, cocoa-nut fibre refuse, or sawdust. If the latter, the thickness need not be quite so great as in the case of tan, which is more apt to get dry at the bottom; but we have had more experience with tan than with anything else, and have found it answer very well. Sawdust, however, is more convenient for plugging small pots; and cocoa-nut fibre is also good. Whatever is used, it will be necessary to give it a watering now and then, say with tepid water, in sufficient quantity to wet it to the bottom, where it begins to dry with the heat from the pipes below. With a little care in this way we have no doubt your propagating pit will do you good service. Of course you will take care in opening it to insert cutting-pots and the like to allow as little of the chilly cold outer air as you can to get in. Such should be done in mild weather if possible, while in severe nights a little covering will be of much service.

REPORTING VALLOTA FLORIBREA (W. G.).—These plants are repotted up to the end of March. We cannot name the flower you sent, and cannot advise as to the time of potting. If an Amaryllis, it would be best potted after it has had a season of rest, dried off, and is beginning to grow; if a Hippeastrum, it would be best potted after the growths are fully-set.

DUCK-BILL APPLE (Idem).—The Duck's-bill Apple is much grown in Sussex. Another name for it is the Water Pearmain. It will keep till June, and at that season may be used either as a dessert or a culinary fruit. It is a good bearer every alternate year, and is reckoned one of the best quality.

IPOMEEA IREARI TREATMENT (M. S. N.).—It is not unlikely that the brilliant purple Ipomoea you saw on the Continent is this. You may keep the plant, or rather its root, in the sand until spring, and in February pot it in a compost of two parts light turfy loam, one part each sandy peat and leaf soil, with a sixth part of silver sand. It requires a rather large pot for the size of the root. We have grown it well in a 12-inch pot. Place the pot in a hotbed, and continue it there until the plant has made shoots 9 inches to a foot long, and then gradually withdraw it from the hotbed, and set in a greenhouse, training the shoots up the roof about a foot from the glass, keeping the plant well supplied with water. It will flower, if strong enough, in August or September. We think the Ceanothus spray you sent us is that of *C. rigidus*, but we cannot be certain in the absence of a better specimen and flowers.

GREENHOUSE BULBOSUS PLANTS FOR WINTER (Anteur).—We can only think of two—*Imantophyllum minutum* and *Schizostylis coccinea*, you having debarred us the "ordinary class of bulbs."

PEACH BORDER—QUINCE FRUIT FALLING (Mrs. H.).—The border for the peach trees ought not to be less than the length of the branches or height of trellis the trees are to cover. The inside border for planting the trees should not be less than 2 feet, better 3 feet, giving root space outside. It would be best to plant the Apricots on the back wall, and the Peach trees in front, as the latter, we presume, will be the principal object. Whether you have Apricots or Peaches on the back wall, they will not succeed after a few years unless the trees in front are kept low, so as to admit light to the trees on the back wall. The Quince on the wall probably casts its fruit through the dryness of the soil. Make holes about a foot deep with a crowbar about a foot apart when the tree is in blossom, and give a thorough soaking of water, making furrows near the hole of the tree, as making holes there with a crowbar would probably injure the roots. Fill the holes and furrows at least three times with water, allowing the water to sink in before applying more. After the water is well settled in, on the next day, level the surface with a fork, level the ground, and give a mulching 2 inches thick of short littery manure, and in a fortnight give another thorough soaking of water, but without making holes.

MANTINIA SALICIFOLIA AND ARISTOLOCHIA GRNITHOEPHATA IN WINTER (A Constant Reader). The former should be allowed to become dry, but not so dry as to endanger the vitality of the root, affording water occasionally to keep them from shrivelling. The *Aristolochia* should also be kept dry to prevent as much as possible growth from the winter. The drier it is kept the better, consistent with the vitality of the stems. So long as they are plump do not water.

CLIMBING ROSE FOR BACK OF GREENHOUSE (J. M.).—If there are no climbers on the roof, nor any plants shading the back wall of your house, it will answer for a Rose, for which you will need to make a border not less than 18 inches wide, and 2 feet deep, it being well drained, and filled with turfy loam and a fourth of well-rotted manure. The Tea-scented kinds would be most suitable, as *Marshall Niel*, *Sombreuil*, *Marie Sisley*, *Niphotos*, and *Narcisse*. Select from these.

CAMELLIAS FOR BACK WALL OF VINEY (Idem).—Camellias will succeed on the back wall of a viney having a suitable border. The best compost is the top inch of soil from a pasture where the staple is a rich light loam. Chop this up roughly, and add a fourth of sandy peat, draining the border well, and putting in the compost firm. Select from *Beali*, *Botanians*, *Mathotiana*, *Mathotiana alba*, *Monare*, *Reticulata flore-pleno*, and *Valteraredo*.

PRUNING VINES IN GREENHOUSE (E. M. W.).—The Vines, we presume, are now losing or have lost their leaves, or when this takes place they should be pruned; but we cannot make out what your proposed mode of training is; but we presume by having them with one, two, and three leaders respectively you intend to train them with one, two, and three rods, and have that number of rafters or wires for training them at 4 feet apart, which distance is sufficiently close for a greenhouse. The canes should be trained along the front to the place where you require the canes, and then up the roof, cutting each cane to within three eyes of the bottom of the rafters. If you only require three rods, then cut the strongest cane back to within three eyes of the bottom of the rafters or where you wish to originate side shoots, and cut the other shoots or canes in to two eyes each. This will give you two side shoots, on which you may take a bunch of fruit each, and train the uppermost shoot as a continuation of the main rod, and this in the following year may be cut back to within 3 feet of its origin. Particulars of treatment you will find in the "Vine Manual," which may be had by post from our office for 2s. 7½d. Keep the house cool, only excluding frost.

FUCHSIA CULTURE (Daisy).—The cultivation of the Fuchsia is given in our "Florists' Flowers," which may be had at our office for 4d., or by post for an additional postage stamp. The appearance of red spider is owing to too dry an atmosphere, and probably a deficient supply of water and nourishment at the roots.

CHRYSANTHEMUMS BUSHY (O. E. S.).—The way to secure this is to stop the plants at 6 inches; and when they have broken, and to induce shoots, the shoot may be pegged down, taking care not to break it, and the shoots resulting from the stopping may be three or more. They should be trained by pegs towards the sides of the pot, and when they have grown 6 inches should be stopped. The shoots should be pegged or tied down or cut as they grow, and disposed evenly, so as to form a well-shaped head. Stopping may be practised up to the first week in July, but not later; after this, regulating the shoots by tying out to neat stakes. Cuttings are preferable to old plants.

BEDDING GERANIUMS—TOMATOES FROM CUTTINGS (C. G.).—The Geranium that have the leaves slightly nipped by frost, and which you have placed rather close together in the vinery pit in ordinary soil, will not, should they revive, which is not unlikely, give you any great amount of cuttings in spring; but you may cut them in then, and put in any available shoots as cuttings. These will strike freely in gentle heat. We have no experience of the raising of Tomatoes from cuttings, but plants so struck would be likely to fruit sooner than those raised from seed in January. The forcing house would probably be most profitably employed in growing Cucumbers, but the small amount of heating medium would be totally inadequate for the growing of Cucumbers in winter.

WEVILS (G. S.).—Lime water in the usual proportion of 1 lb. to three gallons of water for driving out worms has no effect on these pests, nor do dressings of soot or soot water drive them away. We should be glad of the experience of our correspondent on the subject, and by what means he traps the perfect insects in April.

NAMES OF FRUIT (Thomas Clapham).—1, Pearn's Pippin; 2, Norfolk Beefing; 3, Franklin's Golden Pippin; 5, Kedleston Pippin. (*J. D.*)—*Pears*: No. 1, Cattell; 2, Easter Beurre. *Apples*: 1, Norfolk Beefing or Winter Greening; 3, Golden Harvey; 4, Gravenstein. (*E. J. K.*)—We have named six as we announced as our restricted number. Others which we recognise we will publish next week. 3, Golden Harvey; 5, Hall Ford; 7, Selwood's Reinette; 10, Franklin's Golden Pippin; 13, Parry's Pearmain; 15, Early Nonpareil.

NAMES OF PLANTS (F. B.).—1 or 4, *Arbutus Unedo*; 5, *Spartium junceum*. Remainder leaves only. (*J. H. R.*)—1, *Scopolendrium vulgare*; 2, *Polystichum angulare*. (*Sub.*)—1, *Brassia Luceana*, *Lindl.*; 2, *Maxillaria picta*, *Hook.*; 3, *Aesepia* or ally, but specimen insufficient. (*P. W.*)—*Davallia ciliata*, *Hook.* (*Fijer*).—1, *Polypodium (Campyloneuron) repens*; 2, *Davallia dissecta*; 3, *Acrostichum (Ghaphoglossum) conforme*; 4, *Polypodium stagnaticum*. (*R. R.*)—Very bad specimens. 1, *Alternanthera*; 2, *Tradescantia discolor*; 3, *Selaginella* sp.; 4, *Crassula* sp. (*J. C.*)—1, *Pteris longifolia*; 2, *Asplenium Fabianum*; 3, *Selaginella Kraussiana*; 4, *S. uncinata*; 5, *S. Braunii*; 6, *Gymnogramma tartarea*.

POULTRY, BEE, AND PIGEON CHRONICLE.

STANDARD CHARACTERISTICS.

I AM very glad that the remarks I hastily penned a week or two back on this subject have elicited some opinions on the contrary side. What we all want is truth, which we hope to see finally emerge as the fruit of free discussion; and now that two correspondents have replied directly to my previous remarks, I should like again to make such observations as occur to me in reply to theirs.

I differ seriously from the postulates assumed by "O. P. H. Z.," or at least from most of them. It may be that only one in a hundred exhibitors knows what are the requisite points in fowls; but his poultry acquaintance must be very unfortunate if it be his own personal experience which prompts the remark that "that one" does his best or his worst to mislead the others. I remember vividly the time when I, as a young and inexperienced fancier, had to glean from others information that could not possibly be obtained from books; and I remember as vividly the kindness and courtesy I met with from nearly everyone to whom I applied, though in most cases I had no personal acquaintance whatever to presume upon. And I can affirm that the same spirit exists still, for I see large drafts being drawn upon it at every show I visit. One fancier is quick to recognise the real spirit of the craft in another, however ignorant, and wherever this is found it is only to ask and have.

But further, when "O. P. H. Z." asks if it is not worth while to instruct the ignorant, I reply, "Decidedly so; but I also reply that such ignorance as he speaks of—the not knowing "what are the requisite points," is perfectly inexcusable. There is hardly

any modern work on poultry which does not at least set forth as much as this in terms plain enough for anyone with real interest in the subject to master. If there be not that real interest, all the instruction in the world is useless. There is not a single important point in any one breed about which there is any serious doubt among competent fanciers as to the correct ideal; and if it be replied, But how are the ignorant to know these points? I reply that any good book studied, or any recognised judge asked, will impart the needful information. Taking the point itself mentioned—culture hocks in Brahmas, there is not one judge nor one book which does not clearly state that they should not be hocked, and that such a feature is a grave fault; and so of the rest. The exact weight to be allowed to any fault in judging never can be fixed; but after spending several years over the matter, I assert deliberately that the vast majority of awards by our recognised judges can be harmonised. "N. Y. Z." has illustrated this point well.

It is perfectly easy for a gentleman or gentlemen to sit at a table and agree on a scale of figures. The first plan was tried in England, and the second was tried in America. But any such "parlour" scale if tested at a row of pens will be found even ludicrously incorrect, and actual awards rigidly made by it will be found monstrous in many cases. Only a few months ago the judges at a large American show were handed blank forms for every pen, in which their estimate of the points according to the American standard was to be filled-in, and the prizes given to the highest totals. One of the forms was sent me previous to the show as a proof of the improvements to be introduced; and it was announced beforehand that the birds "would be judged according to the standard." Here, then, was every condition now wished for: here was an agreed standard, which had been settled by a convention and revised by another convention, and the birds were to be judged by it. I had a letter from one of the judges after, saying that it was the most foolish thing he ever knew. They took two days of the hardest work possible; and I heard from independent sources that the awards were at least no better than usual when completed. I also know, by a letter from one of themselves, that the same judges being requested to judge the greatest show of the season, just after, in the same way, absolutely and point-blank declined to do so, saying they had had quite enough of it, and would never do it again: one trial of the plan was quite enough for them.

The letter of "DEEDS SHOW" is so courteous to myself personally, that I am sorry I cannot agree with him. I have already said that every point desired in a bird is known; and if more than this be meant, there is no one who has any right to establish a uniform standard. All the competent judges we have refuse to be bound in any such way; and I am at a loss to see, since they stand aloof, how incompetent judges are to first frame and then force such a standard upon them. What value can a standard framed in defiance of the best judges ever have or pretend to? I do not know whether any allusion is meant to an attempt which it is understood is to be made to form a committee and agree upon a standard at the Crystal Palace. If it be, I am sorry to say I cannot, as he suggests, lend any assistance to it. I should certainly like to see a genuine club or association for broad and beneficial objects, and supported by men known and respected in the poultry world. But I can hope for little from a movement notoriously promoted by some persons for their own private ends, to which so ridiculously few names at all known in the fancy have been subscribed; which makes its very first object the framing of a standard in defiance of the opinion of the very best judges we have; and which begins its work by deliberately insulting Mr. Hewitt, and not only insulting but slandering men like Mr. Blakston. Such symptoms are sufficient for me.

There is, however, a sad and serious cause underlying the complaints which have been made, to which it pains me to advert. For many months we have practically lost the services of Mr. Hewitt; and Mr. Teebay, too, is not capable of the fatigues he was. Such loss of services we have grown so accustomed to us almost to forget they might be withdrawn, and could not be easily replaced, and both the cause and its effects are enough to justify the gravest anxiety. I can only say that the matter has caused most anxious thought to many of those best competent to consider the subject, as well as to myself, long before mooted in correspondence. We want no more "agreed" standards, but we do sadly want more skilled judges; and I am not hopeless that the want may before long be in some measure supplied. If energy were expended in this direction which is wasted in ideas long since proved fruitless, good might be done: at all events, I can see no other means of mending the state of affairs.—L. WINGAT.

THE BIRMINGHAM POULTRY SHOW.

The entries for the forthcoming Show terminated on the 1st inst., with every prospect of a satisfactory result. The following are the numbers:—Poultry and Pigeons, 2325; total entries, 2943.

The aggregate is somewhat larger than that of last year. On a comparison of the figures it will be seen that the principal

changes have occurred in roots and corn; the increase under the former head being 96; while under the latter there is a decline of 25. This fluctuation may doubtless be ascribed to the fact that the past season was unpropitious for cereals, but favourable to the growth of roots. In 1872 the numbers were: Poultry and Pigeons, 2363; total entries, 2834.

SOUTHERN SHOWS AND THEIR CLASHING.

We southerners have comparatively speaking very few poultry shows; it is therefore the more galling when these clash; yet the Wilts County and the Portsmouth Show are advertised for the same date, and they must necessarily injure each other if the dates are persisted in. I understand the judges, pens, &c., for the Wilts County Show are engaged, and the schedules in print; I trust, therefore, that if the Portsmouth Committee are not as far advanced they will see the wisdom of altering their date. I have been accustomed for years to exhibit at both, and like many other small exhibitors, regret this unfortunate *contretemps*. I, therefore, appeal to Portsmouth, and hope if the arrangements are not as complete the Committee will try to alter them.—JOSEPH HINTON, *Barnminster*.

BANTAMS AT BRISTOL SHOW.

In reply to Mr. Wright's inquiry last week on the above subject, I would say it is no oversight of the Committee that there is no class for Any other variety. In consequence of our heavy losses in connection with our Show, we have from time to time cut out those classes which fill so badly as to numbers. In our November Show, 1867, we had a class for White and Any other variety. The entries were ten Whites, one Japanese, and one Pekin. The latter took the first prize and cup for all varieties of Bantams, the Japanese second, and the White the third prize. The White exhibitors were so annoyed at the two pens of mongrels, as they were called, taking first and second prizes, that we thought it best to make two separate classes in our next Show, January, 1868. The result was nine entries in the White class and four in the Any other variety. The next Show we struck out the latter class and have not since included it.—E. CAMBRIDGE.

WHERE DO THE INJURIES TO EXHIBITED BIRDS OCCUR?

I THINK, in the name of all our Committee, Mr. Hinton for his kind expressions about our Show. I want to tell him, through the pages of this Journal, that his Malay cock's tail was perfect when it left our Show. I penned his birds myself. I was most careful in putting them into the hamper, and I took them to the station last with my own hands. The cock had his tail perfect then, and perfect did the bird go away from us. I am most sorry it should have happened, but I believe these tail-pullings take place at the stations and places where the birds have to wait for trains. I will narrate a little anecdote. I was travelling to a poultry show; at one of the junctions some curious person insisted on knowing the contents of a big basket. He first peeped in through the lid, and only saw enough to make him want to see more. He took hold of the lid, and tried to make the gap larger between the lid and the basket; the string was fine; the lid suddenly opened, and a Black Red Game cock flew out of the basket and over the line into a field. The bird was at last caught, but the train had gone. That bird was "too late," if nothing worse happened to him. Again, at one of our principal stations in the middle of England I went into the parcels' office, and I found the porters had opened a basket to look at the bird inside, and had let it out on the floor for the others to look at. The bird (a Spanish cock) was wild, and it flew through a window and out its head.

These two examples show us what is done at stations. The secretary and the committee of a show often have blame to bear for tails being pulled out, when it has been done before the birds ever got to the show at all.

Now I am writing, I want to say a word or two about these "men" everyone is talking of and writing of just now. I go about to a great many shows, in fact most of them—I do not suppose any amateur attends more than I do—and I have the pleasure (for it is a great pleasure, in fact I think it an honour) to know most of the "fancy." I know the managers ("poultry-men" some style them) of nearly every known exhibitor. I have been into the show before opening with them; I have seen them under every possible circumstance, and never—not even once—have I seen any one thing which could not have been done before the whole mass of exhibitors. To pull a bird's tail out, to shake up a bird, they would about as much think of doing, I most firmly believe, as you, Messrs. Editors!

Whether it is advisable or no to let exhibitors in before the judging I will not speak of, though personally I cannot see the harm; but of all the dreadful things which are supposed to take place when the "men" are let in I do not believe one word; and

I would safely allow anyone into an exhibition, as far as my birds are concerned, for I do not believe there is one man in the "fancy" who would harm a feather of them, so high an opinion do I hold of all my poultry friends. Of course there may be "black sheep," but at the very many shows, in all countries, I have attended, I have never seen one case.—REYNOLD S. S. WOODGATE, *Tenbury, Tonbridge Wells, Kent.*

UNCONNECTED NOTES.

In Class 27, Black Red Game Bantams, at the Oxford Show, my pen, 45, was "commended." This was omitted in the catalogue, but I saw the card upon their pen and received it back in the basket. A commendation is, perhaps, not much to be proud of, but in a class of thirty-five, and only eight noticed besides, it is something.

I should like to notice, not as a disappointed exhibitor, for I am satisfied, that white deaf ears were more prevalent than I expected. In one prize pen the cock had decided traces of them, and in a highly commended pen both cock and hen.

And now, before the Crystal Palace Show comes on, may I urge the Judges not to give a prize to duckfooted birds? When I say that I have, in different years, bought a second-prize pen of Duckwing Game Bantam pullets which turned out (at least one of them) duck-toed, and last year the only prize pen of Black Reds in that large Bantam Selling class, in which the cock was badly duck-toed, I do not think the protest needless. Of course *cutcut emtor*; but still you do trust a good deal to judges' opinions, and no doubt I did not look at the birds as closely as I should have done.

And now I wish to notice a curious point, also in a Crystal Palace prize bird of last year—viz., the second-prize Silver-Grey Dorking cockerel. I bought him and he was (alas!) a fine bird, but he broke a toe, got sickly, and during his moult has had to be killed. Had I, however, read a passage in the last number of Wright's "Poultry Book" before his death, I would have endeavoured to keep him alive longer. The passage I refer to is on page 500, and relates to *Gallus Bankiva*, "The neck-hackles when first moulted are replaced not by the true hackles, but by short dark grey or black feathers, which remain for two or three months before they are replaced by the new hackles." Mr. Wright says that he has never been able to find these in any breed but Game; now this Silver Grey Dorking moulted his neck-hackles, and they were being replaced by short squarered black feathers, and I did not see on examination any of the true silver hackle coming. I was therefore the less inclined to take much trouble with him, as I thought him useless for breeding Silver-Greys, even if he should have recovered, which seemed more than doubtful. As I have plenty of his stock left I shall be able to see if any of them develop a similar tendency in moulting.—E. SPENSER TIPPEMAN, *Chalderditch Vicarage, Brentwood.*

GREAT YARMOUTH POULTRY SHOW.

This was held at Yarmouth, in the Drill Hall, on Wednesday and Thursday, the 5th and 6th inst. The Hall is an excellent one for the purpose, being capacious, and the light well diffused. The pens were of a very substantial kind, being made of wood and rod iron with sliding doors, and these are intended to be let out for hire. The Show was open to the public for two days, but the previous day had been set apart for judging only, a mistake which we have reason to believe will be rectified for another show; but notwithstanding this drawback, the Committee was well patronised in point of entries, and though many of the best exhibitors were represented, yet the local element was well to the front, and showed a most decided improvement in the birds over those shown last year; in fact, so close was the race against some of the crack birds, that a single point would have decided in favour of those of the locality.

Single *Game* cocks were first on the list, all colours being shown together, and among them were some good birds. The Black Red cockerel to which the cup was awarded, showing fairly that that variety is on an improving march, it being long since so superior a bird was shown; second was a Brown Red cockerel; and third an old cock of that colour; the former, a well-moulted bird, being a little shy or too wild for the show pen. In single hens all were Brown Reds of this year, and the whole class good; the competition in the first three being so close as almost to suggest a toss-up for place. *Game* cock and hen was a poor class, but the winners all Duckwing, good, the two first being grand in colour but somewhat soft, while the third was the best cock in the class, but shown with a bad hen. *Duck wing* good in colour, large, and well-formed, were first; second, Dark; and third, Silver-Grey. *Spanish* poor, if we except the two first pens, the first of which were a grand pair of chickens. *Cochins*, single cocks, were first a grand old Buff; second, Buff; and third, Partridge. Hens were also first a Buff, second a White, and third a Partridge, all being capital birds of their kind. In Cochins chickens the first were capital Buffs, though young, the others Partridge but undeveloped.

In *Brahmas*, single cocks, an old bird stood first, and cockerels second and third, the whole being good and the competition close. In hens of that variety, the cup for the section was awarded to a grand old hen, large, good in pencilling, and well developed; the second-prize hen falling little short in point of quality, but not in as forward a state; the third also being a hen. Light *Brahmas* were single cocks, a large well-marked cock first; second a good bird but lost in colour. In hens a young bird of moderate size but grand marking was first; a large hen, but out of condition, second; and third a fair pullet. In the chicken class Dark were first, and Light second and third. *Hamburghs* were not numerous nor the quality good, if we except a few pens. In *Sprangles*, Golden won the cup; the Silver not proving up to the mark, although with the exception of the tail-hackle of the cock in the first-prize pen of the latter variety they were good, but in this point he was wanting, being entirely free from spangling. Two pens of the Gold-pencilled were very good and close in points, and the cup for Pencilled awarded here, while only the first in Silvers were up to the requirement. Black *Hamburghs* were mostly white in the face, though the first and second were grand pens. *Bantams* (Game), Black or other Reds came next; but we were disappointed with these, for as a class they proved poor compared with what might have been expected, although most pens contained one good bird. The first and third going to Black, and second to Brown Reds. *Game Bantams* (Any other variety), were much better, and the cup awarded to a grand, close-feathered pen of Piles; the second being also capital Piles but rather dirty; the third being very promising Duckwings. Black Bantams were very good, but the White faulty in comb; and in the Variety class were some good Golden Sebrights, and the first and second prizes were awarded to that variety. In the class comprising breeds not before mentioned, *Creve-Coeurs* stood first, Gold Polands second, and Malay chickens third. The Selling class for cocks was very large, and many birds were noticed; a very good Partridge Cochin winning first, a promising Silver-Grey Dorking cockerel second, and a Dark Brahma third, the local cup for several classes being awarded here to a fine Dark Brahma cockerel. Hens were also numerous, and many were very good; and here *Brahmas* were first, Partridge Cochins second, and Silver-spangled *Hamburghs* third; and in *Ducks*, *Ronens* won all the prizes.

PIGEONS were a nice collection, some of the classes being good. The cup for the best bird in the Show going to a handsome Black Carrier cock, although we are sorry to say some of the best birds in this class came too late for competition. The point cup was won by Mr. Fulton. In *Carriers*, single hens, a grand Black was placed first, and the class was good. Young Carriers were a strong class, and some of the birds especially good, the first-prize Black, which also won the local cup, being a strong bird; the second also a very promising hen, and the third a cock. Pouters were a grand lot; a slim-built White being first, a White also being second, though a little dirty. *Barbs* were a very good class, the first-prize Black cock running very close for the cup; while in young birds were some birds that will, no doubt, be heard of again; the first being a Yellow, second Red, and third Dun. *Tumblers*, Short-faced, were also a good class. The first in this class being awarded to an Almond cock, the second to a Red Whole-feather, and third to an Almond. *Fantails* were very good, the first being a large tailed bird but not as good in carriage as the second and third, yet all three did credit to Newark, which is the home of the Fantail. *Dragoons* were, first Yellow, second Blue, both pairs being of the strong-built kind. In *Anticeps*, Silver Duns won all the prizes; and in the Variety class, White African Owls were first and third, and a most beautiful pair of Black Trumpeters second. The Selling class was very large, and some good birds were in at easy prices.

THE CANARY classes were fairly represented, and in the Norwich classes the Derby blush was apparent on the winning and some other specimens, and fairly ran off with the awards; this section was very good; the Crested class being one of the best, while the Ticked were a nice lot. Even-marked *Jonques* had also some capital four-pointed birds.

As is often the case, a great drawback in poultry and Pigeons was the late arrival of many baskets, some even arriving as late as five o'clock on the day on which the birds were judged, and in consequence too late for competition.

GAME—*Black-breasted or other Reds*.—Cock—1 and Cup, J. R. Fletcher, Stoneleigh; 2, H. E. Martin, Fakenham; 3, J. Chester, Nantwich; 1 and 2 Local, S. J. F. Stafford, Yarmouth; *he*, H. E. Martin; S. Matthew, Stowmarket; J. Andrews, Worcester; J. R. Fletcher; *c*, E. Bell, Burton-on-Trent; T. & E. Fringe, Nantwich.

GAME—*Black-breasted or other Reds*.—Hen—1, S. Matthew, 2, J. R. Fletcher; Local Cup, 1, 2, and 3, S. J. F. Stafford; *he*, J. S. Pearson, Great Melton; E. A. Leeds, Embsay; H. E. Martin; S. J. F. Stafford; *c*, E. W. Laxton, Nantwich.

GAME.—*Any other variety*.—1, W. F. Entwistle, Westfield; 2, S. Matthew, 3, J. Fletcher; 1 and 2 Local, W. Durant, Yarmouth; *he*, E. W. Southwood, Fakenham; *c*, J. Andrews; H. E. Martin.
GAME.—1 and Cup, Henry Lingwood, Barking, Neatham Market; 2, E. Hooper, Calne; 3, T. & H. Heath, Norwich; *he*, F. Parlett, Great Baddow; E. W. Southwood; A. S. Clarke, Lowestoft.
SPANSOL.—1 and Cup, R. Newbit, Epworth; 2, H. Wilkinson, Repton; 3 and 1 Local, R. Beazor, Yarmouth.

COCHINS.—Cock.—1 and Cup, Lady Gwydyr, Ipswich. 2, Henry Lingwood, 3, R. S. Woodgate, Pembury, he, T. & H. Heath; Major Bignold, Norwich, he.—1, Lady Gwydyr, 2, R. S. Woodgate, Local 2, Misses E. W. Birch, Yarmouth. 3, Mrs. Pryor, Weirton, he, T. Sherwood, Crowfield, Needham Market; P. Passmore, Northampton.

COCHINS.—Chickens.—1, Lady Gwydyr, 2, Mrs. E. Pryor, 3, T. M. Derry, Gedby, he, Major Bignold, c, J. J. Watson, R. Fulton, London. BRAHMAS.—Dark.—Cock.—1, Lady Gwydyr, 2, 1 Local, and Local c, G. S. Pearson, Yarmouth, 3 and 2 Local, W. J. Nutman, Yarmouth, he, W. Brunton, Fast Derham; 1 cv, J. G. B. Knight, Dunbury; W. Mansfield, Cambridge; F. Fulton, 3, W. Leaswell, Early Wood, Bursfold, he.—1 and Cup, Dr. B. Holmes, 2, L. Wright, Local 1 and 2, W. J. Nutman, W. Harcourt, he, W. Erntun; F. Kendrick, jun., Lichfield; E. Pritchard, Tettenhall; W. J. Nutman; T. L. Nash, Spongton, c, W. J. Nutman (2); L. Wright; O. E. Cresswell.

BRAHMAS.—Light.—Cock.—1 and Cup, H. M. Maynard, Ryde, Isle of Wight, 2, P. Haines, Padraue, Liss, 3, Rev. N. J. Kiddle, Newbury, he, R. Fulton, he.—1 and 3, F. H. nes, 2, Lady Gwydyr.

BRAHMAS.—Any variety.—Chickens.—1, Dr. Holmes, 2, P. Haines, 3, Lady Gwydyr, c and 1 Local, G. S. Pearson, 2 Local, W. J. Nutman, he, Rev. J. G. B. Knight; T. L. Nash.

HAMBURGH.—Goldenspangled.—1 and Cup, J. Robinson, Garstang, 2, C. Parsons, Wolverhampton, 3, T. May, Wolverhampton, Silverspangled.—1, Ashton & Houth, Mottram, 2, J. Robinson, 3, J. Walker, he, Rev. F. Tearle, Newmarket.

HAMBURGH.—Goldenspangled.—1 and Cup, W. Speakman, Nantwich, 2, C. J. Row, Melkoth, 3, R. Newbitt, 1 Local, G. S. Pearson, 2 Local, J. Hall, jun., Yarmouth, he, J. Robinson; A. T. Faulkner, Thrapston, c, T. Brook, Holmfirth, Silverpencilled.—1, J. Robinson, 2, T. Hanson, Kighley, 3, R. Newbitt, he, J. Carr, Swansea; A. Stebbings, Lowestoft.

HAMBURGH.—Black.—1 and Cup, R. S. S. Woodgate, 2, J. P. Case, Fakenham, 3, W. Cutlack, jun., Laleport, Ely, 1 Local, T. A. Wright, Yarmouth, he, R. Newbitt, J. Robinson.

GAME BANTAMS.—Black or other Bant.—1, G. Garrod, London, 2, W. F. Entwistle, 3, W. B. Foster, Ipswich, 1 Local, G. S. Pearson, 2 Local, W. Durrant, he, T. J. Miller, jun., Fakenham; W. Baskerville, Manchester, R. Newbitt; G. S. Pearson; W. B. Jeffries, Ipswich (2); W. F. Entwistle; W. F. Addie, Preston; J. Andrews, c, W. B. Backeville; G. S. Pearson; Master C. Crossland, Wakefield; J. Andrews; J. R. Fletcher.

BANTAMS.—Any other variety.—1, Cup and he, W. F. Entwistle, 2, R. Wingfield, Siboury, 3, J. R. Fletcher, c, J. Andrews.

BANTAMS.—Black or White.—1 and Cup, R. H. Ashton, 2, J. S. Pearson, 3, T. E. Burple, Lowestoft, 1 Local, W. J. Nutman, 2 Local, W. Bignold, Yarmouth; Bristol, W. Adams, Ipswich; E. H. Ashton; Rev. F. Tearle; J. R. Fletcher, R. Tidlow, Halesworth; W. J. Lincoln, Any variety.—1, W. Stringfield, Lowestoft, 2, M. Leno, Markyate Street, Dunstable, 3, R. S. S. Woodgate, he, R. S. S. Woodgate; Hon. Mrs. Paget, Hoxne, scale, W. Durrant.

ANY OTHER VARIETY.—1, Cup, and c, W. Cutlack, jun. (Creve-Coeurs), 2, G. W. Boothby, Louth (Golden Polands), 3, T. S. Rooth, Chesterfield (Malays), 1 Local, A. S. Cooper, Yarmouth (Boudans), 2 Local, R. Barewood, Yarmouth (Silver Pheasants), he, A. Long, Bromley Common (American Fowls), he, Rev. N. J. Bidley (La Fleche); J. Robinson (Polands or Creves); A. S. Cooper (Houdans); E. Langton, Hexton, Amphill (Creve-Coeurs).

SELLING CLASS.—Cock, Cockerel, or Drake.—1 and Cup, Lady Gwydyr, 2, Wren & Page, Lowestoft, 3, Rev. J. G. B. Knight (Dark Brahma), 1 Local and Local Cup, W. J. Nutman (Dark Brahma), Extra Local 1, J. N. Waite (Rouen Drake), he, W. Howebn, Shadingfold, Wainford (Dark Brahma); J. & E. Prince (Blue), he, T. S. Rooth (Malay); C. Sayer (Black Red Game); C. Denton (Brahma); Mr. F. A. Eeles (Bronze Common (Dark Brahma)); T. Saragat, Nantwich (Brown); c, W. J. Nutman (Dark Brahma); F. Parlett (Rouen); P. Passmore (White); ch, J. H. E. Martin (Game); T. L. Nash (Buff Cochins); T. M. Derry; J. N. Waite (Rouen), c, T. & H. Heath (Silver-Grey Dorking); J. W. Buckle (Black Red Game Bantams); W. J. Nutman (Dark Brahma); A. Fenley (Black Bantam); W. Rayner (Pile Game); E. Cox, Gorleston, Yarmouth (Roulan).

SELLING CLASS.—Pullets, or Ducks.—1, Col. J. Cockburn, Bracondale, Norwich (Dark Brahma), 2, T. M. Derry, 3, J. B. Ely, Lowestoft (Silver-spangled Hamburg), 1 Local, G. S. Pearson (Dark Brahma), 2 Local, Misses E. W. Birch (Buff Cochins), he, T. Love, Ringsborough, Northampton (Gold-spangled Hamburg); C. W. Laxton (Brown-breasted Red Game); G. W. Boothby (Golden Polands); Wren & Page; Lady Gwydyr, he, T. & H. Heath (Silver-Grey Dorking and White Cochins); G. S. Pearson (Dark Brahma); B. Beazor (Black Spanish); J. J. Watson, Cringfold, Norwich (Black Red Game); R. Hare, Elmham, c, Nutman (Brown Red Game); E. A. Leeds (Brown Red Game); W. J. Nutman, Yarmouth (Dark Brahma) (2); Misses E. W. Birch (Buff Cochins); T. L. Nash (Buff Cochins); J. B. Ely (Silver-spangled Hamburg).

DUCKS.—Aylesbury or Rouen.—1, F. Parlett, 2 and 1 Local, J. N. Waite, 3, J. Wright, Normansstone, Lowestoft, he, J. S. Pearson; Misses E. W. Birch; J. Wright, Any other variety.—1, J. N. Waite (Wild).

PIGCONS.

CARRIERS.—Cock.—1 and Cup for best pen in Show, R. Cant, London, 2, J. Chesters, 3, L. Wren, 1 Local, 2 Local, and c, G. S. Clements, Yarmouth, he, R. Fulton; H. Yardley, Binmusham; H. M. Maynard, he.—1, L. Wren, 2, H. M. Maynard, 3 and 1 Local, G. S. Clements, he, T. H. Dows, Boston, c, R. Fulton.

CARRIERS.—Young.—1 and 1 Local, G. S. Clements, 2, R. Cant, 3, R. Fulton, he, H. Turner, Ipswich; G. S. Clements.

POUTERS.—Cock.—1, W. R. Rose, Kettering, 2, J. Hawley, Gillington, Bradford, 3, R. Fulton, 1 Local, G. S. Clements, he, H. Thurlow; G. Holloway, jun., Stroud, Gloucester, c, C. H. Eyford, Ipswich, he.—1, W. Nottage, Northampton, 2, R. Fulton, 3, L. Walker, 1 Local, G. S. Clements, he, W. R. Rose.

BARBS.—1, R. Fulton, 2, H. M. Maynard, 3, H. Yardley, he, H. Thurlow; J. Hawley, 5, G. J. Foster, (2), M. H. Toulson, London, Newkirk-on-Trent, 1 and 2 Local, G. S. Clements, Young.—1, R. Fulton, 2 and 3, H. Thurlow, 1 Local, G. S. Clements, he, H. M. Maynard; T. H. Dows.

TUMBLERS.—Short-footed.—1, J. Ford, London, 2, J. Hawley, 3, R. Fulton, 1 and 2 Local, G. S. Clements, he, R. Cant; H. Thurlow; J. Ford; H. Yardley; J. Hawley, Long-footed.—1, c, Cowies, Lowestoft, 2, J. Ford, 3, G. and W. Barnes, Lowestoft, 1 Local, W. Hill, Handforth, he, C. Cowies (2); G. and W. Barnes; R. Fulton; J. Hawley; H. W. Webb, Lower Sydenham.

FANTAILS.—1, J. Walker, 2, and 3, J. E. Lovelange, Newark, 1 Local, W. Durrant, he, W. H. Tomlinson, (2), c, R. Fulton, c, F. H. Aldes, Fakenham.

DRAGONS.—1, W. Larkins, Henlow, Biggleswade, 2, H. Yardley, c, H. Thurlow, 1 Local, G. S. Clements, he, W. Larkins; R. Fulton; A. W. Wren; G. S. Clements, c, A. W. Wren.

ANTWERPS.—1, Master C. Crossland, 2, C. F. Copeman, Birmingham, 3, H. Yardley, 1 Local and 2, G. S. Clements, he, H. Thurlow; A. Bentley; J. Hawley, c, A. Bentley; G. S. Clements.

ANY OTHER VARIETY.—1, J. Chesters (White Owl), 2, R. Fulton (Trumpeter), 3, H. W. Webb (African Owl), 1 and 2 Local, Misses (Danish and Trumpeters) he, L. Allen (English Owls), c, H. Thurlow; A. Bentley (Blue Owls); Hon. Mrs. Paget (Florentine Kunts); H. Yardley. SELLING CLASS.—1, Cup, and 3, H. Thurlow (Carriers), 2, K. Fulton (Barbs), 1 Local, G. S. Clements (Black Carriers), 2 Local, C. Rumbold, jun. (Black Carriers), he, A. Silvers, Melford (Bantams); W. Larkins (Pouters); H. Thurlow (Yellow); A. Bentley (Black Carriers); R. Elliott (Priests); J. Ford; L. Wren (Carriers); W. B. Backeville (Black); R. B. Blacker, Sunderland (Kite Tumblers); G. S. Clements (Black Carriers), c, J. Chesters (Black Carriers); W. Nottage; H. W. Webb (English Owls); C. Rumbold, jun. (Black Carriers) (2).

General Point Cup awarded to R. Fulton. Local Point Cup awarded to G. S. Clements.

CANARIES.

CLEAR YELLOW.—1 and 2, Lamplough & Bexson, Derby, Local, W. Eracey, Yarmouth, he, G. & J. Mackley, Norwich (2); Goode & Audley; C. Rumbold, jun, Yarmouth, F. Alden, Norwich, c, C. Rumbold, jun. (2).

CLEAR BUFF.—1 and 2, Lamplough & Bexson, Local, W. Eracey, he, G. & J. Mackley; C. Rumbold, jun., c, Goode & Audley, Leicester (2); C. Rumbold, jun. (2).

MARKEO OR VARIATED YELLOW.—1 and 2, Lamplough & Bexson, Local, C. Rumbold, jun., he, G. & J. Mackley; Goode & Audley, c, W. Eracey; Goode and Audley; C. Rumbold, jun., F. Alden.

MARKEO OR VARIATED BUFF.—1 and 2, Lamplough & Bexson, Local, C. Rumbold, jun., he, G. & J. Mackley, c, W. Eracey, C. Rumbold, jun.

TICKED OR UNEVENLY-MARKEO YELLOW.—1, Lamplough & Bexson, 2, G. & J. Mackley, he, Lamplough & Bexson; Goode & Audley; C. Rumbold, jun. (2).

TICKED OR UNEVENLY-MARKEO BUFF.—1 and 2, Lamplough & Bexson, Local, C. Rumbold, jun., he, G. & J. Mackley (2); Goode & Audley; C. Rumbold, jun., c, W. Eracey; C. Rumbold, jun.

CLEAR YELLOW OR BUFF, WITH DARK CREST.—1, Lamplough & Bexson, 2, F. Alden, Local, C. Rumbold, jun.

VARIATED YELLOW OR BUFF, WITH DARK CREST.—1 and he, F. Alden, 2, Lamplough & Bexson, Local, C. Rumbold, jun.

CINNAMON.—Jonque.—1 and 2, Lamplough & Bexson, Local and he, C. Rumbold, jun., Buff.—1 and he, G. & J. Mackley, 2, R. Poole, Maldon, Local, C. Rumbold, jun.

CINNAMON.—Marked or Variegated Jonque or Buff.—1, G. & J. Mackley, 2, Lamplough & Bexson, Local, W. Eracey.

FOUR CANARIES EXHIBITED IN ONE CAGE.—1, Lamplough & Bexson, 2 and he, G. & J. Mackley, Local Prize, C. Rumbold, jun.

SELLING CLASS.—1 and 2, G. & J. Mackley, Local Prize, W. Eracey, he, C. Rumbold, jun.; G. & J. Mackley.

General Point Cup awarded to Messrs. Lamplough & Bexson. Local Point Cup awarded to C. Rumbold, jun.

JUNGES.—Poultry: Mr. E. Hutton, Pudsey. Pigeons: Mr. H. Beldon, Bingley. Cage Birds: Mr. H. Thurlow, Burnham Market.

NEWCASTLE-UPON-TYNE POULTRY SHOW.

The fifth annual Exhibition was held in the Corn Exchange on November 6th and 7th, and was successfully carried out in every respect, being a marked advance on previous Shows both as regards numbers and quality.

In poultry Cochins stood first, and, though not large classes, good birds competed both in adults and chickens. In Brahmas adults had only three entries. The first-prize pen was excellent. Chickens were more numerous and very good. Dorkings were not particularly strong, and only an average lot. In Spanish the chicken class was perhaps one of the best brought together this season, many very promising pens competing. Game were good, the cup going to Brown Reds, the same colour also taking first in chickens. In the latter the first-prize pen contained one of the best pullets we have seen for some time. In Game Any other variety a grand pair of Piles were first, and Duckings second. All the Hamburgs were good, Silver-spangled chickens receiving the sectional cup. Game Bantams were by far the best represented in this department of the Show, a large number of first-class birds having been sent. The cup went to a splendid pen of Black Red chickens. In adult birds the first-prize pen contained the best cock in the Exhibition, but rather indifferently matched. In the class for Any other variety of Bantams good Silvers were first, and capital Blacks second. Ducks were numerous and good.

The Pigeons were the great feature of the Show, the entries numbering 846 pens. Single birds were exhibited throughout, except in one of the Selling classes, where a pair was required, and in a collection class, which was for four pairs exclusive of Carriers, Pouters, Almonds, and Barbs. We have seldom had to report such a collection of really first-class Pigeons which will be found to be fully borne out by a glance at the prize list, most of the leading exhibitors being represented; we would, however, suggest to the Committee that, where Judges of such experience are engaged, a division of the classes might be satisfactorily made on a future occasion.

Pouters had six classes, the cup going to a magnificent White cock, good in every point, shown by Mr. Ridley; the same exhibitor also had first with a particularly fine White hen. The other prize birds were also of very high order, the most noticeable being Mr. Harvey's Blue cock, and Messrs. Fulton and Taylor's Yellows and Reds.

In old Carriers Messrs. Taylor, Horner, and Fulton divided the prizes with capital birds; Mr. Taylor taking the cup with a heavy Black cock, admirably shown. In young Carriers both prizes went to most promising Duns.

Dragoons, Blue or Silver, were a large entry, but the class contained a great number of defective birds. The first went to a very rakish Blue; a splendid Silver taking second. Dragoons, Red or Yellow, were a much more even lot, Mr. Graham's first Yellow taking the cup; Yellow also was second, and some good Reds received notice. In Dragoons, White or any other colour, a good White was first, and a remarkably fine Grizzle second.

Short-faced Tumblers were a fine collection. Mr. Fulton took the cup with a beautiful Almond hen, good in every respect. Capital Yellow Agates and Red Mottles won in each of the other classes. Many of the birds were, however, not in good show condition. Barbs were good.

Foreign Owls did not come up to our expectations. It seems

cided on in consequence of the success which attended a similar trial at Hartlepool, and the result in this case also surprised all connected with the Show. But while recording such a success, we regret very much to say that one irregularity marred the whole on the first day—the pens, which were from Messrs. Turner, of Sheffield, did not all arrive at one time, and some of the birds had to be judged in the baskets. The Show was in other respects very well managed, and the visitors were numerous.

Cage Birds were divided into two sections—viz., one for the young birds of the members, and the other open to general competition.

In the first-named section the Belgians headed the list, but while there was here and there a good bird, they were not good as a whole. The rest of the classes were well filled, and the birds very good, with the exception of the heavily-variegated and crested varieties, which were only of moderate quality. The grand sight was, however, the birds shown by Messrs. Bemrose and Orme in the open classes, where out of eighty-three entries they had forty-five; in fact they had nearly the whole of the first eight classes to themselves, and to say that these birds are all a-breeze conveys but a poor idea of their great beauty, the colour being such as almost to compare with the blush on the rind of a ripe blood orange. Belgians were all good, also the Lizards in both classes. In Males a Clear Buff was first; but this bird had a lame wing, while the second was perfect in limb and evenly marked. Mr. Ormerod's grand bird did not arrive in time to be judged.

Parrots were good, but in British birds only a Goldfinch was noteworthy.

In poultry and Pigeons there were 260 entries in fourteen classes, and some of these were of the highest merit, the Bantams proving the very best class we have seen this year, the Game predominating. The Cochins were only a moderate lot. The Brahmans were numerous, but only a few pens were of sterling merit, the first being of the Dark, and second of the Light variety. In Game there were some good birds in almost every pen, but few good pairs, the winners being both Brown Red chickens. A nice even pen of Golden-spangled was first in the *Hamburgh* class, Silver-pencilled second, while there were other good Gold-spangled cockerels. Bantams were a grand display, the first being Black Red, the second Black Rose-combed, and third Brown Red.

In single cocks Game won the prizes, a most perfect Black-breasted Red standing first, and a Duckwing cockerel second, a third being awarded to a Dark Dorking cockerel; many excellent birds were only highly commended. In Any other variety, Dark Dorkings were first, and Silver Polish second.

Pigeons were well represented, the first four classes proving good, the Fantails and Dragons being of rare excellence, while the winning Turbits and Tumblers were very good. In the latter class an Almond won first, and Blue Bald second; and in the Variety class a White Pouter was first, a Black Barb second, and a Black Carrier third.

Rabbits had but one class, all varieties competing together. The first prize was awarded to a Tortoiseshell Lop, the second to a Tortoiseshell Dutch, and the third to a Fawn Lop buck.

OPEN TO ALL ENGLAND.

COCHINS.—1, H. Yardley. 2, M. M. Cashmore. *hc*, H. Bagshaw. *c*, W. Harvey.

BRAMA POULTRAS.—1 and 2, H. Chawner, jun. *hc*, J. Widdowson; T. Webb; W. Harvey. *c*, G. H. Bakewell; S. T. Vernon.

GAME.—1, E. Bell. 2, W. Ormerod. *hc*, J. Hood; C. Spencer; J. T. Hollingsworth; J. Clewes.

HAMBURGH.—1, T. Blakeman. 2, J. Preston. *hc*, J. Widdowson; W. Jackson; F. Boulton; P. Hanson; M. M. Cashmore. *c*, H. Huckleley; J. Preston; M. M. Cashmore.

BANTAMS.—1, R. Winfield. 2, P. H. Ashton; 3, A. Ashley. *hc*, A. Ashley; F. Shonack (2); W. Harvey. *hc*, J. Smith; H. Yardley; R. J. Hartley. *c*, R. J. Hartley (2).

SINGLE COCK.—Any variety.—1, W. Thorpe (Black Red). 2, E. Bell (Duckwing). 3, W. H. Crewe (Dorking). *hc*, A. Ashley (Duckwing Fantail); M. M. Cashmore. *c*, J. Holmes (Dark Brahma); J. Winfield (Black Red); H. Huckleley (Silver-spangled); J. Richardson (Black Red).

ANY OTHER VARIETY.—1, Mrs. German. 2, W. Harvey. *hc*, J. A. Routh (Malay); H. Yardley; W. H. Crewe (Dorking); M. M. Cashmore; R. Webster (Black Spanish); — Hard (Black Fowl); *c*, Lieut.-Col. Conolly.

PIGEONS.

TUMBLERS.—1, W. Harvey. 2, H. Yardley. 3, J. Peace. *hc*, J. N. Harrison; H. Yardley; W. Harvey. *c*, S. Ozson; J. Owen.

TURBITS.—1, J. Owen. 2, H. Yardley. 3, A. Bolaman. *hc*, J. Pearce; J. N. Harrison; M. M. Cashmore. *c*, H. Yardley; W. Harvey (2).

FANTAILS.—1 and 2, W. H. Tomlinson. 2 and 3, J. Walker. *hc*, F. J. Loversidge (2); H. Yardley.

DRAGONS.—1, T. Chambers, jun. 2, S. Foster. 3, E. Lee. *hc*, H. Yardley; W. Harvey (2); M. M. Cashmore. *c*, W. H. Crewe (2).

ANY OTHER VARIETY.—1, J. Owen (Pouter). 2 and 3, H. Yardley. *hc*, W. H. Tomlinson (Barb); M. M. Cashmore. *hc*, E. Lee (Dw); J. Wood (Black Carrier). *c*, S. D. Baddeley; H. Yardley.

SELLING CLASS.—1, E. Lee (Dragon). 3, Walker. 3, H. Yardley. *hc*, W. Harvey; W. G. Waters (Jacobin).

RABBITS.—1, J. Boyle. 2, F. Subhaze. 3, F. Banks. *hc*, S. Brierley; J. Spencer; W. H. Tomlinson. *c*, J. N. Harrison.

CANARIES.

NORWICH.—Clear Yellow.—1, 2, *hc*, *hc* and *c*, Bemrose & Orme. Clear Buff.—1, 2, *hc*, and *c*, Bemrose & Orme. Marked Yellow.—1, 2, *hc*, and *c*, Bemrose and Orme. Marked Buff.—1, 2, and *c*, Bemrose & Orme. Variegated Yellow.—1, 2, and *c*, Bemrose & Orme. Variegated Buff.—1, 2, *hc*, and *c*, Bemrose and Orme. Yellow Crested.—1 and 2, Bemrose & Orme. Buff Crested.—1, Martin & Griffin, Northampton. 2, and *hc*, Bemrose & Orme.

BELGIAN.—Clear, Ticked, or Variegated Yellow.—1, R. Hawman, Middles.

brough. 2, J. N. Harrison. *hc*, J. N. Harrison; T. Keys, Derby. Clear, Ticked, or Variegated Buff.—1 and 2, J. N. Harrison.

LIZARD, or Golden-spangled.—1, J. Hackett, Sutton-in-Ashfield. 2 and *hc*, J. N. Harrison. *hc*, Rev. V. Ward, Ilxte (2); S. Stevens & Durich, Silver-spangled.—1, T. Keys. 2, Rev. V. Ward. *hc* and *hc*, J. N. Harrison. *c*, J. Hutton.

CINNAMON.—Jonque.—1 and 2, Bemrose & Orme. Buff.—1 and 2, Bemrose and Orme.

GOLDFINCH MULE.—1 and 2, J. Brown, jun., Penrith. *hc*, R. Hawman. SELLING CLASS.—1, T. Ellison (Norwich). 2, Martin & Griffin (Cinnamon). 3, E. Hyde (Norwich).

BRITISH BIRDS.—Goldfinch.—1, J. N. Harrison. 2, Hampton & Chamberlain. Brown Linnets.—1, J. N. Harrison. 2, T. Tenniswood. Any other variety.—1, J. N. Harrison. 2, W. Alcock (Bullfinch).

PARROTS.—1, J. Screechley. 2, T. Keys. *hc*, J. Ride. *c*, L. Martin.

BIRDS HATCHED IN 1873.

BELGIAN.—Clear Yellow.—1, J. N. Harrison, Belper. Clear Buff.—1, J. N. Harrison. Marked Yellow.—1, J. N. Harrison. Marked Buff.—1, J. N. Harrison. Variegated Yellow.—1, J. N. Harrison. Variegated Buff.—1, J. N. Harrison. 2, H. Hutchinson, Derby.

NORWICH.—Clear Yellow.—1, J. Bexson, Derby. 2, J. Judge, Derby. 3, J. G. Edge, Derby. 4, E. Hyde, Mr. Bourne. 5, James Torr, Derby. *hc*, C. Markham, Derby. *hc*, J. Clarke, Derby. *c*, A. Wallis, Derby. Clear Buff.—1, J. Bexson. 2, H. Adams. 3, J. Clarke. 4, J. Judge. 5, A. Wallis. *hc*, C. Legge. *hc*, C. Markham. *c*, H. Maccannel.

NORWICH.—Marked Yellow.—1, J. Bexson. 2, John Clarke. 3, James Clarke. 4, J. Judge. 5, R. Hanson, Derby. *hc*, A. Wallis. *hc*, Joseph Torr, Derby. *c*, N. Banks, Derby. Marked Buff.—1, J. Bexson. 2, John Clarke. 3, H. Adams. 4, C. Legge. 5, J. G. Edge. *hc*, James Torr. *hc*, C. Merrin, Spaldon. *c*, Joseph Torr.

NORWICH.—Variegated Yellow.—1, R. Henson. 2, J. Judge. 3, W. Sherwin, Derby. 4, James Clarke. 5, John Clarke. *hc*, James Torr, *hc*, A. Wallis. *c*, W. Colbourne, Derby. Variegated Buff.—1, C. Merrin. 2, J. Bexson. 3, S. Cholerton. 4, James Clarke. 5, C. Markham. *hc*, W. Sherwin. *hc*, J. Judge. *c*, C. Legge.

NORWICH.—Heavily-variegated Yellow.—1, J. Bexson. 2, C. Legge. 3, James Clarke. *hc*, J. Judge. *hc*, H. Maccannel. Heavily-variegated Buff.—1, J. Bexson. 2, J. Judge. 3, James Clarke.

NORWICH.—Green Yellow.—1, J. Judge. 2, S. Smith, Derby. 3, F. Woodward, Litchurch, Derby. Green Buff.—1, J. Judge. 2, W. Sherwin.

NORWICH.—Lightly-variegated Crested Yellow.—1, J. N. Harrison. 2, S. Smith. 3, J. Judge. Ecdyly-variegated Crested Buff.—1, F. Woodward. 2, J. G. Edge. 3, J. Judge.

NORWICH.—Any other variety of Crested Yellow.—1, F. Woodward. 2, W. Sherwin. 3, J. Bexson. *hc*, J. Judge. Any other variety of Crested Buff.—1, F. Woodward. 2, James Torr. 3, H. Johnson, Derby. *hc*, J. Judge. *hc*, J. Bexson.

LIZARD.—Golden-spangled.—1, A. Upton, Derby. 2, J. N. Harrison. 3, S. Cholerton. *hc*, John Clarke. Silver-spangled.—1, S. Cholerton. 2, A. Upton. 3, C. Legge. *hc*, J. N. Harrison. *hc*, John Clarke.

CINNAMON.—Jonque.—1, J. Bexson. 2, J. N. Harrison. 3, J. Judge. Buff.—1, J. Bexson. 2, J. Judge. 3, N. Banks.

CINNAMON.—Variegated or Marked Jonque.—1, J. Bexson. 2, J. Judge. 3, J. G. Edge. Variegated or Marked Buff.—1, J. Bexson. 2, J. Judge. 3, J. G. Edge.

GOLDFINCH MULE.—Jonque.—1, W. Ashworth. Buff.—1, W. Ashworth. Dark Jonque.—1, W. Coulbourne. 2, W. Ashworth. Dark Mule.—1, W. Ashworth. LINNET MULE.—1, S. Smith.

LIZARD, WITH BROKEN CAP.—Gold or Silver-spangled.—1, A. Upton. 2, John Clarke. 3, C. Legge.

JUDGES.—Cuckeries: Messrs. G. H. Goodwin, Derby; G. Moore, Northampton; J. Martin, Salford, Manchester. Poultry, Pigeons, Rabbits: Messrs. G. A. Crewe, Etwell; E. Hutton, Pudsey, Leeds.

NATIONAL PERISTERIC SOCIETY.—Besides the Crystal Palace Show the above well-known Pigeon Society will hold a show on the 18th inst., from 7.30 p.m. to 10 p.m., at Evans's Covent Garden Hotel, London. Admission free, on presentation of address card.

HIGH-COLOURED CANARIES.

ALLOW me a line to reply to Mr. Troake's question as to where I purchased and the price paid for the two Canaries I exhibited at the last Crystal Palace Show. The Yellow bird I had from Mr. Orme, of Derby, whose breed is so well known. The Buff bird, which Mr. Troake purchased, I bought from Mr. Richard Henson, of Derby, a noted breeder, and for it I paid £1. The birds disqualified at Cheltenham were coloured on the surface, the work of men's hands; mine are naturally coloured, warranted to wash.—E. BEMROSE, Derby.

[It is needless to publish more upon this subject.—Eds.]

THE ART OF SUPERING.—No. 3.

WHEN this art shall have become pretty generally known supers of honeycomb will be plentifully obtained by amateur bee-keepers, and our honey markets will be plentifully supplied by cottagers and others who keep bees for profit. The abundance and beauty of the produce will act as a stimulus to those who have hitherto been unsuccessful with bees. A very successful farmer, or gardener, or bee-keeper imparts healthful action to his neighbours. His example and success have a far greater and more uplifting influence than he himself ever thinks of. Exhibitions of works of art tend to increase the demand for such works. Amid agricultural and horticultural shows progress becomes the order of the day. The crystal palaces of honeycomb which appeared at the Manchester International Exhibition were merely the forerunners of grand productions of coming years.

In my last letter, while pointing out the advantages of moveable lids in glass supers, I omitted to state that the form of the super recommended is of considerable advantage to both bees and bee-masters. It would be observed that the narrowest part

of the super is at the bottom or lowest part, and that therefore when the combs reach the glass they will not slip down. Supers with tapering sides hold the combs secure, and fast as the keystones in arches of masonry. The intelligent reader may be ready to ask if all kinds of supers (wood, straw, and glass) would not be better with tapering sides and moveable lids? Perhaps they would, but in the case of wood and straw supers the advantage would be very immaterial, for these are better than glass for supering, and more eligible in every respect, save show and appearance. Neatly-made straw supers to hold from 10 lbs. to 20 lbs. of honeycomb are what I prefer. They are more easily managed, as well as more profitable, in my hands than either wood or glass ones.

In these letters I have hitherto confined myself to the question of simple supering—that is to say, placing supers on hives that are full of bees and ready to fill them; but where profit is not considered, and supers of comb are specially sought, extra effort is made and special means adopted to obtain them. I have had glass and other supers filled on empty hives by swarms. "Without any combs in the hives on which the supers were filled?" Yes. It has been done again and again with swarms having pregnant laying queens. With such queens I wish the reader to understand that it requires some dexterity and practice to accomplish such feats, but with queens that are not pregnant they are more easily done. Most bee-keepers know something about piping queens; these have just come to maturity, and are making well-known sounds which may be heard in all hives for three days before second swarms leave them. These queens are unimpregnated, and will not go out to meet the drones for a few days; and even after they have been out on that errand, they generally do not commence to lay for a short time. The bee-master knowing this, and wishing to have a super filled, has only to drive all the bees out of the hive as soon as the piping commences into one quite empty, fix a few pieces of empty white comb in a super as already described, and then place it over this empty hive. In less than ten minutes' time the bees will be in the super and speedily commence work. If the weather be fine, and honey be in the flower, a moderate-sized super will be filled before the queen begins to lay. If the weather be unfavourable for out-door work we have the old hive, whence the bees were driven, to fall back upon. By placing this hive underneath the swarm, the bees will speedily carry all the honey in it up into the super. Nothing but pure honey is carried aloft. Let me here tell the reader that when I have any honey tainted by farina or other impurity, I give it to swarms, thus filling supers; and sure enough they leave all impurities behind them in filling supers except honeydew, which is not honey at all, and therefore cannot be cleaned. With some empty white combs fixed in a super it is an easy matter to induce a swarm to fill it, and even to filter-out every impurity from honey that is not fit for the use of man. Not a speck of honey need be lost. In the autumn, when the hand of the bee-keeper cannot get all the honey from the combs, he has only to let bees come after him to cleanse the refuse and gather up the fragments.

In my last letter I promised to come to the filling of crystal palaces in unfavourable seasons. The common sense of the reader will convince him that if bees cannot obtain honey enough out-doors to fill such palaces they should get it in-doors, for such palaces cannot be filled without honey. At the Manchester Exhibition it was my intention to appear with twenty large supers, but the season was unfavourable. Had it been favourable the supers would have been filled without artificial help. The International could not wait for a favourable honey year, hence I had to resort to artificial means to get my palaces filled. An old and profitable practice of ours is to turn all the bees out of the honey stock hives three weeks after their first swarm leave them. They are then without brood. The bees are driven into empty hives to shift for themselves, and the honey is taken from the stock hives for sale. Very well. Instead of taking the honey and jarring it up for sale in the usual way, it is a very easy matter to let the bees fill the super or crystal palace have access to the combs of these stocks, from which they take all the honey and carry it into their own hive and super. By placing the hive with honey underneath the supered hive, the bees will sling every particle of honey out of it and aloft without the use of the American sling r. If the combs thus emptied of honey be not more than twelve months old they should be used again by having swarms put in to refill them.

In discussing the art of supering in these letters, I have not looked at it from a profitable point of view. My aim has been simply to show how bee-keepers may succeed in filling supers—filling them speedily and under adverse circumstances. I have not yet gone over all the ground I intended to go over, but as some of your readers may have difficulties which I have not anticipated I shall be glad if they state them to the Editors, so that they may be noticed when I come to treat of low supers are cut off hives and the bees driven out of them.—A. P. HARRIS.

MR. T. C. BARRELL'S COLOURED DORKING CHICKENS, which won the cup for the best pen of Coloured Dorkings, in a blition

to Prince Leopold's cup for the best pen of Dorkings in the Oxford Show, were claimed at the catalogue price, £20.

HIVES.

"Each, like a bee, raises his shivering wing,
Employs his claws, and points his angry sting."

For a considerable time past I have been in the habit of reading with mingled feelings of pleasure and pain the articles and correspondence in the "bee corner" of your interesting Journal—pleasure at the information therein to be gained, and at seeing the amount of interest evinced in our little favourites by so many intelligent writers; and pain at observing a propensity to "sting" on the part of some of your correspondents quite equal to that of either the Ligurian or English bee, so far as my experience of either species extends. I have often felt a disposition to thrust in my pen amongst them, even as a peace-maker; but having before my eyes a wholesome dread of the fate which usually befalls an intermeddler in domestic quarrels—namely, an immediate union on the part of both belligerents to belabour the interloper, I concluded that the safest side to take in the quarrel was the outside; for, after all, I am disposed to believe that the quarrels, if such they may be designated, amongst our brethren of the bee fraternity, may be very well compared to those of the nature I have referred to, and that all lovers of bees must be lovers of each other in the end. I trust, therefore, that if I ask for a "corner" in your "corner" on the present occasion I shall be permitted, when I have said my say, to retire again to my own "corner" scatheless. My object in coming out of it just now is to offer a few remarks on the method of filling crystal palaces as described by my friend Mr. Pettigrew; and I desire to say in setting out, that he of all others is the last with whom I should wish to be found in antagonism, having during the past four or five years spent many pleasant and profitable hours in his society and that of his bees. So much by way of preface, and now to my subject.

If the object be simply to fill a large glass with honeycombs anyhow, then the wholesale method of cramming it described by Mr. Pettigrew will, undoubtedly, produce the desired result; but if the intention is to get the bees to fill a crystal palace, such as was exhibited by me at the International Exhibition lately held here, I question very much if it can be done in the manner indicated. Indeed, if a crystal palace is to be commenced by half or even quarter filling it with empty combs, if more empty combs are to be packed into the middle of it at its "widest part," and if a third batch of combs are to be suspended from a board at the top, it is open to question whether it can be legitimately called a "super," filled upon a hive by the bees of that hive, however numerous, or however assisted (of which more anon), and I am certain that the result attained in my crystal palace—namely, beauty of construction, cannot be arrived at; for I hold that we have as much right to have regard to the beauty and build of the combs in producing a crystal palace, as to the size and weight of the super or purity of its contents. In this opinion I am fortified by the Rev. J. W. Cotton, who purchased my crystal palace "at first sight," for £10, as that gentleman, evidently believing with the poet that "a thing of beauty is a joy for ever," bought it, not for the purpose of making present use of its contents, but with a view of having it hermetically sealed and placed as an ornament in his entrance hall; and has further avowed his intention of having it photographed, and introducing a woodcut of it in the next edition of his Bee-Book.

My crystal palace is 10 inches in diameter at bottom, the same at the opening of the lid, and 16 at the widest part or bulb, and, including the lid, which is dome-shaped and to the top of which the combs reach, stands 22 inches high, and yet the combs are so perpendicular and so straight and regularly-formed longitudinally that one can see right through the passages from front to back as easily as through the most regularly-formed combs in a bar-frame hive. Add to this that, with the exception of a very small portion of the outside, they are sealed throughout, and some idea may be formed of its beauty as a super, on the whole. As it has caused some sensation, and as those who have not seen it would naturally conclude that it was "put together" in the manner described by Mr. Pettigrew, I deem it but due to its present owner, to myself, and, though last not least, to the bees in the hive upon which it was built, to declare that it is, throughout, the work of the latter, aided by a little mechanical ingenuity on my part in enabling them to keep the combs straight and regular; for in this latter respect I claim that its greatest beauty consists.

In Mr. Pettigrew's description of the *modus operandi* of filling crystal palaces there are, however, one or two ideas of mine rather imperfectly rendered. Those ideas were suggested to me while the crystal palace was in course of erection by what at first had all the appearance of misfortune, but which in the end turned out to be helpful and served to prove, if further proof were needed, the truth of the adage that "necessity is the parent of invention." But having already occupied so much of

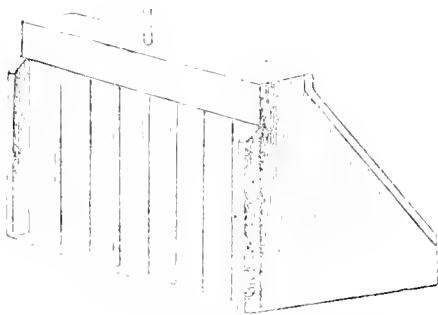
your space in hinting at what I *did not do* I shall defer till your next number a reference to those ideas and to what I really *did do* in assisting the bees to rear the crystal palace; and if any of your readers feel disposed to accept the challenge, "Try to beat this," which Mr. Cotton proposes placing upon it, I shall be gratified to learn that the information has been of any service to them, and promise not to be in the least jealous should any or all of them succeed.

I may just remark, in concluding for the present, that the objections to the Woodbury hive to which Mr. Pettigrew refers in a previous number were pointed out to him by me some two years since, and that at that time, in order to meet those objections, I designed and made a hive such as he now suggests to the consideration of the "practical bee-keeper and live-maker," and stocked it; but owing to a desire, too natural in most amateurs, in trying to do it too well I overdid it, and destroyed the queen without knowing it until the season was too far advanced to remedy the evil for any practical purpose. I have the hive still in my possession, however, but have not tried it this year owing to want of time to carry out the "brush" idea (also now suggested by Mr. Pettigrew, which presented itself to my mind after the hive was made, and which, I thought, if it could be carried out, would render the hive unique and worthy of being entitled the "Ladies' own Boudoir Hive," the idea being that even in a room and with the supers on, a frame might be withdrawn at the back without permitting the bees to escape. I will, with your permission, give a description of this hive in a future number, and shall be glad if any of our practical bee-keeping and live-making friends will offer any suggestion that will improve it.—D. BREEN, 6, Ardwick Terrace, Manchester.

OUR LETTER BOX.

FATTENING TURKEYS AND GESE (Subscriber).—Turkeys do better if they are shut-up for the last fortnight. They should be in a small place, but lofty enough for them to perch. Their food should be ground oats mixed with about a third of barley and a small proportion of peameal. This should be slaked with milk and put in a trough; a pig-trough will do very well. In fattening these, as anything else, the food should be fresh-mixed two or three times per day, and they must roost warmly and free from draught. You may take it as a rule that where it is wished to make anything very fat, exercise is a bad thing, and they are therefore better without it. Geese may be shut-up in a pigstye, and fed from a trough on oats, bran, and sometimes gravel. The food to be given moist. The bay of a barn littered with straw, with the troughs brought to the highest part, makes a good place for either, provided there is not too much room.

COOP FOR DORKINGS (J. E.).—Such a coop as you require should be 24 inches high in front, 18 wide in front, and 24 in depth, with round bars



1 1/2 inch apart. The roof of it should be flat for a space of 7 or 8 inches, and then slant sufficiently to shoot off any downfall, as in this engraving.

TUMOR NEAR VENT (H. J. B.).—You will ascertain the existence of the cheesy matter by pressure. It is always round, and tolerably hard. Taken in time and treated as we advised the cure is easy, and pressure from below after an incision 1/4 inch above causes the discharge of the offending substance. It comes out hard. If, however, it is allowed to remain the skin surrounding hardens upon it, and becomes attached to it. It is then a more serious operation, and causes excessive bleeding.

SPANISH FOWLS FEATHER-EATERS (R. J. S.).—We have kept Spanish for more than thirty years, and, with few exceptions, always in confinement. We have always been subject to this abominable practice of eating the feathers at times. They never do it when at liberty, nor in confinement till towards the end of the summer. When the plumage becomes shabby they seem to have an uncontrollable desire to eat the plumage. They then eat it to such an extent that we have had them with only wing and tail feathers. They have no desire to eat the new plumage until in the common course of things it becomes scaly, rusty, and thready in July. The feather resembles something they lack that would seem to be necessary to the new plumage, and it suffers from the likeness. We do not believe any treatment will prevent it, but that which with us has seemed to lessen the filthy habit has been to provide sods of grass, cut with plenty of earth, fresh horse dung from the stable, lettuce, and some worms.

SHEFFIELD COLLEMBIAN SHOW (G. W.).—As it was not advertised we conclude that it was a local exhibition only.

JAPANESE AND OTHER OMITTED BANTAMS.—We have letters from Mr. W. B. Smith and others agreeing with Mr. Wright, that prizes should be given for these varieties.

OXFORD SHOW.—"A Silver-Gray Dorking pullet, totally unlike the one I sent, was returned with one of my cockrels. It is not a bad bird, but I like my own better, as mine had shorter stronger legs, although this has a better comb. Perhaps the person who received mine would prefer this. I shall be glad to return this bird on receipt of my own.—GEORGINA PASLEY, Moorhill, Sheddield, Farham, Hants."

FEEDING BEES (J. S.).—It is impossible to say exactly what weight of food should be allowed for any given hive, so as to consider it safe for the winter, therefore we recommend a full allowance. Hives and boards are very different in weight; also, there is a great difference between a swarm of the current year and an old stock. In the latter case the combs are heavy with accumulations of bee-bread, propolis, and the residuum left in them by generations of young bees that have been laid in them. Also bees will eat more or less food according to population, situation, the state of the weather, &c. A careful bee-keeper will adapt his supplies to the probable wants of his bees. Five pounds of food will carry most hives safely through the three winter months, often less than this; but we should like every hive to have 10 lbs. on the 1st of November, so as not to have to feed again till Lady-day. If your two stocks now weigh 22 lbs. and 17 lbs. you may let them alone. Cover them up warmly, and see that their entrance-holes are always free for them to go in and out at pleasure.

METEOROLOGICAL OBSERVATIONS,

CAMDEN SQUARE, LONDON.

Lat. 51° 32' 40" N.; Long. 0° 8' 0" W.; Altitude 111 feet.

DATE.	9 A.M.				IN THE DAY.						Rain.	
	Baromet. at Sea-level.		Hygrometer.		Direction of Wind.		Temp. of Soil at 1 ft.		Shade Temperature.			Radiation Temperature.
1873.			Dry.	Wet.			Max.	Min.	Max.	Min.	In sun.	On grass.
Nov.	Inches.	deg.	deg.		deg.	deg.	deg.	deg.	deg.	deg.	deg.	In.
We. 5	29.434	49.0	48.6		S. E.	44.0	52.2	43.8	56.1	33.4	44.9	0.140
Th. 6	29.222	48.6	48.5		S. E.	45.5	51.2	45.4	53.4	37.8	0.150	
Fri. 7	29.575	43.8	43.0		W.	45.1	50.0	39.9	56.7	35.9	0.048	
Sat. 8	29.351	41.0	41.9		N. E.	45.6	51.5	39.9	60.3	35.3	—	
Sun. 9	30.061	45.5	44.2		E.	46.3	47.3	43.3	54.9	39.4	0.132	
Mo. 10	30.145	47.3	46.4		E.	45.8	47.7	41.5	49.9	41.6	0.017	
Tu. 11	30.281	42.4	40.7		N. E.	45.8	47.8	41.1	50.2	38.4	—	
Means	29.84	45.8	44.8			45.5	49.7	45.7	60.1	37.3	0.787	

REMARKS.

- 5th.—Dark and foggy in the morning; rain more or less all day, rather better in the evening.
- 6th.—Fine morning; rain before noon and continuing till 4 P.M., fine afterwards.
- 7th.—Rather fine morning, slight shower in afternoon, and rain at 7 P.M.
- 8th.—Very fine morning, but rather cloudy afternoon. Lunar halo at 9.30 P.M. Dump, though not rainy, at night.
- 9th.—Rather dull morning; rain at intervals from 2 P.M. to midnight, at times the rain fell heavily.
- 10th.—Very dark all day, though there was but little either rain or fog.
- 11th.—Rather dull till 10 A.M., from which time it was finer than any day we have had for some time.

The period of low temperature has passed, but from the dampness and fog the week has been far less pleasant than when the air was drier though colder.—G. J. SYMONS.

COVENT GARDEN MARKET—NOVEMBER 12.

A MODERATE amount of business is done at last week's quotations, the only article that has receded to any extent being Oranges, of which several cargoes of new fruit are to hand in good condition. They are from Gibraltar and the Azores. From the latter islands we have received the first regular consignment of Fine Apples. The Potato trade is lively, and there is again much complaint of disease.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples, sieve 1 cto 1 6					Mulberries, lb.	0	0	0	0
Apricots, doz.	0	0	0	0	Nectarines, doz.	0	0	0	0
Cherries, p lb.	0	0	0	0	Oranges, p 100	6	0	12	0
Chestnuts, bushel	10	0	2	0	Peaches, doz.	8	0	13	0
Currants, sieve	0	0	0	0	Pears, kitchen, doz.	1	0	2	0
Black, doz.	0	0	0	0	dessert, doz.	2	0	3	0
Figs, doz.	0	0	0	0	Pine Apples, lb.	8	0	0	0
Gilberts, doz.	1	0	0	0	Plums, doz.	8	0	4	0
Gooseberries, lb.	1	6	0	0	Quinces, doz.	1	0	3	0
Raspberries, quart	0	0	0	0	Raspberries, lb.	0	0	0	0
Grapes, bathouse, lb.	1	0	5	0	Strawberries, p lb.	0	0	0	0
Lemons, p 100	8	0	12	0	Walnuts, bushel	10	0	16	0
Melons, each	1	0	5	0	ditto, p 100	2	0	2	6

VEGETABLES.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes, doz.	3	0	0	0	Mushrooms, pottle	1	0	2	0
Asparagus, p 100	0	0	0	0	Mustard & Cress, pottle	2	0	0	0
French, doz.	0	0	0	0	Onions, bushel	3	0	6	0
Beans, Kidney, sieve	2	0	0	0	Parsley, p 4 quart	0	6	0	0
Beet Red, doz.	1	0	0	0	Parsley per doz. bunches	0	6	0	0
Broccoli, bundle	0	2	1	0	Peas, doz.	0	9	1	0
Cabbage, doz.	1	0	6	0	Peas, doz. bushel	0	0	0	0
Carrots, p 100	1	6	0	0	Potato, bushel	3	0	4	6
Carrots, bunch	0	6	0	0	Kidney, doz.	0	0	0	0
Cardiower, doz.	3	0	6	0	Round, doz.	0	0	0	0
Celery, bundle	1	6	2	0	Radishes, doz. bunches	1	0	1	6
Coleworts, doz. bunches	2	6	4	0	Rhubarb, bundle	0	0	0	0
Cucumbers, each	0	4	0	0	Salsify, bundle	1	0	1	6
Endive, doz.	0	0	0	0	Savoy, doz.	0	0	0	0
Fennel, doz.	2	0	0	0	Sea-kale, bundle	1	0	0	0
Fennel, bunch	0	3	0	0	Sea-kale, p 6 set	2	6	3	6
Garlic, lb.	0	6	0	0	Shallots, lb.	0	3	0	0
Herbs, bunch	0	3	0	0	Spinach, bushel	2	0	3	0
Horse-radish, bundle	3	0	1	0	Tomatoes, doz.	1	0	2	0
Leeks, bunch	0	3	0	0	Turnips, bunch	0	3	0	4
Lettuce, doz.	1	0	1	6	Vegetable Marrows, doz.	0	0	0	0

WEEKLY CALENDAR.

Day of Month	Day of Week	NOVEMBER 20—26, 1873.	Average Tempera- ture near London.			Rain in	Sun	Sun	Moon	Moon	Moon's	Clock after Sun.	Day of Year.					
			Day.	Night.	Mean.	Days.	Rises	Sets.	Rises	Sets.	Age.							
20	TH	Linnean Society's Meeting, 8 P.M.	48.7	34.6	41.7	14	29	af 7	2	af 4	55	7	59	3	11	8	321	
21	F	CROWN PRINCESS OF GERMANY BORN, 1840.	49.6	36.2	42.9	26	31	7	1	4	14	9	30	4	1	13	53	325
22	S	J. Sherard died, 1738.	49.2	34.7	41.9	22	33	7	0	4	27	10	15	5	2	13	37	326
23	SUN	24 SUNDAY AFTER TRINITY.	47.6	34.2	40.9	18	34	7	59	3	23	11	15	6	3	13	29	327
24	M		47.4	31.7	39.5	11	36	7	58	3	after.	30	7	4	13	2	328	
25	Tu	Day breaks, 5.35 A.M.	46.4	33.7	40.0	22	37	7	57	3	48	0	54	8	5	12	41	329
26	W		47.2	32.9	40.0	23	39	7	56	3	12	1	21	10	6	12	25	330

From observations taken near London during forty-three years, the average day temperature of the week is 48.0°; and its night temperature 34.0°. The greatest heat was 62°, on the 25th, 1863; and the lowest cold 9°, on the 25th, 1858. The greatest fall of rain was 0.95 inch.

THE KITCHEN GARDEN.—No. 2.



THE first thought that naturally occurs to those who come to the determination to form a garden is that of selecting a favourable situation, and I would say that there is no more important matter in connection with a garden than that of selecting a suitable spot for it. It requires the most careful deliberation, sound judgment, and good taste, and if these be combined a satisfactory result will be tolerably certain. It is easy

to make a mistake, but by no means an easy matter to rectify it.

In large places where there is plenty of scope it is much less difficult to steer clear of a fault than it is with the amateur's small plot of land, though it is desirable in both cases, and perhaps I may say compulsory in the latter, to connect the garden with the other surroundings of an establishment in as compact and convenient a form as possible. Doubtless there is economy in this; but I know of no rule that can be laid down whereby both the large landed proprietor and the amateur can work by one plan, so as to enjoy the same advantages of situation, aspect, shelter, and soil. The former, if he wants a garden, must make up his mind to sacrifice some of the pleasures which breadth of land and natural advantages give; but the latter in his enthusiasm is often a match for all this, and is able to find pleasures in things that run a risk of being unobserved by those possessing larger scope. By this I mean that from surrounding circumstances the proprietor of a humble residence is not the person to regard his kitchen garden as a necessity only to supply his household with vegetables, but would rather regard it also as one of the chief objects of his attention and care. This is as it should be, for a kitchen garden skilfully laid-out, and well planted and kept in order, is as beautiful as any other department of the garden, and certainly in this way it affords a considerable degree of pleasure.

Taking it in this light, there is no impropriety in having the garden as closely connected with the house as is consistent with the arrangement of the little shrubbery, rosery, or flower garden, and even these in some places where the space is small may be made to work-in with it, or perhaps surround it, in such a tasteful way as to completely exclude the garden from sight, and yet afford a privacy in walking about not to be found or secured in any other way. Again, avoid if possible placing the garden in sight of the principal rooms of the residence; and it would certainly be considered bad taste to place it in front of the house, even if it be a respectful distance from it, unless, by judiciously banking-up and planting, the view of it can be effectually excluded. This arrangement, however, is not likely to be adopted, except when there is no alternative, as it would detract much from the appearance of the residence, and confine it to such a degree as to do away with the appearance of freedom or extent.

Elevated or exposed situations, especially if they incline to the north and are open to cutting winds, are among the worst situations possible—even a low and damp position is not to be dreaded so much; but neither should be chosen unless absolutely unavoidable. About the best situation appears to be somewhere in the rear of the dwelling, yet at such a distance from it as neither to be inconvenient nor to interfere with other features of the place. If the residence has its principal frontage due south, the garden may be placed on either the west or east side, yet nearly or quite in a line with the house, if other circumstances are favourable to this being done; one of these is that whether the garden is bounded by a hedge or a wall, before such a position is decided on it must be considered if there are facilities for effectually planting-out or hiding the formal appearance which the wall or hedge would create when placed in a line with the house.

Again, before finally deciding upon a spot for a garden, other important matters must receive attention; one of these is a suitable aspect, and that one which is generally considered to be most favourable is where the ground has an inclination to the south; or no great objection need be made if there is a gentle slope towards the east, because the garden receives the benefit of the morning sun; but the slope must not by any means be steep, otherwise it looks badly, and is objectionable because it is difficult to shelter such a spot from cold and cutting winds. The natural result would be that in too much of an eastern aspect the crops would be late and the ground generally colder; the same may be said of a northern aspect, which should likewise be avoided if possible. However, these unfavourable aspects do sometimes place one in a favourable position; for I well remember that I once had charge of a kitchen garden sloping sharply towards the east, and with no shelter beyond what a neighbouring hill afforded with its clothing of high trees half a mile away. When a dry summer occurred I was far before my neighbours with abundant and superior crops of vegetables, particularly Peas. I that year grew the Ne Plus Ultra as a late Pea, and it cropped so well that I have grown it as the best late Pea every year since. In large establishments, where a long succession of large quantities of vegetables and other crops is essential, it may be as well to select a piece of ground with an aspect favouring these conditions.

Looking at things in a gardening point of view, it has often occurred to me as a pity that when the position for a residence and out-door offices is being decided upon, a little more thought has not been bestowed upon the garden, so that each might have a share of the advantages of the best positions. I am induced to think so only when I observe the garden pitched, as it were, into a corner or some other makeshift place, where produce has to be reared at a great disadvantage. In places allotted to villa residences I am afraid there is very little chance of overcoming this difficulty; but with others where a few acres of ground are attached to the house a more advantageous position for the garden might without difficulty be obtained.

In my next paper I hope to make some remarks upon shelter and soil.—THOMAS RECORD.

WINTER FLOWER GARDENING.—No. 4.

Of plants with variegated or coloured foliage we have a goodly number, all very fine and appropriate. The first on my list shall be

Thymus vulgaris variegatus.—The old garden Thyme with the leaves white-variegated. It may be cut into any form required, and this for our purpose should be done when the plants are removed from the beds in spring, so that by autumn they may be stiff, compact, and well furnished with young shoots. Slips put-in in April make nice plants by autumn. It forms a fine margin to a bed or border, and is one of those subjects which may remain as a permanent edging with close pinching during the summer, and cutting-in after it has been used for winter and spring gardening. It likes dry soil, sandy rather than clayey.

Thymus lanuginosus.—Very neat and compact in growth, forming little round-headed bushes 4 to 6 inches high, and as much in diameter. The shoots early in spring are variegated with yellow. It is one of the finest of hardy edging plants.

Thymus citriodorus aureo-marginatus.—Of dwarf very close growth, completely covering the ground with neat foliage finely variegated with yellow. It only grows to a height of 3 or 4 inches, and for carpeting and as an edging has no equal.

The Thymes thrive best in light loamy soil well drained, especially in winter, and move so well in autumn and spring that they cannot be too highly recommended. They are increased readily by slips in spring, allowing the plants a space which they will fill by autumn.

Bellis aurbæfolia.—This, the Aucuba-leaved Daisy, is beautiful in autumn, winter, and spring, as its leaves are blotched with yellow. It is one of the finest of edging plants. Its flowers, produced in April and May, are of a fine red colour, and the plant is then very attractive. It succeeds best in a rather light soil in winter, and in summer does best in a border shaded from strong sun and kept moist. Increased by offsets or division after flowering, when removed from the beds to make way for their summer occupants.

Salvia officinalis aurea.—This is the old garden Sage effectively variegated with yellow, and compact plants of about 9 inches to a foot high are very ornamental. Such are secured by putting-in slips, as in the case of the common Sage, in spring, and shortening irregularities of growth as they occur during the summer. It does best in rather light open soil.

Aubrietia purpurea variegata.—The leaves are broadly margined with white. This is a variegated form of *Aubrietia purpurea*, and, like it, has pale or lavender-blue flowers in spring. It is one of the finest and neatest of all edging plants, and to succeed, should have a gravelly soil well drained, otherwise it is not quite hardy, but in a well-drained light soil it is perfectly so. It is increased by divisions, with or without roots, put in up to the growing point in October, or in spring in a shady border. These will make fine plants by the following autumn.

Arabis alpina variegata.—Very free-growing, and one of the best yellow-variegated plants we possess, growing to a height of only a few inches, and being of very compact growth, therefore suitable for edgings and tracery-work. It is increased by divisions or slips of the side shoots in October, planted in sandy soil in a shady border. If the slips be put-in up to the leaves every one will root and form a fine plant by the following autumn.

Arabis albida variegata argentea.—This is very similar to the preceding, but with white variegation, free in growth, and fine for edgings or tracery-work. Both kinds flower in April and May, and form fine margins, lines, or masses of white.

Arabis lucida variegata.—A dwarf-growing, glossy-leaved, yellow-variegated plant, which, when it succeeds well, is one of the most effective of edging plants. It is increased by division. It does not, however, succeed in all soils, and seems to do best in light moderately rich soil on a dry subsoil. Where it thrives it is a gem.

Santolina incana.—This is of neat compact growth, the small grey or silvery foliage thickly set and covering the branches. It does not exceed 3 or 4 inches in height, and forms a neat margin or carpet of hoary whiteness. It prefers a light well-drained soil, and is propagated by cuttings in spring or autumn in a shady place.

Senecio argenteus.—A silvery-leaved rosette-like plant, introduced by the Messrs. Backhouse, of York. It only grows to

a height of 4 inches, and is almost as white as a *Centaurea*. Particularly fine in autumn for margins or lines.

Antennaria tomentosa.—Very dwarf—only an inch or so high, very dense in foliage, and as silvery as a *Centaurea*. It is the best of the very dwarf white carpeting and edging plants. It requires light sandy soil well drained.

Alyssum saxatile variegatum.—A cream-yellow variegated Alyssum, of vigorous habit, with lanceolate leaves, and by pinching-out the fore shoots it forms a dense close growth suitable for a bed, having in spring bright golden yellow flowers. It likes a light open soil, and is increased by cuttings inserted in spring in sand in a shady border.

Cerastium tomentosum.—White or silvery edging plant, too well known to need comment.

Stachys lanata.—Large, woolly, silvery leaves; of very close growth, and fine for groundwork, broad lines, or margins. Very effective throughout the winter.

Sempervivum californicum.—This, from its green leaves with dark brown points and rosette-like habit, is very distinct and effective for edgings and lines. Requires well-drained soil.

Saxifraga longifolia.—Dark green leaves edged with white, having a silvery appearance, the foliage disposed in rosettes. It is, undoubtedly, the finest and most graceful of all the Saxifrages.

Saxifraga pectinata.—Small silvery or frosted leaves, in rosettes; very dense. Very effective for margins.

Gineraria maritima.—Silvery foliage. Too well known to need comment. In well-drained soil this is very effective in autumn and throughout the winter.

Pyrethrum Golden Feather.—Golden foliage, as everybody knows, and in dry soils and sheltered spots it is effective throughout the winter, but in wet soils and exposed positions this is not the case.

It will have been observed that the plants named have yellow-variegated or silvery foliage, or white-variegated leaves. We must have colour. Unfortunately there are few plants with red foliage. Those I know are

Ajuga reptans purpurea, with dark purple-bronze foliage, growing only a few inches high, and which, in contrast with the yellow-foliaged or variegated plants, has a fine effect.

Beet, with its metallic bronzy-purple leaves is never so fine as in autumn. Dell's Crimson is the best, having many synonyms, as Dwarf Waterloo, Perfection of Beets, Osborn's Red, Dickson's Improved Black-leaved, Belvoir Castle. It is of dwarf leafy growth, the leaves bronzed purple or red, wavy, and arching over, like those of *Dracenas*, until they reach the ground. The height is about 9 inches to a foot. Sutton's Dark Red is of rather taller growth, as good in colour, and as suitable for decorative purposes. Beet should be sown in drills in May, and thinned-out to a foot apart, and in moving in autumn care should be taken not to break the leaves, planting so that the root may be covered. In the winter Beet may justly claim to occupy the place of *Iresine*, and coming in at a time when there is nothing in the way of flowers, its use in flower gardens does not give it the character of a subject out of place. We cannot have any effective display without it during the late autumn and winter months.

Variegated Kale is one of those subjects I would not admit under any circumstances to the flower garden, but we are under the same necessity with it as Beet—viz., we have no other subject that will give us the colour we need for contrast in winter. The kinds, as everyone knows, have finely-frilled leaves tinted or variegated with various hues of colour, but those with purple or rose, or nearer to red, will best meet our requirements. The perennial Variegated is probably the hardiest and least culinary-like. Sow in April, prick-out in poor soil when the plants can well be handled, and before they become crowded plant-out in only moderately rich soil, and at a good distance, so that they may not be drawn-up weak. Take up with balls in autumn, planting so that only the head may be above ground, or they may only be planted as deeply as to give the height required.

Chilian Beet.—This, from giving us deep waxy orange to polished crimson in the broad midribs of the leaves, must have a place, and requires the same treatment as Dell's Crimson.

It is only in autumn that the Beets and Kales attain their greatest beauty, being heightened in colour by the approach of frost.—G. ABBEY.

ROSE PRESIDENT THIERS.

JUST a word in defence of Rose President Thiers. I saw it grand at its raiser's, M. Lacharme's, at Lyons, and can perhaps

throw a little light on its comparative failure with us in England this year. It is essentially an early-flowering Rose, and comes at that period bright, with a peculiar freshness of colour and clearness of petal that are specially charming. It suffered, like all the early sorts this year, from the spring frosts; the first blooms were destroyed, and the second flowers coming on, the weaker succeeding growth arrived somewhat feeble in character right in the hot weather of July. It will probably, like its "double" amongst men (see "The Wicked World") regain its position in 1874.—GEORGE PAUL.

APRICOT TREES UNDER GLASS.

It is now twenty years since I planted out dwarf Apricot trees in glass-roofed sheds to bear fruit. After a few years I found the roofs too low, so that our spring frosts killed the young fruit. Since then I have planted low standards. My bearing trees, now ten years old, are pictures of fertility; they are the Royal and the Peach-Apricot. The former ripens a fortnight before the latter, and is a charming early and prolific sort. They have but little pruning, but their young shoots are shortened to one-half their length in July and August, and crowded shoots removed in winter. The trees are planted in the central border of an orchard house 12 feet high, the soil undug; when full of fruit they have water in hot weather, say twice a-week. Allow me to give an extract from my book, "The Orchard House," fifteenth edition, 1873.

"By growing the Peach-Apricot in cheap houses as half or full standards, in borders unstirred and always hard, our markets can be supplied with Apricots at a price not at present thought of. Such trees should be planted from 7 to 8 feet apart.

"Our market gardeners, at present wedded to their wall culture of fruit trees, will do well to cover a few acres of ground with cheap orchard houses, and to plant out in them half-standard and standard Apricot trees. Covent Garden will then be supplied with such Apricots as have rarely been seen there. They may be sold cheap, and yet yield a fortune to the growers. The Peach, the Royal, and the Moorpark Apricots are the only kinds adapted for this profitable mode of culture.

"The trees when planted out will require in spring a light dressing of the surface-dressing compost on the surface round their stems, and of course water during the summer, although not nearly to the extent required by potted trees."—THOS. RIVERS.

ROYAL HORTICULTURAL SOCIETY.

At the Show on Wednesday, Nov. 12th, I had the opportunity of sounding some experienced old horticulturists as to the practicability of bringing in a large number of Fellows at a guinea subscription without admission fee, five hundred of us to bring in on an average ten one-guinea Fellows each. More than one said, "Oh, I could bring in twenty if required;" others said, "The leading gardeners could and would afford to become Fellows at a guinea." What I would venture to propose is, that by agreement with H. M. Commissioners we should arrange for room for exhibitions and committee meetings at South Kensington, that the guinea subscription should entitle to a transferable ticket (it might be necessary to restrict the use to the same person the same day), the ticket to admit to all the Society's shows, large and small, in London and in the country, but not to the recreation part of the gardens, and to admit bearer and two friends to the Chiswick Gardens; the Fellow to have the privilege of cuttings, &c., as at present.

I think that it is now generally felt that matters cannot go on as they are. It is no question of who are in power. I believe that if the Council consisted of the twelve wisest men in London, and if they all regularly attended, they could not make the Society what it ought to be on its present basis. The old, wise, experienced Council, after all the time, thought, and consideration devoted to the subject, could make nothing of it, and so were driven to the suggested arrangement with the Commissioners, clearing off rent and debenture-debt, and giving something to the good of horticulture. Those who best know the Society know how utterly rotten are its foundations. It is a horticultural society the major part of whose Fellows care little for horticulture, and the principal part of whose funds is of necessity applied to non-horticultural objects. It does not matter who are on the Council, they cannot change this essentially false state of things. We have had enough, and more than enough, of attempts at patching-up

and trying to alleviate symptoms; the time is surely now come for tackling the disease itself.

The South Kensington Garden land, worth £300,000, bought with public money, must, if kept private, yield a return to be applied to public objects. If the Kensingtonians could by admission fees pay £15,000 a-year rent—that is, £12,000 for interest at 4 per cent, and £3000 for cost of maintenance, they would have a strong case in favour of keeping their recreation grounds private. Having friends round the gardens I wish this could be done, but is it possible? I now call on the horticultural world, especially on its leaders, to come forward and express their opinion, and to state whether they will exert themselves to put the Society at last on a reasonable and solid foundation. With five thousand one-guinea Fellows we should be independent of all parties and of all authorities. It is the interest of H.M. Commissioners, for the public good, to have little and big shows at South Kensington; it would be our interest to hold them there. Surely we could not disagree over this our only point of contact. I ask, then, that horticulturists with influence shall canvass their friends and those who are guided by their opinion, and ascertain whether they will give in their names as willing to join the Society if reconstituted on some such basis as the above. They would, of course, by so doing bind themselves to nothing until the details had been worked out and brought before them. I venture to say that we would receive any lists of such provisional Fellows as should be sent in. I should have no hesitation in putting my name down for ten Fellows.—GEORGE F. WILSON, *Heatherbank, Weybridge Heath.*

The following circular has been sent to the Fellows of the Society, and we recommend it to their favourable attention:—

November 17th, 1873.

We, the undersigned Fellows of the Royal Horticultural Society, appeal to our fellow members, in the present disastrous state of the Society, for their advice and assistance, and at the same time desire to draw their attention to the following facts:—

I. The present Council was elected by a very small number of the Fellows, displacing a Council consisting of His Grace the Duke of Buccleuch, as President, and well known and trusted friends of horticultural science. The legality by which this Council was elected is disputed; and we believe that a Chancery suit to try the question is imminent, which would necessarily paralyse the Society.

II. The Society is unable to pay an annual rental of £2400 to its landlords (Her Majesty's Commissioners for the Exhibition of 1851). It has paid rental only twice in twelve years.

III. It is known to have liabilities to the extent of many thousands, which it cannot meet.

IV. The debenture-holders have formed a league to recover their loan, to the Society, of £50,000.

V. The prospects of horticultural science are, therefore, as bad as possible.

VI. Under these circumstances we ask our fellow members to join with us in appealing to the landlords of the ground (the Royal Commissioners) to terminate the lease, relieve the Society of all its pecuniary liabilities, compound with Life Fellows, making satisfactory arrangements to enable the Society to hold its Committee Meetings and a certain number of Shows at South Kensington every year.

VII. Fellows who concur in this policy are requested to sign the enclosed form without delay, and return it, if possible, on or before the 1st December.

DANIEL COOPER, Bart.
G. F. WILSON, F.R.S.
HARRY JAMES VEITCH.
ROBERT HOGG, F.L.S.
WM. PAUL.
THOS. MOORE, F.L.S.
MAXWELL T. MASTERS, F.R.S.
JOHN FRASER.
JOHN DENNY.

J. R. PEARSON, Chilwell, Notts.
CHAS. NOBLE, Bagshot.
CHAS. TURNER, Slough.
WM. ROBINSON, F.L.S.
JOHN B. HAIG, 14, Chapel St.,
Belgrave Square.
CHAS. LEE, Hammersmith.
JAMES CUTHBERT, Highgate.
JNO. STANDISH, Ascot, Berks.

—29, Prince's Gardens, South Kensington, London, S.W.

LEAF SOIL.

This subject, opened-up by Mr. Pearson in last week's issue of the Journal, is one of very great importance to gardeners and plant-growers. I quite agree with Mr. Pearson in believing that there is leaf mould and leaf mould. The various effects which it has had upon the same species of plants has frequently struck me. For instance, I have grown *Franciscea* and flowered them most profusely, indeed finer than I ever saw them anywhere else, in leaf mould with a slight addition of Reigate sand, and I have had them refuse to grow in leaf

mould. I am of opinion that the soil upon which the leaves are produced has much, if not all, to do with the quality of the mould they produce when decomposed. I have always found that leaf mould obtained from chalk had an injurious effect upon pot plants. Have any of our readers noticed similar results? The subject I consider of very great importance, and any experiences should be recorded.—*EXPERIO CREBE.*

GRAPE SHEDS.

It is many years since we gave an account of Mr. Rivers' method of growing Vines in pots resting on the hot-water pipes of the house, and if we recollect rightly, the idea was suggested to his mind by a friend having told him that in Syria he saw the Vine luxuriating among rocks which were so hot that the bare hand could not touch them. "In short," said Mr. Rivers, "you may roast the roots of a Vine and never injure it, provided you give a supply of moisture." For a long time this method of growing them has been followed in the same house even till now, and with marked success. But lately two immense glazed sheds—for mere sheds they really are, having been erected to furnish shelter to the potted fruit trees during winter—have had heated pipes put into them, and on these pipes the pot Vines were placed, standing on slates. This structure is 400 feet long, parted into two divisions, 14 feet wide, 10 feet high at the back, and 5 feet in the front. The supports are deal posts in iron sockets, the same as are described in "The Orchard House." The walls are formed of half-inch boards nailed over one another, so as to prevent draughts when they are joined. The glass is 21-oz. squares of 21 ins. wide. The ventilation is by a 2-feet shutter on hinges in front, and no ventilation at the back. The house is heated by three 4-inch pipes and a Deards' boiler.

The Vines are planted in 15-inch pots, placed in the house on slates over the pipes 2 feet apart, in the middle of December. They gave twenty bunches of blossom, which were thinned to ten, but Mr. Rivers thinks eight better; and in May and June the crop was ripened, and not a failure among them. The bunches averaged three-quarters of a pound each, and they would have ripened three weeks earlier if the walls of the shed had been of brick. Vines costing 12s. to 15s. each would give on an average 6 lbs. each of ripe fruit in April and May. The cost of this immense structure is at the rate of 10*d.* per foot, or £200 for the whole, without the heating.

Mr. Rivers thinks the method the most cheap and safe of all, and that it gives no encouragement to Phylloxera.

THE BEDDING-OUT SYSTEM.

THE massing or bedding-out of groups of half-hardy plants as an embellishment to the grounds surrounding country and suburban residences during the summer months is now universally practised. This is generally accomplished with good effect, and may be considered as an improvement upon the state of things which it has in a great measure displaced.

The bedding-out system, as it is called, is of comparatively recent introduction, for there are still many amongst us who have not yet begun to consider themselves as very old, who must remember the commencement or the gradual introduction of this system.

The practice of horticulture may, of course, be regarded as among the earliest employments of the human race. Still it does not appear that flowers received an early period of our history a great amount of consideration. It is true that the

goddess Flora is made to figure among the deities of ancient mythology, and in Holy Writ flowers are occasionally alluded to as "the Lilies of the field," &c.; but nothing that I am aware of is said about their cultivation, so we may reasonably infer that flowers were at that time generally left to take care of themselves. We read in the first book of Kings that Ahab coveted the vineyard of Naboth the Jezreelite for the purpose of making a garden of herbs. The word "herbs" may, of course, in its signification have included flowers; but it is more likely to have meant culinary vegetables, and Ahab, it is to be feared, coveted the site of Naboth's vineyard for a "kale-yard," and not for a parterre, although it was near to his house or palace. In the famous gardens of king Alcinoüs, as described by Homer in the *Odyssey*, which must have flourished—if they ever existed—many centuries before the commencement of the Christian era, mention is made of the Apple, the Pear, Grapes, Figs, Pomegranates, &c., also of avenues of Plane trees and groves of Olives, showing that even at that early period some attention had been given to the cultivation of fruit and ornamental trees; but little or no allusion is made to flowers. Indeed floriculture does not appear to owe much to

either the ancient Greeks or the Romans, notwithstanding their advanced civilisation and their wondrous skill in the arts of sculpture and architecture—arts, by the way, which were even brought to bear upon such subjects as evergreen trees and shrubs, as the "topiarian" (as the artistic gardener of the period was termed) aspired to imitate or to rival the art of the sculptor, and unfortunate Yew trees, the Cypress, the Holly, the Box and other evergreens were tortured and clipped into forms, more or less uncouth, of birds, animals, &c., of various sorts. This, combined with fountains, grottoes, and statuary, appears to have formed the severely artificial style of garden embellishment which found



Rivers' Grape Shed.

ultimately made its way into this and other European countries. But the practice of this style of ornamentation has happily been long abandoned, and it would be difficult at the present time to find any trace of it, if we except the circumstance of one or two old country seats where a few years since by no means unsuccessful attempts were made to revive it, to some extent at least.

As an offshoot of this exceedingly artificial style may, perhaps, be classed that of Box-embroidry and coloured gravel, &c., which some few years since was attempted to be introduced into our gardens; but fortunately this style never became popular. So long as the topiarian system of embellishment held possession of public favour floriculture appears to have been proportionately neglected; and although the rival houses of York and Lancaster adopted for their respective emblems the red and white Roses, still their partisans, it may well be supposed, were generally too actively engaged in the destruction of each other to find either time or inclination for the pursuit of an art so gentle as that of floriculture.

It would, however, appear that even the present and prevailing style of embellishing the parterre is by no means without its detractors and opponents, although many of the objections which they bring to bear against it appear to be more imaginary than real. It is said in disparagement of this system that a too free use is made of the bright or primary by colours, which a glaring effect is produced which savours much of vulgarity. It would, of course, be unwise to argue that the laws of good taste are never transgressed in this manner; but, as a rule, this is by no means generally the case. On the contrary, instances are not rare where, by judicious

arrangement and skilful application of the material used, a pleasing and harmonious effect is generally produced, which seldom fails to give satisfaction to the most fastidious.

It is also said that the encouragement or preference given to this style of decoration has had the effect of banishing from the parterre the many interesting and beautiful early and late flowering hardy plants. In reality this is not the case, for even the most devoted practitioners of the bedding-out system are only too glad to avail themselves of the use of these plants to enable them to carry out and to extend their favourite system, which must, however, plead guilty to the charge of having banished in a great measure from the parterre many huge and unmeaning clumps or beds which were generally furnished with a few flowering or evergreen shrubs, together with an assemblage of coarse-growing herbaceous plants, many of them as destitute of beauty as of interest, unless in a botanical point of view, while evidently the only arrangement which had been attempted in planting them was that of placing the tallest-growing sorts in the central parts of the beds, and even this was by no means always accomplished.

The next charge brought against this well-abused system, is that of leaving the beds and borders empty during five or six months of the year; and much has been said against the unsightly appearance of the heaps of raw bare earth which the parterre presents during so long a time. Now there is in reality much less in this charge than is attempted to be proved. A tastefully-designed flower garden, whether on grass or on gravel, surrounded by its usual accessories in the form of evergreen shrubs and ornamental trees, &c., with the beds neatly dug-up for the winter, is by no means so unpleasant a picture as it is represented to be. But at the same time it is not necessary that the beds should be empty or devoid of interest for so long a period as five or six months. The weather in this country during some four months of the year, commencing with November, is certainly incompatible with the enjoyment of a flower garden in the open air, as, taking one season with another, unless it be in the case of some few favoured localities, the surface of the earth is either frost-bound or hidden from view by snow for at least half that time, so that a winter flower garden in these Isles can only exist and be enjoyed under glass and in an artificial climate.

The parterre may be said to be rendered gay and attractive by the summer bedding-out system alone for about five months of the year, or from the beginning of June until the end of October; and to this may be added at least three months during which it either is, or ought to be, interesting and attractive by the display of spring-flowering plants and early-flowering bulbs, or, say, from about the beginning of March until the end of May, at which time they must, of course, be removed to make room for their summer-blooming successors. So taken altogether, if matters connected with the parterre are managed as they ought to be, there is really little to complain of as regards the length of time during which it is rendered enjoyable.

It has already been admitted that in some instances gay colours may have been used somewhat too freely in the embellishment of the parterre; but this charge will, I think, apply more to the pioneers of the grouping style, or the practitioners of the bedding-out system of some thirty or more years since; and when the paucity of material at command for this purpose at that period is taken into consideration the circumstance is not by any means surprising. The flower gardener of to-day would certainly be at his wits' end were he confined to the list of bedding plants which were available at that time wherewith to furnish his beds and borders next season. It is quite possible that the introduction of such plants as the Dahlia and the Verbena may have had much to do in suggesting, as it were, the bedding-out or massing system, which has been steadily progressive in its development even up to the present time. The material now at command for the purpose of garden embellishment is rich and varied in the extreme. This great wealth is due to the indefatigable exertions of the hybridiser and crossbreeder, to the collector and introducer, also to the adapter, if I may be allowed to apply this term to the experimentalist who has successfully used for this purpose many denizens of our stoves and greenhouses, also hardy plants of various sorts, proving their adaptability to the purpose of garden embellishment as bedders, marginal plants, or for lines in ribbon borders, &c.

Many species of tender plants with large and ornamental foliage which it was formerly supposed could only exist, or at

least be successfully cultivated, in our stoves, are now in garden establishments made to furnish an interesting department in the open air during the summer months, this department being known as the sub-tropical garden, where such plants may generally be found growing with a luxuriance and freshness which they seldom attain under glass with even the most skilful treatment. Various tribes of succulents, hardy as well as tender, together with hardy Alpine plants possessed of ornamental foliage, are also made to play a very distinguished part in a style of planting known as "carpet-bedding." This has certainly much to recommend it to popular favour, being entirely distinct from all other methods of grouping, and displays to advantage the singular and interesting appearance of a number of the plants used for the purpose, and many of them being quite hardy have the advantage of requiring little or no protection during winter.

To successfully arrange the materials employed for the embellishment of the parterre it is quite necessary to take into careful consideration the habits of the various plants used, more particularly as regards simultaneous and continuous flowering. Form as well as colour must likewise always be kept in view, and foliage as well as flowers. Indeed, some of the most beautiful and effective beds that I have seen this season have been entirely destitute of bloom, being arranged in the carpet style and composed of such plants as *Echeverias*, *Sempervivums*, *Sedums*, and *Saxifragas*, together with the new *Golden Fleece Thyme*, *Golden Feather Pyrethrum*, and the several varieties of the beautiful and richly-coloured *Alternantheras*, &c.; while other beds have been composed of the finest sorts of gold and silver tricolor *Pelargoniums* divided of their bloom, and margined by such plants as *Iresine Lindeni* and *Coleus Verschaffelti*.

As soon as the autumn frosts have rendered the summer bedding plants unsightly no time should be lost in finally removing them, in order to make room for the spring bedders and bulbs, which should without delay take their place in the beds and borders. As regards harmony and contrast of colours as well as symmetry and habit of growth, the rules which govern the summer planting are equally applicable to that of the spring; and in cases where carpet-bedding may have been followed during the summer months such beds will merely require to have hardy plants substituted for tender species, such as allowing the *Sempervivum californicum* to take the place of the *Echeveria secunda glauca*, which is nearly but not quite hardy; and such plants as *Ajuga reptans rubra*, *Oxalis corniculata rubra*, and other dark-foliaged hardy plants to replace the tender *Alternantheras*, *Iresines*, &c. Excellent substitutes for variegated *Pelargoniums* may be found in the *Dactylis glomerata variegata* and *Polemonium caruleum variegatum*.

It has already been remarked that the present style of summer bedding does not necessarily exclude hardy herbaceous plants from the attention they really deserve. On the contrary, a portion of them at least are eagerly sought after on account of possessing a dwarf habit of growth, combined with silvery-white or variegated foliage, rendering them exceedingly useful as marginal plants in summer grouping and carpet-bedding, &c. But in addition to this, a garden establishment can hardly be considered as being complete without its collection, more or less extensive, of hardy herbaceous plants. If this class of plants have really experienced anything like neglect a reaction is now rapidly setting-in in their favour, and the grouping of hardy plants for spring display is now becoming as popular as the system of summer bedding-out has been for some years. But as the flower beds and borders are being compelled, as it were, to do double duty, it is therefore necessary that they should receive the most liberal treatment in the form of fresh soil and other fertilising materials, which should be carefully prepared during the winter months and incorporated with the soil of the beds as soon as the spring bedders are removed to their summer quarters, or just before the summer bedders are planted out. The beds may also be enriched, should this be thought necessary, at the time of planting-out the spring bedders; but this will seldom be the case.

On commencing this paper I intended to have attempted further inquiry into the origin of the bedding-out system—viz., as to where it was first practised and by whom, but as my remarks have already run to a much greater length than was contemplated I must consequently leave the subject for the present, or recommend it to the consideration of some of your numerous and able contributors who may feel interested in the matter, and who may be in a position to afford more

information upon the subject than I can do.—P. GRIEVE, *Calford*.

SEWAGE AS A FERTILISER.

By CUTHBERT W. JOHNSON, F.R.S.

THE difficulties attending the disposal of sewage commence as soon as cesspools and the consequent fouling of well water are supplanted by sewers. It then becomes necessary to provide for the disposal of the sewage—either by pouring it into a stream or by adopting some plan for its purification. Then commences numerous suggestions to accomplish this very difficult object. These have been, in many cases totally unworthy of notice, in others difficult to be understood. It is needless to examine these in detail, for with one exception these processes are unable to extract from sewage the salts of ammonia and other soluble matters which render the effluent waters so noxious. That exception is by irrigation, which has been well alluded to by Her Majesty's Commissioners who were appointed to inquire into the pollution of rivers. They remarked (*First Report*, p. 128), "A most important feature of this plan of treating town sewage is, that although wherever irrigation is carelessly conducted a certain amount of unpleasantness is inevitable, yet no injury to health follows the adoption of the plan. No locality can be named in which typhus fever, enteric fever, dysentery, or any other zymotic disease generally attributed to foul emanations has been traceable to irrigation with town sewage. On every ground, therefore, irrigation may be confidently recommended as a safe and trustworthy remedy for the nuisance with which towns have to deal."

With such evidence before us, and with the knowledge that several hundreds of acres of grass land have long been successfully sewage-irrigated at Mansfield, and a far larger extent of land at Edinburgh for ages, we might reasonably expect that the question might be carefully and calmly examined, and even condemned with reluctance. But how different has recently been the mode of attack by those who do not even pretend to suggest any other and better mode of purifying town sewage? It has of late not even been considered necessary to ascertain the truth of certain rumours before a violent attack was commenced on sewage irrigation.

It was asserted that a typhoid fever in Marylebone was attributable to the use of the milk from a herd of cows fed on sewage-irrigated grass; then it was found out that these cows were not fed upon any such irrigated grass. When this charge broke down, then it became necessary to try another tack. It was gravely asserted, by a gentleman who ought to have known better, that typhoid fever was always rife around the sewage-irrigated meads of Beddington, near Croydon, and at Edinburgh. This assertion, however, did not prove more fortunate than the previous one, for it turned out, by the official report of the officer of health for Beddington, that in the surrounding parish of Carshalton and the hamlet of Wallington not a single fatal case of typhoid fever occurred in the years 1871 and 1872, two cases only from scarlatina in 1871, one from diphtheria in 1871, and not a single case from either in 1872! And then with regard to the meads at Edinburgh we find in the Report of the Commissioners (No. 1, p. 90) that Dr. Littlejohn, the medical officer of health to the city, "although he looked with prejudice and displeasure on the existence of sewage meadows in its suburbs, he had not been able to connect the ill health of certain localities in Edinburgh with the Craigentenny meadows as its cause." And Professor Christieson, President of the Royal Society of Edinburgh, adds (*Ibid*, p. 90), "Many years ago my own prejudices were all against the meadows; I have been compelled to surrender them. I am satisfied neither typhus, nor enteric fever, nor dysentery, nor cholera is to be encountered in or around them, whether in epidemic or non-epidemic seasons, more than in any other agricultural district of the neighbourhood."

That myth not answering the purpose for which it was concocted, another battery was opened. It was gravely asserted that the irrigated land would become supersaturated and in a short time lose its deodorising powers. Those who made this assertion were well aware that the meads of Edinburgh and Mansfield had been sewage-irrigated for generations. Then came the report of the Sewage Committee of the British Association at the Bradford meeting in September last, thus reported in the *Times* of September 23:—"The Committee consisted of Mr. Grantham, Professor Corfield, Dr. Gilbert, Mr. W. Hope, and Professor A. W. Williamson, who had attended the meetings; and Mr. Bailey Denton, Mr. J. T.

Harrison, Lieutenant-Colonel Leach, and Dr. Voelcker, who had not attended. The Committee had continued that part of the inquiry for which it was more particularly appointed—namely, the examination of the typical case of sewage-farming at Breton's Farm, near Romford. An analysis of the soil of the farm showed a considerable increase in the amount of nitrogen and phosphoric acid. The Committee's funds being nearly exhausted, they present a *résumé* of the results of their labours, prepared by Professor Corfield.

"Mr. Hope presented the Report on Breton's farm, Romford, and stated that the systematic observations hitherto carried on had been continued. The point of chief importance was that the effluent water was slightly purer, thus exploding the idea that land becomes "sick" of sewage. An analysis of samples of the soil taken in April, 1853, at the same part of the farm as the samples were taken for analysis in 1870, prior to the application of any sewage, showed very appreciable quantities of phosphoric acid, ammonia, and nitric acid, which valuable manures were almost, indeed practically, absent in the same soil in 1853. The Committee also found that the population of Romford had been largely overstated by the Local Board, and that, instead of between 7000 and 8000 persons feeding the sewers, there were only about 4600 persons in all. This, of course, gave a very different complexion to the agricultural results, and among other things gave the important and new fact that in the case of this town the sewage of the population, including, of course, kitchen and washhouse slops, and that due to horses and to live stock on market days, contained 13 lbs. to 14 lbs. of nitrogen per head per annum. Professor Corfield recapitulated the contents of all the Reports which had been presented by the Committee, and said they had come to conclusions which were substantially as follows:—First, All conservancy plans, including heap and cesspool systems, dry-ash and dry-earth closets, pail closets, &c., are quite incompetent as solutions of the general question of the removal of the refuse matters of a population; they only deal with a small part of the liquid manure. Towns which resort to one of them require to be sewered, and the sewage requires to be purified. The manure produced is in all cases (excepting that of simple pails or tubs, where no extraneous materials are added) poor, and will only bear the cost of carriage to a short distance; that produced by the dry-earth system being, even after the earth has been used three times over, merely a good garden mould. Moreover, these plans all violate one of the most important of the Sanitary Laws, which is that all refuse matters which are liable to become injurious to health should be removed instantly, and then be dealt with afterwards. With all these plans it is an obvious advantage, on the score of economy, to keep the refuse about the premises as long as possible; and the use of deodorants of various sorts, or even of disinfectants, proves that this is the case, and that these systems all depend upon a fallacious principle. They should therefore be discouraged as much as possible, and only resorted to as temporary expedients or with small populations in very exceptional instances. Second, The water-carriage system, on the other hand, is based upon the sound principle of removing all the refuse matters as once and in the cheapest possible manner by gravitation, and ought to be resorted to in all but the most exceptional cases. The opinion of the Committee that all sewers should be made of impervious materials, and that separate drains to dry the subsoils should be constructed where necessary, has already been most emphatically expressed. The freest possible ventilation of sewers, house drains, and soil pipes, in order to prevent accumulations of foul air, is also essential. With regard to utilisation of sewage, the Committee has come to the conclusion that the precipitation processes which it has examined are all incompetent, and necessarily so, to effect more than a separation of small parts of the valuable ingredients of sewage, and that only a partial purification is effected by them. Some of them may, however, be useful as methods of effecting a more rapid and complete separation of the sewage sludge. The upward-filtration process only effects a clarification of the sewage, and is therefore no solution of the question. Wear's charcoal filtration process, as carried on at Stoke-upon-Trent Workhouse, did not give satisfactory results, the effluent water being in effect weak sewage; an opportunity will, however, soon be given for an examination of this process in a modified form on a much larger scale at Bradford, and under more favourable conditions. Intermittent downward filtration through soil has been shown at Merthyr Tydvil to afford a means of purifying the sewage under favourable conditions, but it can-

not be said to be a method of utilisation, except to a partial extent, as the investigation made by the Committee showed that the effluent water contained as much nitrogen as was originally in solution in the sewage, but mainly as nitric acid, instead of as ammonia and organic nitrogen; and there can be no doubt that the process will prove useful, as an adjunct to irrigation cannot conveniently be got. By properly-conducted sewage irrigation, a solution is afforded to the question of sewage utilisation. It has already been stated that a precipitation process or some clarifying process may be found useful in all instances. It is essential that the land should be well underdrained, and that the sewage should all pass through the soil, and not merely over it; otherwise, as has been shown, it will only occasionally be satisfactorily purified. The catch-water, or, as the Committee term it, the 'supersaturation' principle is not defensible, either on agricultural, chemical, or sanitary principles. An irrigation farm should therefore carry out intermittent downward filtration on a large scale, so that sewage may be always thoroughly purified, while at the same time the maximum of utilisation is obtained. It is certain that all kinds of crops may be grown with sewage, so that the farmer can grow such as he can best sell. Nevertheless, the staple crops must be cattle food, with occasional crops of corn; and it is also certain, from the analysis of the soil, that it has become very much richer, and that the manurial constituents of the sewage accumulate in it. Cattle should be fed on the farm, which leads to a vast increase in the production of meat and milk, the great desiderata of the population producing the sewage. Thus the system of farming must be specialised and capital concentrated, the absence of which conditions has proved a great barrier to the satisfactory practical solution of the sewage question. The Committee has not been able to trace any ill effects to the health of the persons living around sewage farms, even when badly conducted, nor is there any proof whatever that vegetables grown thereon are in any way inferior to those grown with other manure. On the contrary, there is plenty of evidence that such vegetables are perfectly suited for the food of man and beast, and that the milk given by cows fed on sewage grass is perfectly wholesome. Thus Mr. Dyke, medical officer of health of Merthyr Tydvil, states that since the abundant supply of milk from the cows fed on irrigated grass the children's mortality has decreased from 48, 50, and 52 per cent. of the total deaths to only 39 per cent., and that, so far from diarrhoea having been made more prevalent by the use of sewared cabbages, 'last year the Registrar-General called attention to the fact that diarrhoea was less prevalent in Merthyr than in any place in England and Wales,' and he expressed his belief in 'the perfect salubrity of the vegetable food so grown.' With regard to the assumption which has been made that entozoeic disease would be propagated by irrigation, all the evidence that the Committee has been able to collect, and more especially the positive facts obtained by experiments, are against such an idea, and the Committee is of opinion that such disease will certainly not be more readily propagated by sewage irrigation than by the use of human refuse as manure in any other way, and probably less if the precaution be taken of not allowing the animals to graze, but always having the grass cut and carried to them."

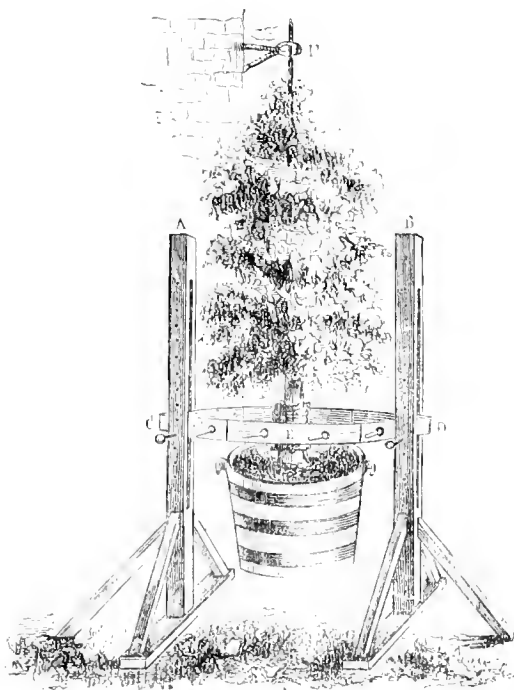
From the results thus reported (and the evidence could be readily multiplied), we may safely banish all our fears of any danger to our health being produced by the use of sewage-irrigated grass. The object to be obtained is of far too important a character to be discussed without the greatest caution, with an inflexible determination to adhere to truth, and the most careful avoidance of personalities, which on recent occasions have been employed to an intolerable extent.

RETUBBING LARGE PLANTS.

THE contrivance represented in the accompanying figure was designed by Mr. H. J. Van Hulle, from his recollection of a drawing of a similar apparatus which he had seen in his youth, its object being to lighten the labour and lessen the difficulty of placing large plants in fresh tubs. Mr. Van Hulle thus describes it in the Belgian "Bulletin d'Arboriculture" of September:—

Take two strong posts, *a* and *b*, so securely stayed at their base that there can be no chance of their upsetting. Set them at a suitable distance from each other, and place between them the plant to be retubbed, or, what amounts to the same thing, take the uprights to the plant. The old tub or box is removed, the ball seen to, the stem carefully wrapped round to prevent

injury to the bark, and the collar *e* put on. This can be tightened to any desired extent by the four screws shown in the engraving. Lastly, the two ends of the collar are slipped into the grooves in the uprights, which, as will be perceived, are also pierced with holes. The apparatus having been prepared for action, two men with a pole, or even one with a long lever, will raise the collar, and therefore the plant, say to the point *c*, and an iron pin is there pushed into the hole under the collar; the plant is then raised to *d*, and so on alternately. In a few minutes two, or at most four, men can thus raise up plants of the largest size. To prevent any danger of over-



balancing, a strong stake has been put to the plant, and of sufficient length to slide in the guide-ring *r* as the plant is lifted. When the requisite height is reached, the new tub is put under the plant, and the latter is let down peg by peg in the same way as it was raised up. The less the distance between the holes the better, and never raise up or let down more than one hole at a time. The contrivance is in use at the Ghent Botanic Garden, and there gives perfect satisfaction.

KEW GARDENS.—No. 4.

ANOTHER very remarkable tree which springs up amid the dingier Gums, and is just touching the roof, is the Norfolk Island Pine, the leaves of which forming green platter-like trays, so to speak, at regular intervals on its delicate stem, have a very graceful effect. In its native woods it reaches a height of 200 feet. These beautiful trees have been successfully imported into Europe, and grow with great luxuriance at San Laucar and on the coast of Portugal. New Zealand has many specimens of her trees at Kew; among them, *Kai Kutea*, a fine tree—the white Pine of the colonists, and *Arca sapida*, a New Zealand Palm, and *Podocarpus Totara*, which is one of the most valuable timber trees in the colony.

On the northern side of the house there is a noble collection of Japanese plants. This we are told is characterised by an unusually large proportion of woody plants, many of which belong to families which are rare elsewhere so far to the north. This, doubtless, is the scientific distinguishing character of the Japanese flora, but to the non-botanical observer the remarkable characteristic is the perseverance with which this extraordinary people have managed to variegate the leaves of their plants. The *Acacia japonica* we have so assimilated to ourselves, is a specimen. The variegation in the leaves of this handsome Laurel is but a type of the change effected in

numerous other plants by the Japanese—a testimony to the civilisation which must so long have existed there in order to bring about this remarkable result. In consequence of our hitherto having but one sex of the *Aucuba*, it was long wanting in the beautiful scarlet berries which contain its seed, but this deficiency has of late years been supplied, and the staminate plant can now easily be procured. As the climate of Japan closely resembles that of Great Britain, most of the Japanese plants can be grown in this country without protection.

A very short walk from the temperate house takes us to the Chinese "Tai." This pagoda was built under the direction of Sir William Chambers in 1761-2, and was considered at the time one of the finest specimens of brickwork in the country. It consists of ten octagonal storeys, which diminish from the lowest. The building is 163 feet in height, and the view from the top is very beautiful, extending over a large area of country. It is closed to the public in consequence of the inveterate habit of name-cutting which affects a certain class of visitors. The only Cedars of Lebanon of any size in the garden are close to the building. They were planted in 1750, and consequently are fine trees.

Now that we are in the arboretum, or pleasure ground, which the public so much affect, it will be as well to give some account of it. It was mainly planted about the year 1730 by the Earl of Bute, consequently the trees have grown to a noble size; but the wood has altogether lost its character within these last fifty years—indeed, since the destruction of old London Bridge. The old Curator, who still survives, tells us that in his youth the Thames stood at least 3 feet higher than it does now; in fact, there was never low water showing mud banks such as we now see. The solid piles of the old bridge formed an impediment to the flow of the stream, which kept it back like a mill-dam—a fact which those old enough to have performed the perilous feat of "shooting the bridge," as it was called, can well remember. The effect of lowering the tide, no doubt seconded by the general land drainage of the neighbouring country, was that very many of the trees died; the present Curator testifies to the fact that when their roots have been dug up, they were marked at a certain depth, where the water never reached them in the gravelly soil, by a fungus which destroyed them. There used to be a tangled underwood throughout, and rare Mosses and Ferns grew there, which collectors in despair can no longer find. In fact, it was at one time a covert for game, impassable to anyone but the royal hunters. When the Queen made over the botanical garden and the old arboretum to the public, the pleasure ground was in the possession of the late King of Hanover, and this Prince refused to give up possession, but kept it as a preserve for pheasants. At the annual shooting the game were sent over to Hanover, and we are informed found its way back again to this country as presents to his friends! Even as late as the advent of Dr. Hooker, the present Director, it was impossible, he tells us, to find a way through the dense undergrowth; the squirrels and the wild birds were plentiful, and the aspect of the place was quite forest-like. Since that time it has been brought within the pale of civilisation. The undergrowth has disappeared, paths have been cut through in every direction, new trees have been planted, and it has assumed its true form as a noble pleasure ground. The river, it is true, has become very tidal, and the banks at time of low water muddy; but the side of these grounds overlooking the Thames is still the favourite resort of the more pleasure-loving in the gardens.

Finding our way back from the pleasure ground by way of the gate near the Temple of Minion—a monument to a battle Englishmen have almost forgotten—we come in sight of the flagstaff, said to be the finest spar in Europe; it is planted in a mound to a depth of 18 feet, and its entire length is 150 feet. But the height is but that of a clothes-prop to some of the spars the *Wellingtonia gigantea* trees could yield. A specimen of this tree is to be found in the plantation on the round mound near the Palm stove, of a very moderate height, but in California there are trees now standing 150 feet in height and 116 feet in circumference! The fine square tower we pass on our right once did double duty—as a smoke shaft, drawing the smoke from the Palm stove furnaces, and as a water-tower, in order to obtain a sufficient elevation for the requirements of the gardens and houses. But both these requirements have now been answered in another manner: The smoke takes a short cut through the two wings of the building, and the water is now provided by means of the lake in the pleasure grounds, from which it is pumped by an engine near the temperate house to tanks in Richmond Park. For-

merly the smoke from the Palm stove was conveyed by underground flues a distance of nearly 500 feet to the tower, where it was consumed. An underground railway also ran to the stove, to convey coals to the furnace and remove the ashes.

A short winding path takes us to the herbaceous grounds, which form one of the most interesting features in the gardens, and answer many questions plant-growers feel interested in, but which the uneducated passer-by thinks as of no account. These herbaceous grounds may be looked upon as the living reflex of the herbarium, to which we shall draw attention presently. It may be considered a map of hardy herbaceous plants, arranged in the natural orders to which they belong.

Some of the orders occupy several beds, and some but few, the order in many instances being represented by a typical plant placed in a circular side bed, so that the botanist sees at a glance the bed from which he may require to gather information. The Grasses and Sedges are illustrated by a splendid collection. The Thistle tribe—few people sufficiently appreciate their beauty—are very numerous, culminating in the Artichoke, which we have often wondered has not been introduced into our flower gardens for the beauty of its foliage. Evelyn tells us that they were appreciated by the ancients as they deserved. "For not very long since this noble Thistle came out of Italy, improved to this magnitude by culture, and so rare in England that they are commonly sold for a crown a-piece; but what Carthage yearly spent in them, as Pliny computes the sum, amounted to £30,000 sterling." Whether they were appreciated for their beauty or for their gastronomic properties Evelyn does not say; but the nobility of their appearance no lover of the beautiful can deny. The infinite varieties of many of the common flowers only the botanist has a notion of, the differences in many cases only being observable to the keen scientific eye. Nevertheless, only distinct types are represented here, all cross-breeds being eliminated. Among the noble foliage to be found here we took especial note of the *Gumera scabra*—a plant which grows very like the Rhubarb, the leaf-stalks springing at once from the ground, but flowering differently, the seed-pods springing also from the ground. The leaves are of gigantic proportions, measuring 8 feet in length, and forming deep masses of shade, and presenting most striking forms. We trust we shall see it ere long embellishing private gardens. A collection of hardy Ferns, Alpine plants, &c., close to the herbaceous gardens clearly attracts many fanciers, as we see they are under the especial care of a watchman, rare Ferns being one of the articles some people see no crime in appropriating clandestinely.

Of the value of this herbaceous garden as a test by means of which collectors are able to identify rare plants, the number of persons who daily visit it is the best proof. It may be asked, What's in a name, "a Rose by any other name would smell as sweet?" but the nurserymen know otherwise, and in order to sell their plants they must give the true botanical name. This garden, and the hortus siccus, or herbarium, by far the most extensive collection of dried plants in existence, form a necessary complement to each other. The house at the entrance of the gardens where the late King of Hanover used to live, forms what may be termed a huge album, where most of the dried plants in existence can be found duly indexed and arranged in folios. In this and the herbaceous grounds most of the scientific work of the garden is done. The valuable botanical library situated under the same roof attracts to it botanists from all quarters of the globe, and nearly every valuable work on the subject published in this country has issued from this spot.—(*Edinburgh Review*.)

PORTRAITS OF PLANTS, FLOWERS, AND FRUITS.

SENECIO (KLEINIA) HAWORTHII. *Nat. ord.*, Composite. *Lin.*, *Syngenesia equalis*. Native of South Africa. Flowers silvery, anthers yellow. "This plant has been cultivated for many years at Kew, where there is no record of its origin. It forms a small suffrutescent herb a few inches high, in the succulent house, growing freely enough. Haworth again (*Pl. Succ.*, 311) says, "This extraordinary plant has not yet produced any flowers with me. It is completely enveloped in a short dense skin-like cover of cottony wool, which is even capable of being stripped off the leaves like a skin, leaving the leaves themselves green after being divested of it. This cotton, if lighted in the flame of a candle, &c., slowly consumes in the manner of touch-paper, owing to the resinous quality this genus abounds in. *Cacalia tomentosa* is capable of living very long

without water, as are also other woolly succulents, &c.' The absence of the conical points to the stigma of this species would remove it from *Kleinia* as characterised by most authors; its habit and capitulum are, however, those of the peculiar group of chiefly South African plants to which that name was originally applied."—(*Bot. Mag.*, t. 6063.)

PENTSTEMON PALMERI. *Nat. ord.*, Scrophulariaceæ. *Linn.*, *Didymia* Angiospermiæ. — Native of California. Flowers creamy and rosy purple. "Mr. W. Thompson, of Ipswich, flowered it in August of the present year from American seeds; he informs me that it attains a height of 3 to 4 feet, from which, at Watson's attributing to it a stature of 2 to 5 feet, I judge that it must be altogether the grandest and most beautiful known species of the genus. Though coming from so southern a latitude, 32°-42° N., it appears to be quite hardy."—(*Ibid.*, t. 6064.)

SAXIFRAGA KOTSCHYI. *Nat. ord.*, Saxifragaceæ. *Linn.*, *Decandria* Digynia. — Native of Asia Minor. Flowers yellow, calyces red-tipped. "This is one of the group of Saxifragæ that forms dense hard cushion-shaped masses on the mountains of the South of Europe and Western Asia, where they are exposed to great summer heat and winter cold, without the humidity of a more northern or western climate. They are consequently very difficult to cultivate in England; and where they have succeeded they never form the luxuriant masses that they do in the Mediterranean region. S. Kotschyi is a native of precipitous rocks in the Cilician Taurus, at an elevation of 6,900 feet, as also of the mountains of Armenia and Cataonia, all in Asia Minor, where it was discovered by Ancher Eloi, the French explorer on the Thessalian Olympus. It flowered in the Royal Gardens (where it has been in cultivation for a good many years) in May, 1873, and bears evidently imperfect flowers, the petals being smaller than in the native specimens, and the stamens and the styles quite arrested in growth."—(*Ibid.*, t. 6065.)

CELSIA BENTONIFOLIA. *Nat. ord.*, Scrophulariaceæ. *Linn.*, *Didymia* Angiospermiæ. — Native of N.W. Africa. Flowers yellow and red. "A little-known plant, discovered by Desfontaines in fields in Algeria, subsequently in Tangiers by Salzmann, and lastly by myself (in 1839), on the top of a peak in the Island of St. Jago, one of the Cape de Verd group, a station very far removed from the above. It is remarkable that it has not been detected in the Canary Islands. It is closely allied to the widely-distributed *C. cretica*, L. (Tab. nost. 964), which ranges from the Canary Islands to the East Indies, differing in usually less divided leaves and long pedicels of the flowers.

"In Morocco two varieties occur, one nearly glabrous, the other woolly; both are found in the valleys of the Greater Atlas, ascending to 5000 feet, as also in fields on the plains; the lower leaves are sometimes pinnatifid throughout. The specimen here figured was flowered by Mr. Niven of the Hull Botanic Gardens, in August last, I believe from seeds procured by Mr. Maw in Morocco in 1871."—(*Ibid.*, t. 6066.)

ARISTOLOCHIA TRIANGULARIS. *Nat. ord.*, Aristolochiaceæ. *Linn.*, *Gynandria* Hexandria. — Native of Eastern Mexico. Flowers crimson-stalked, tube creamy, purple-tailed. "It was discovered by Ghiesbreght, an indefatigable explorer, and transmitted by him to M. Verschaffelt, of Ghent, by whom it was published, in 1866, with an excellent plate in the 'Illustration Horticole.' *H. triangularis* flowered in the stove at the Royal Gardens in August last, on a plant received from Mr. Bull in the previous year. It is said to recommend itself to the cultivator from the negative quality of wanting the detestable odour so prevalent amongst its congeners."—(*Ibid.*, t. 6067.)

CRASSULA SAXIFRAGA. *Nat. ord.*, Crassulaceæ. *Linn.*, *Pentandria* Monogynia. — Native of South Africa. Flowers pale flesh-coloured. "For this very singular and brilliantly-coloured S. African plant the Royal Gardens are indebted to Principal MacOwen, of Gill College, Somerset East, who transmitted tubers of it from that district, which flowered in June of the present year. It would seem to have a wide South African distribution, being found on mountain sides from the extreme south-west, as on the Mvusenberg Mountain, near Simon's Bay, to Port Elizabeth and Albany. The brilliant red colouring of the under surface of the leaf is not a constant character."—(*Ibid.*, t. 6068.)

TAESONIA INSIGNIS. — "Raised by Mr. R. Anderson, gardener at Sowerby House, Hull. The honour of introducing it to this country belongs to Yarborough L. Greame, Esq., by whom seeds were sent to England some few years since, and who in a memorandum communicated by Mr. Anderson, writes as

follows concerning it:—"I saw the *Taesonia* growing in a deep richly-wooded gorge, on the eastern slope of the Cordilleras, between La Paz and Chulumani, in the north of Bolivia. It seemed to like to climb to the end of a long branch, and then hang in festoons, swayed backwards and forwards by the breeze." This description of its manner of growth is, we learn, very accurate, since it supports itself by its tendrils till it begins to flower, and then hangs loose, each branch having as many as a dozen or fourteen flowers open in different stages of development. We believe the plant is to be sent out by Messrs. Backhouse & Son, of York."—(*Florist and Pomologist*, 3 s., vi., 241.)

THE EUCALYPTUS GLOBULUS AS AN ANTI-FEVER TREE.

At the last meeting of the French Academy of Sciences an interesting communication was read from M. Gimbert, who has been long engaged in collecting evidence concerning the Australian tree, *Eucalyptus globulus*, the growth of which is surprisingly rapid, attaining, besides, gigantic dimensions. This plant, it now appears, possesses an extraordinary power of destroying miasmatic influence in fever-stricken districts. It has the singular property of absorbing ten times its weight of water from the soil, and of emitting antiseptic camphorous effluvia. When sown in marshy ground it will dry it up in a very short time. The English were the first to try it at the Cape, and within two or three years they completely changed the climatic condition of the unhealthy parts of the colony. A few years later its plantation was undertaken on a large scale in various parts of Algeria. At Pondook, twenty miles from Algiers, a farm situated on the banks of the Hamyze was noted for its extremely pestilential air. In the spring of 1867 about thirteen thousand *Eucalypti* were planted there. In July of the same year, the time when the fever season used to set in, not a single case occurred; yet the trees were not more than 9 feet high. Since then complete immunity from fever has been maintained. In the neighbourhood of Constantia the farm of Ben Machylin was in equally bad repute; it was covered with marshes both in winter and summer; in five years the whole ground was dried-up by fourteen thousand of these trees, and farmers and children enjoy excellent health. At the factory of the *Gue de Constantine*, in three years, a plantation of the *Eucalyptus* has transformed twelve acres of marshy soil into a magnificent park, whence fever has completely disappeared. In the island of Cuba this and all other paludean diseases are fast disappearing from all the unhealthy districts where this tree has been introduced. A station house at one of the ends of a railway viaduct in the department of the Var was so pestilential that the officials could not be kept there longer than a year; forty of these trees were planted, and it is now as healthy as any other place on the line.—(*English Mechanic and World of Science*.)

WEEVILS.

You ask for my mode of trapping these in the orchard house. Having pressed down the soil in the pots to make it level, I lay on it a cake of half-decomposed hay, taken from the bottom of a heap of the mowings of the previous year. Every morning I look to see where the leaves have been freshly bitten. I have then only to turn over the grass and find the weevil below. When the grass is not consolidated it is sometimes tedious to find the offender, as his colour is the same as old grass. I allow this latter to remain as a top-dressing; richer material may be added above. Figs are especially fond of rooting into the decaying grass.—G. S.

PRIMROSES, COWSLIPS, POLYANTHUSES, AND OXLIPS.

(Continued from page 369.)

PANTALOONS.

This is a term applied by the old florists of two centuries ago to a form of the *Hose-in-Hose*, "having green leaves about their blossoms, which are sometimes variegated with the same colours as the flowers they encompass." This in modern language signifies that the calyx is not an exact fac-simile of the corolla, as in the *Hose-in-Hose*, but is enlarged, so as to become funnel-shaped, and while partaking of the colour of the corolla, it is variegated with green stripes. Of these I have a very large variety, ranging in colour from pale lemon yellow

to deep rich yellow, and from yellow stained with red through all shades of red to dark maroon, but I have not yet succeeded in obtaining a white one.

There is a curious variety of *Pantaloons*, raised by Mr. J. Anderson-Henry, which has large foliaceous bracts, the same as in old Parkinson's *Jackanapes-on-Horseback*, of both of which we will publish a portrait next week.

A bed of *Hose-in-Hose* and *Pantaloons* is one of the gayest sights in the spring and early summer flower garden, and their fragrance is so powerful it may be scented at a distance. There is no doubt that the *Hose-in-Hose* and *Pantaloons* come originally from the *Cowslip*, for when the seed is sown a considerable per-centage of the plants produced are the common *Cowslip*, differing only in colour. I have, however, a fine form of the *Pantaloons* which is a large-flowered deep crimson *Primrose*, and is very gay in the flower border in spring. This is frequent in the cottage gardens of East Sussex and some parts of Kent, and as it is a luxuriant grower and free bloomer it is pretty widely distributed.

GALLIGASKINS.

This is one of the most curious forms to which the *Primrose* and *Cowslip* are subject. The name of *Galligaskins* is used by Parkinson. He thus describes them: The "flowers are folded or crumpled at the edges, and the husks of the flowers bigger than any of the former, more swelling-out in the middle, as it were ribs, and crumpled on the sides of the husks, which do somewhat resemble men's hose that they did wear, and took the name of *Galligaskins* from thence." The meaning of which is, that the ribs of the calyx-tube are prominent and crisped, and the segments of the calyx are developed into large foliaceous blades crisped or curled on the margins; hence Parkinson calls them also "*Curled Cowslips*."

The *Galligaskins* are rarely to be met with. I am fortunate enough to possess several distinct varieties, all of which are very curious. There is one form which Parkinson calls "*The Frantick or Foolish Cowslip, or Jack-an-apes on horseback*," which I have also been fortunate enough to secure. It, too, is very curious. The involueral bracts at the top of the scape, instead of being small bodies as they are in the normal form of the *Cowslip*, are produced into long narrow leaves an inch or more in length, from the bosom of which issues an umbel of single-flowered pedicels. Of this we will give an engraving next week. These are all the different forms of the *Polyanthus* and *Primrose* with which I am acquainted.

CULTIVATION.

Primroses and *Polyanthuses* will grow in any soil except that which is very light and very poor; but any light soil that is amply supplied with vegetable matter will grow them well.

That in which they delight most, and in which they grow with the greatest luxuriance, is a strongish sandy loam, or what is better, a strong fibrous loam. Whenever a border is prepared for them, fresh stable manure should never be applied, and if the soil requires amendment, this ought to be given to the previous crop, so that by the time the *Primroses* are planted the manure will have become entirely rotten and incorporated with the soil. The debris of a wood heap which has been reduced to mould, rotten weeds which have long lain in a heap, and leaf mould, are as good a dressing as can be

applied to them, and if this is mixed with a portion of old cow dung it will be much benefited. Some of the best plants I have ever grown were on the north side of an old Holly hedge, the over-shadowing branches of which were never trimmed, where the dead leaves had been allowed to accumulate and rot for years, producing a loose, light, rich mould in which the roots could run freely.

The situation for a bed of *Primroses* ought to be shady, so that the mid-day sun will not reach the plants. If fully exposed to the sun the beauty of the flowers is not only impaired, but the vigour of the plants is much weakened, and this is especially the case after the flowering period, when the plants go to rest. It is then that shade is very essential; and if it so happen that this cannot be procured by the natural position of the bed, it must be obtained by strewing the plants with short grass, litter, or any such covering. If the plants are left exposed to the full influence of a scorching summer sun they become in many instances totally blind, and the buds never burst again. There is no better place in which to grow *Primroses* and *Polyanthuses* than in an orchard under standard fruit trees, the essential conditions for the successful cultivation of them being shade, coolness, and humidity.

These plants should never be allowed to remain more than two years in the same position. Some of them are the better for being taken up and divided annually, and especially those that have the habit of elongating the rootstock above ground, and forming long bare branches with only a tuft of leaves at the crown. The best time to take-up and divide them is in August and September. If the work can be completed by the middle of the latter month so much the better, as the plants will then be perfectly established and have begun to grow before winter frosts set in, by which they are apt to be thrown out of the ground if they are not properly established.

The rhizome or underground stem of these plants is often subject to a sort of canker or gangrene; and this not unfrequently occurs when they are transplanted from one description of soil to another, with the old soil clinging to them. These decayed and decaying portions should be thoroughly removed,



Pantaloons.

even to the quick; and I have found it an excellent precaution before planting to have a pail of water at hand, and thoroughly to wash the old soil away from the roots before planting them in their new situation, and an addition of lime to the water tends to check the spread of this gangrene.

RAISING SEEDLINGS.

The best time to sow the seed is immediately after it is ripe. This will be in the latter end of June and early in July. It is not advisable to be later than the first week of the latter, especially if it is intended that the plants are to bloom in the following spring.

The seed may be sown either in pans or boxes under glass in a pit or frame, or in a bed in the open air. If the latter, choose a shady spot where the soil is light and easily worked fine, and after preparing it by digging, and raking till the surface is fine and mellow, scatter the seed thinly over the surface and pass the rake over it with a very light hand, so that the seed will not be covered more than a quarter of an inch. If the weather continue dry give occasional waterings with a fine-rosed watering-pot, enough to keep the surface moist without causing it to cake. The plants will soon be up, and the only care they require is to keep them free of weeds. As soon as they have got four leaves and can be easily handled they are to be pricked-out about 3 inches apart on a bed prepared for the purpose, and before the beginning of winter they will have grown to a good size, so that in the spring they may be removed and planted where they are intended to flower, which they will do during the current summer.

If the seed is not sown at the time indicated above, it may be done at the beginning of February in pans or boxes, which are to be placed in a gentle hotbed. When the plants are large enough they are to be pricked-out and treated in the same way as I have described for those raised in the open air. These, if well grown, will mostly flower in autumn, and will have become very strong plants before the succeeding spring.

When planted out where they are intended to flower they ought, according to the soil, to be from 6 to 9 inches apart. On my soil, where they grow so strong, I am obliged to adopt the latter, for if placed at less distance they overgrow each other; but in ordinary garden soil 6 inches will be enough.

SELECTION OF VARIETIES.

When the blooming season has commenced then is the time to make selections of those that are to be preserved, for no matter how carefully the seed may have been selected, it will be found that some of the plants produced will be so inferior to the others, that it will be necessary to weed them out.

In making the selection, the first point the strict florist

directs his attention to is to see which of the flowers have *thrum* and which *pin* eyes. Those which are called *thrum-eyed* flowers have the throat closed by the anthers, which are set round the top of the tube of the corolla, the pistil being so short as not to be visible. This form has been called by botanists *brevistyla*. The *pin-eyed* flowers have the throat closed by the stigma, the pistil being as long as the tube of the corolla, and sometimes much longer, and this form the botanists call *longistyla*.

The *thrum* eyes are those to which prize florists give greater preference. No matter how well formed or highly coloured a *pin-eyed* variety may be, it meets with no favour in the eyes of the prize florist. But these who are not so fastidious, and who admire a flower for its beauty, take little heed of the prize florists' distinction. Still, if the selection is to be a rigid one, the first choice is to pick out those with *thrum* eyes. The next point to be attended to is that the scape or stem be sufficiently stout to support the umbel of flowers unaided. The footstalks of the individual flowers should have the same property, being short and proportionately stout, so as to sustain the flowers in an erect position. And the flower itself should be large, round, and flat, and if possible with six lobes in the limb of the corolla, the colours clear, and, if more than one, distinct and decided, not blending one into the other, unless where there are two shades of the same colour. Another important quality which ought not to be overlooked, is the abundance of bloom and its long continuance.

These characteristics which I have set down relate only to what may be called *border* flowers, and have no reference whatever to those properties which the prize florists have fixed as the necessary requirements of *prize* or *stage* flowers. But although the strict florist is so particular

about all being *thrum* eyes, there is no reason why the lover of flowers for their beauty should be so restricted in his selection. We have seen many very beautiful varieties with *pin* eyes excelling in size, form, and colour those with *thrum* eyes, and always failed to see any reasonable ground for discarding them merely because the prize florists set up an opposite standard of choice. In the case of *prize* flowers, prize florists may enact such rules and laws as their fancy suggests; but the true florist, he who loves flowers for their natural loveliness, and not for their development of any particular points, needs not to be restricted by any such rules, but may please his taste in whatever he considers most beautiful, and which to him seems most ornamental.—PHILANTHOS.

ELECTION OF ROSES.—In looking over the returns of the election of new Roses, I find, to my astonishment, that Mar



Gallianaskin

quise de Castellane is omitted in my list. This was entirely an oversight, as I consider it fully entitled to rank in the best half dozen. Of President Thiers last year I expressed my doubt, and another year has confirmed my opinion that it will never rank as a first-class flower; I must, therefore, depose the President in favour of the Marquise.—BENJAMIN R. CANT.

DESTROYING WASPS AND OTHER OFFENDING INSECTS.

A COMMUNICATION signed "C. P. P." suggests, Has anyone tried a weak solution of cyanide of potassium on plants? I cannot say that I have, but I have been trying the effect of placing a plant affected with blight, also one with mealy bug and thrips, under a bell-glass, and with them a lump of the cyanide with most certain effect. But I have not yet attained all I desire, for the fumes are apt to damage the plants also, those most affected being *Adiantum farleyense*, an *Asplenium*, and *Torenia asiatica*. I purpose continuing the experiment to ascertain the shortest time that it takes to kill these "varmints," when I will let you know the result.—WILLIAM RAYNER, *Surgeon, Uxbridge*.

NOTES AND GLEANINGS.

CAN any of our readers inform us where the DOUBLE COWSLIP is to be procured, and also the WHITE HOSE-IN-HOSE POLYANTHUS?

—SINCE the Messrs. Salter were compelled by the railways to give up their nurseries, there is no one on whom their mantle has specially fallen, but some of the London nurserymen have this year acknowledged the value of the CHAYSANTHEMUM as an autumn decorative flower by holding special shows of the different varieties. Thus Messrs. Veitch, of Chelsea, and Messrs. Cutbush, of Highgate, have each an excellent show of it. Messrs. Dixon, of Moorgate Street, and Amhurst Nurseries, Hackney, and Mr. Forsyth, of the Brunswick Nursery, Stoke Newington, have likewise large and well-grown collections now in great beauty. It will be remembered that all the above-named were successful exhibitors at Kensington last week.

WORK FOR THE WEEK.

KITCHEN GARDEN.

AS long as the present wet weather continues I would strongly recommend all digging and trenching to be deferred until a more favourable time. When the heads of *Brussels Sprouts* are cut the dead leaves should be removed, but none of the green ones, as they protect the young side sprouts; the same may be said of the Scotch Kale and other Winter Greens. When a favourable opportunity occurs take advantage of it to cart-up the autumn plantations of *Cabbages*; it not only invigorates them, but prevents them from being loosened by the wind. Never neglect giving air to *Cauliflowers* under hand-lights and in frames daily, unless during severe frost; if the plants are now drawn by an insufficiency of air they will be very liable to button-off. I purposely say but little on the winter treatment of *Cucumber* plants growing in frames, as there are few persons who go to the trouble and expense of this mode of cultivation who have the convenience of a stove, as they may there be cultivated with much greater certainty. Any *Endive* that may have been planted in frames should have air freely admitted to it to prevent its rotting. *Mushroom* beds out of doors should have a thick covering of straw, over which should be placed mats to protect them from wet and frost; when the straw is wet it should be replaced with dry. As most families require a large supply of *Parsley*, frames should be placed over a portion to protect it from frost; some roots should also be potted and placed in one of the houses where it will be protected from frost, and when wanted it can be removed to a house where forcing is going on. *Radishes*, as soon as they come up in the frames, give air at every favourable opportunity to prevent their drawing.

FRUIT GARDEN.

Continue to prune and nail wall trees; but in no case should old shreds be used without boiling, as they generally contain innumerable eggs of insects. It is also an excellent plan to wash wall trees with hot water from a garden engine—it should be boiling when put into the engine. Few things are more annoying than canker to those who delight to see their trees healthy and producing good flavoured fruit. As this is the season for planting, or preparing for it, considerable attention should be given to the procuring of hardy as well as good sorts in all cases where the situation is not the most favourable. In addition to examining the lists of kinds suited to different localities so often given in answers to correspondents, the planter should

take the trouble of ascertaining what sorts thrive best in circumstances similar to his own. Canker owes its origin chiefly to these sources—planting too deep, the result of which is that the roots are supplied with more nourishment, such as it is, than the heat and sunlight of the place can duly elaborate so as to give ripeness and firmness of texture to the young wood; or from the roots getting into an unfavourable soil that furnishes the trees with vitiated juices; or from the climate of the situation being too cold, or the season too damp and sunless, to permit the healthy action of the plant. Where canker exists the diseased parts should be cut out in spring or summer and the wound covered over with clay and cow dung; but all applications of this nature will be of temporary influence unless attention is paid to the following things: Plant suitable sorts; improve the climate by thorough drainage of the soil; raise the trees on hillocks above the surrounding surface, after laying a substratum of concrete, tiles, slate, &c., at the requisite depth to prevent the downward progress of the roots; never bury the collar of the tree; expose and air the soil before planting, and use no manure but as mulching, and you will generally be rewarded—not by astonishing quickness of growth, nor by your Apple and Pear trees towering their heads like forest trees, but by seeing them produce healthy though rather stunted wood covered with fruitful buds; and if you imagine that you must wait a long time for the full occupancy of your ground by such moderate growth, you may increase the number of the trees.

FLOWER GARDEN.

Examine pillar and trellis Roses, and if the weather is favourable see if the soil wants renewal, or the kinds changing. For choice sorts roomy holes should be made, capable of containing three or four barrowloads of well prepared soil; turfy loam of good quality is the chief material. To this add a portion of rich rotten manure, and, if at hand, a little sandy peat or leaf mould. Crocuses may be planted whenever the weather is favourable. They like a deep, light, rich, sandy soil, but will thrive in any ordinary soil or situation. In planting, the bulbs should be covered from 2 to 3 inches with fine mould. For edging borders or beds the Crocus is exceedingly useful, and where planted in lines along the margins of walks, or in clumps of three, six, twelve, or more bulbs in each, and allowed to remain in the ground for several years, the effect of the masses of flowers which they produce is all that can be desired. I have seen a very effective display in a flower garden in March produced by each bed having a broad edging of Crocus, the colours being nicely arranged and contrasted. This may be secured without interfering with either the spring or summer occupants, for the bulbs may be planted close to the outside of the bed, where they will scarcely be in the way either in digging or planting. Unless the bulbs become too numerous, and the leaves spread over more space than it may be desirable to have covered with them, they should not be disturbed, as they bloom more profusely when well established. Care, however, must be taken to protect them from mice, as these are exceedingly partial to Crocuses, especially in winter. For blooming in-doors, either in pots or in any of the various contrivances that are used instead of pots, strong bulbs should be selected, planting them in succession, and keeping the crowns of the bulbs slightly under the surface of the soil. Place them in any dark cool situation for three or four weeks, to allow of their making roots before exciting them into growth. If pots are used—and these are doubtless the best, if not the most ornamental—use good, rich, sandy soil, and secure perfect drainage, for a liberal supply of water is required during the blooming period, and if the drainage is defective the soil is very apt to become sodden by injudicious watering. While the bulbs are kept in a dark place very little water need be given—merely sufficient to keep the soil, moss, or sand from becoming too dry. When the roots have made some progress the crowns will soon make their appearance, and when these are observed remove to the greenhouse, or, when this is not convenient, a cold frame or pit will answer perfectly; they will also do exceedingly well in a sitting-room window. All that is requisite is to allow them all the light and air possible in mild days, giving water as it may be necessary to keep the soil, &c., in a moist state. Stove plants that are flowering and coming into flower should be placed near the light, and also receive a more plentiful supply of water than other plants. Take every opportunity of destroying insects.

CONSERVATORY AND GREENHOUSE.

The leaves of the Citrus tribe should be washed when the weather is unfavourable for out-door work; all other plants should also be looked over and cleaned where necessary. In mixed greenhouses see that the young stock of *Heliotropes*, *Pelargoniums*, *Cyclamens*, and all other flowers grown especially for winter have nice light situations and regular attention as regards watering. The forcing pit must provide at the proper season such things as *Rhododendrons*, *Azaleas*, *Persian Lilacs*, *Sweet Briars*, *Moss* and other *Roses*, *Kalmias*, *Daphnes*, *Anno Boleyn Pinks*, *Dutch bulbs*, &c.

PITS AND FRAMES.

Every means should be used to prevent young and tender

plants from dumping off; remove any of them which stand in the drip, and give air when the weather is not frosty.—W. KEANE.

DOINGS OF THE LAST WEEK.

FRUIT AND KITCHEN GARDEN.

We have been glad of a short period of comparative dryness to forward digging and trenching in this department, for ground that does not require any manure, as it has been almost impossible to wheel loaded barrows down the alleys owing to the soft nature of the ground. The wall trees, such as Plums, Pears, and Cherries, owing to summer pruning and training, do not require much attention in the winter; but as most of the leaves had fallen, cutting the borders to look untidy, the remaining leaves were cleared off by hand, and any young wood not required was cut back to one or two eyes at the base. Kitchen gardens have an untidy appearance if leaves are allowed to lie about in corners, on borders, or on paths.

We are at a disadvantage as regards planting-out the *Cauliflower* plants; the ground which was devoted to the *Gladiolus* requires to be dug over for them, as it is sufficiently rich without any more manure being added, but in a wet season ground which has grown *Gladiolus* is always very wet after the crop has been taken up. It has now been dug some time, and the plants have gone out in good order. Some dry siftings from the potting-shed were placed round the plants, and into this material they will strike root readily. The plants are taken out of the ground carefully, placed in a flat-bottomed basket, and planted under the hand-lights with a trowel, in preference to a dibber; the covers of the lights are kept on pretty closely for a day or two, when they are removed entirely in fine days. A further supply of plants is pricked out in boxes, so that they can have the shelter of a cold frame during severe frosts.

FORCING HOUSES.

Vines.—In the late houses it has been necessary to look over twice a week the bunches of all Grapes hanging, in order to remove all decaying berries. Up to this time Gros Guillaume has not had a decayed berry on any of its large compact bunches. Mrs. Pince's Black Muscat has not kept nearly so well. We have twice obtained plants of Alicante to grow in the late vineries, and each time Morocco has been sent; this is a good Grape but very inferior to the old Alicante. Morocco was through a mistake named Kempsey Alicante, and has deceived many since that mistake occurred. Its berries are longer in shape, and are seldom jet black, nor do they ever carry such a dense bloom as the true variety; further, the bunches are not nearly so large.

We have been surface-dressing the borders in the early houses. This is an important part of the management, and is done to enrich the border and to entice the roots up to the surface. In the houses at Loxford Hall the roots are near the surface, and have grown considerably into last year's dressing; only the surface has been removed, and loam, rotted manure, and bone dust have been placed on the surface, about an inch deeper than last year. It would have been barbarous treatment to have dug over the border. In many vineries no roots are to be found near the surface; where this is the case forking the dressing in may be an advantage. It is well to bear in mind that Grapes, and, indeed, all fruits, are of the best quality where surface-rooting is encouraged. When the borders are surface-dressed the state of the ground a foot or more below the surface should be ascertained, so that some idea may be formed of the quantity of water which ought to be applied when the houses are started. If the soil has become very dry it will be as well to give a good watering before applying the compost to the surface of the border.

The first batch of Black Prince *Strawberries* have been removed to the shelves of the Cucumber house; the other occupants of the house require a night temperature of 50°, or in cold nights it may fall to 45°. This, with a moderately moist atmosphere, is just what the Strawberry plants require. Many good Strawberry-growers recommend surface-dressing the pots when they are introduced into the forcing houses. We do not approve of this, as it is so difficult to ascertain when the pots require water, as the surface dressing will appear quite wet even when the plants are suffering from want of water. The pots are washed and any decaying leaves picked off. Worms are detected in the pots by the casts on the surface, and are destroyed by the application of clear lime water.

Tying and training Cucumber plants; the shoots require to be well thinned-out, and where the leaves are crowded remove the oldest. Fumigated to kill green fly.

HOUSE AND COTTAGE GARDEN.

In the stove, amongst other insect pests, *Thrips* has been injurious to certain plants, especially some of the *Orchids*. Cypripedium *Vendicatum* is especially attractive to them, and will not thrive if thrips are in the house. Tobacco smoke is the most destructive agent, but must be used with extreme caution amongst tender and expensive plants. The beautiful *Azaleum*

farleyense requires to be removed from the house while it is being fumigated, as the delicate pinnales become browned with even a moderate fumigation. The best way is to smoke the house every ten days during the winter months, and if it is done effectually this pest will be overcome.

In the greenhouse department much time has been devoted to the *Chrysanthemums*, as we grow a very large collection. Specimen plants have required training, picking all decayed leaves off them, and sulphuring to destroy mildew. In the case of the large-flowering specimens there are always a number of malformed flowers; these ought all to be removed, and only the perfect ones left to come to perfection. They should stand well above the foliage, which ought to be healthy and hide the stems and sticks used in training. Every individual flower requires a neat stick to support it; the sticks are best painted a light green. The Pompon section requires similar treatment as regards training, but the flowers support themselves, except that a few sticks are required to distribute the flowers at regular distances over the surface of the plant. We looked over the flowers intended to be cut for exhibition, they have suffered much from mildew on the florets. If a single floret shows signs of decay it ought to be at once removed, as otherwise the whole flower would be destroyed.

The pretty white Roman Hyacinths are now in flower, and the first batch of Hyacinths and Tulips have been removed to the forcing house to succeed them. They are placed in the same house as the Strawberry plants. Potted tree or perpetual-flowering Carnations for late spring-flowering; this lot will produce a few flowers as early as February, and will continue until the florists' varieties of Carnations and Picotees are flowering in the ordinary course, in July.

Potted the last batch of *Hyacinths*. This flower is a great favourite, and it is necessary to retard as well as force. It is best to select the finest bulbs and most choice varieties for early work, because a Hyacinth spike which is in flower late in January or early in February will continue in perfection for three or four weeks. Late in March it would not last more than ten days, even if shading the house were adopted.

Large specimen plants of *Cyclamens* are throwing-up scores of flowers, and it is necessary to exercise great care in watering them. Only the soil should be watered. Where water had been allowed to lodge on the foliage and about the crowns of some of the plants, both leaves and flowers became mouldy and decayed. The affected parts were instantly removed, and some dry lime dusted over the injured portion. November is the worst month in all the year for preserving flowers from damp, and great caution is requisite when using the watering-pot not to spill the water on the paths and stages on which the pots stand. All watering ought to be done early in the forenoon, and if necessary a fire should be put on to dry the house while the ventilators are open.

FLOWER GARDEN.

We have cleared off all the summer occupants of the beds, and those devoted to spring flowers have been planted. We approve very much of filling the beds with plants to flower in spring, to be removed in time for the summer occupants; but so much bedding-out entails much extra labour, as no sooner are the beds cleared from the summer-flowering plants than it is all hurry to get them filled again, and the same process must be gone through about the end of April or early in May for the summer stock. It can easily be done, and ought to be done, but the head gardener should have sufficient help to do it. In some instances where this has not been the case the summer flowers have been sadly deficient.

We are potting-off zonal Pelargoniums; variegated and golden tricolors first, to be followed by the green-leaved sorts. All the cuttings are struck in boxes, and were removed in doors on the first signs of severe frost. This is better than putting the cuttings in the open ground, as they are sometimes injured before they can be potted-up. The lawn should be rolled, and if necessary swept once a week when there is no frost.—J. DOUGLAS.

TO CORRESPONDENTS.

N.B.—Many questions must remain unanswered until next week.

BOOKS (M. J. K.).—For the propagation and culture of greenhouse plants consult our manual, "The Greenhouse." You can have it post free from our office if you enclose ten stamps with your full address. (S. B.).—Our "Fruit Gardening for the Many." You can have it free by post if you enclose five postage stamps with your address.

FLORIST'S LIS (Wishman).—This change in the arms of the French kings is not the Lily, but the LIS. Nor is it a modern emblem, for flowers of similar shape are on some of the most ancient Egyptian marbles. It is called Fleur de Lis seemingly because it was used first as his distinctive badge by Louis XI. of France when he joined the Crusaders. Thence it was called Fleu de Louis, and thence was easily corrupted to its present form.

CUTTING DOWN APPLE TREES (P. G.).—We do not think that well bearing trees only twenty-five years old should have been destroyed merely because their growth was straggling. The dark centre of the branch of which

you sent a section is only the wood becoming deeper-coloured with age. The soil resting on red sandstone needs no draining. There is no gardener's diary published.

OIL OF VITRIOL FOR WEEDING (*An Irish Subscriber*).—Do not add any water. Two or three drops of the strongest are effectual.

SCALE ON VINES (*C. R.*).—Brush spirit of turpentine over the insects twice, with the interval of a day between the applications. Avoid dropping any of the spirit on the foliage of the plants.

MOVING POLYANTHUSES (*H. Good enough*).—Seedling Polyanthuses of this year's raising should be planted out in the spring. They ought to have been potted a month ago, and if kept in frames during winter you may prick them into pans or boxes now. Old roots should be divided in August and September, and in February and March.

IS THERE A NETTING MACHINE?—"Can you tell me if there is such a thing to be found as a netting machine, something handy, inexpensive, and fit for garden work? I pass some portion of my evenings in netting; but if I were to net a hawk a-week I could not keep pace with the birds. Last winter I turned out about 10 yards of Strawberry netting, and with this at one end of a bed and a cat at the other I did pretty well; but it was grievous to see the unprotected fine fruit further on pecked and mangled long before six o'clock—S. B."

[If any of our readers know such a machine we shall be obliged by their informing us. We have found that purchasing the old fishing nets, which are both supplied by nurserymen and at various shops, is very far cheaper than home-manufacturing.]

ROSES ON TRELLIS (*Young Gardener*).—No good Roses will do as climbers twined along wires in an exposed situation, though some of the old hardy summer-blooming climbers may, as Bennett's Seedling (Thoresbyana), Doodee Rambler, Queen of the Belgians, Riga, Splendens, Madame d'Arbury, Felicite Perpetuelle, Laura Davoust, Amadis or Crimson Bourasault, Blush Bourasault, Inermis. None of the above are first-class Roses. If the situation is not too exposed then some of the better Roses may be used, though not strictly climbers, as Gloire de Dijon, Aimé Vihert, Céline Forestier, Pelteberg, Jaune Desprez, La Biche, Lamarque, Solitaire, Climbing Devoniensis; also some of the stronger-growing Hybrid Perpetuals, as General Jacquemont, Madame Clémence Joigneaux, John Hopper, Edward Morren, Charles Lefebvre, Maréchal Vaillant. Do not, however, expect to succeed well with the better class of Roses trained to wires in exposed positions. Roses do not like wind.

FORCING POTTED ROSES (*Tips*).—Roses for forcing in pots are none the worse for having bloomed this season, and the dried buds and seed-pods will not hurt them; it only proves that the wood is most probably well matured. If there is much mildew the plants will not be likely to succeed well. It is difficult to decide without seeing the plants. They ought to be well cut back and potted if the pots are small, if not top-dressed previous to bringing them in for forcing. Do not force too rapidly.

NAME OF OAK (*H. W. Loring*).—The leaf enclosed is of *Quercus coccinea* or Scarlet Oak, a native of North America.

CUTTINGS FOR NEW ZEALAND (*Good Tomplar*).—They can only be conveyed thither with certainty in a case. Strip off the foliage, put them in alternate layers with dry sand in a tin-lined box, and solder the tin thoroughly before screwing down the box. A 2-feet-cube box would hold many cuttings.

TENANT LEAVING CARRIAGE CROP (*H. Whittier*).—He has no right to leave it growing, nor can he compel the incoming tenant to pay for it.

MUSHROOMS IN VINERY PIT (*Anxious Inquirer*).—The pit is too deep by more than half for the growth of Mushrooms, but you can lessen its depth by putting in rubble, bringing it up to within 18 inches of the top of the pit, and placing about 3 inches of finer materials, such as gravel, on the top. This will keep down the heat from the pipes, and will be sufficient for the Mushrooms. The bed would have been quite as well, if not better, without the hot-water pipes, as it is likely they will dry the bed too much. To the materials you collected add one-fourth of dry, light, turfy loam chopped up rather small. Put in the droppings in layers 15 inches deep, and beat each very firm, adding layers to give 18 inches depth of bed. Spawn the bed when the temperature is steady, at 70° to 75°, which will be in a week or ten days; but care is needed so that the bed be not spawned when it is rising in temperature, for it may probably rise to 80° or 85°, or more; therefore, see that the heat has attained its maximum before inserting the spawn. Put in the spawn in pieces about 2 inches square, at 9 inches apart, and so as to be covered an inch deep. The bed in a day or two, or when the temperature is steady at 70°, should be covered with 2 inches of rather stiff fibrous loam, and beaten very firm and smooth with the back of a spade. In six weeks after spawning you may commence watering the bed, but do so very lightly. The sprinklings given to the Vines will be sufficient. The bed, however, will need to be kept moist, but not very wet.

FORCING DWARF KIDNEY BEANS (*Item*).—Two parts turfy loam of medium texture, and one part leaf soil or old dry manure, well mixed and made fine will grow them well. The temperature at night should be 55° to 60° until the plants show for flower, and then 60° to 65°; by day it may be 70° to 75°, and on clear days 10° higher. Admit air freely after the temperature reaches 70°. Water abundantly after the plants show flower.

RHOIODENDRON CUTTINGS (*A Young Gardener*).—Take the growths of the current year when they are firm or partly ripened at the base, which is usually the case at the end of June or early in July, and cut them over below a joint. Remove the leaves from about two-thirds the length of the cutting, and insert it in sandy peat covered with an inch thick of sand. Put on hand-glasses, and keep close, shaded, and moist, admitting air when struck. The cuttings may be inserted in pans, placed in a cold frame, kept shaded and moist until they have formed a callus, and then may be placed in a gentle bottom heat, which will insure more speedy rooting.

AYCUBA PROPAGATING (*Item*).—They strike freely in September from cuttings, which should be of the wood of the current year, either with or without a portion of old wood. Put them in the cuttings in a frame in loam and leaf soil sufficed with sand. Insert them about half their length in the soil, and firm it about them. Keep them rather close, moist, and shaded from bright sun for about six weeks, and then admit air, drawing the lights off in mild weather, but in severe weather protect with mats. They will be well rooted by the following autumn.

TRANSPLANTING ROSES (*Item*).—This is the proper time to lift your standards planted in light poor soil, and afford them a stiffer and richer soil. Do not keep them out longer than can be avoided, and shield the roots from the drying influence of the atmosphere, either by covering with soil or mats. Now is also a good time to move those budded last August, but we should prefer to let them stand a year and then transplant.

TREES NOT EATEN BY SHEEP (*Arborulturist*).—Sheep will eat as great a variety of trees and shrubs as almost hares and rabbits. We four forest trees will have a poor chance on hilly ground near the sea. Beech succeeds, so does Elm; but the best thing we find for withstanding the sea breeze and at the same time ornamental, is the common *Syzygium*. Corsican and Austrian Pine do well, Mountain Ash also thrives, and gets-up where sheep are free. For shelter near the sea the common Eder is probably without an equal. As to what sheep will not eat, we have proof of their making bare every shoot they can reach in an extensive ornamental covert to which they had access. What escaped was beyond their reach.

PRIMULA JAPONICA WINTER CULTURE—PEACH TREE IN GREENHOUSE (*L. E. K.*).—The Primula should be kept rather dry during the winter in a cool house or pit, but do not allow the soil to become dust-dry. That from which you have broken-off the flowering stem you may expect to see again in spring. The Peach tree should be kept moderately dry at the roots during the winter, but the soil must not be allowed to become very much dried and cracked, as that is a frequent cause of the buds falling. Water in February, and afterwards, keeping the house as cool as you can up to that time. All you need for the setting of the flowers is to keep the atmosphere dry, well ventilated, and when the pollen in the anthers becomes yellow shake each branch gently, which will cause the pollen to be distributed, or you may apply it to the stigma with a camel-hair brush. Hyacinths grown this year in pots are not suitable a second time for the same purpose. They are best planted out of doors after being hardened-off, in light, rich, well-drained soil, and a sheltered position, covering the bulbs about 2 inches deep. They will flower tolerably well out of doors. Those in glasses are of no use for pots. Plant them out.

IMPROVING CLAYEY SOIL (*H. O. W.*).—Your baring, as we have often recommended, is the best in the way of rendering a very heavy soil more friable. We are glad it has satisfied your employers as well as yourself, but you need only pare off the top 9 inches and bar the other 6 inches. All crops flourish on a soil so treated.

TWENTY-FOUR BEST ROSES (*M. G.*).—Maréchal Niel, Baroness Rothschild, Charles Lefebvre, Alfred Colomb, La France, Gloire de Dijon, Marie Baumann, John Hopper, Senateur Vaisse, Dr. Andry, Countess of Oxford, Duke of Edinburgh, Etienne Levot, Marquise de Castellane, Louis Van Houtte, Dujny-Jaunin, Emilie Hausburg, Mlle. Marie Raly, Annie Wood, Marguerite de St. Amand, Céline Forestier, Pierre Notting, Xavier Olibo, Maurice Bernardin. The above twenty-four are as neatly the best. We have omitted Teas. If Teas are wanted, add Souvenir d'un Ami, Madame Willermoz, Souvenir, Madame Bravy, Catherine Mermet, La Boule d'Or, Souvenir d'Elise, Adam, Alba rosea, Belle Lyonnaise, Louise de Savoie, Climbing Devoniensis. We recommend "M. G." to look at the list of Roses returned in December, 1872.

HEATING A GREENHOUSE BETWEEN TWO VINERIES (*J. W. L.*).—As you mention the existence of a flue, we presume you mean to heat by it; otherwise, if your vineries be heated by hot water, a few pipes attached to those doing duty at one or other of the vineries, would heat your greenhouse in the most convenient way, as they can be made to ascend or descend to suit doorway and other obstructions. As you are on the point of making alterations, and may not be able to introduce hot water, we may say that we have two plant houses, each larger than yours, heated by flues composed partly of ordinary brick and partly of Portland cement pipes 12 inches in diameter; they have done duty in a satisfactory way for sixteen years, and seem likely to last as long as the structure. There is a dip and rise at one door in each house, yet the fire acts very well; only, he observed, the dip is not a sudden descent, but an incline say of 15° or thereabouts, and as your house has three doors, the flue will have to descend twice. We would therefore advise your having a shelf, say 2½ or 3 feet wide, along each end of the house, and also in the front, where the space is not wanted by the porch; and expecting the fireplace to be low enough at the back, the flue would enter underneath one doorway at the end of the house, and rising as high as it could conveniently under the shelf, it would descend again, after turning the corner, so as to meet the front doorway and after passing underneath that doorway rise to the next corner. Another dip would have to be made at the next doorway, after which it might pass underneath the stage once or twice, and eventually end in an upright chimney; the higher the latter is the better the draught. The partition which joins both the vinery doors and runs along the front may be 3 feet wide; and as 2½ feet or more has been allowed for the outside shelf, all the remainder may be devoted to the main stage, which may consist of two returned shelves, the lower one 2 feet from the floor, and the second having a rise of 8 inches, and a similar rise of 8 inches may terminate in a platform that may be 3 feet wide if necessary. This will be useful for standing all tall plants on; but if small plants only be wanted, more shelves may be added, with a less space than 8 inches rise to each. If you determine on using earthenware pipes for your flue, first ascertain if they will endure fire, and even if you are assured on that point, it is better to have at least 6 feet of brick flue nearest the fireplace. Be careful also in fixing it to arrange places for cleaning it out hereafter, and if a plain wire be left in the flue it will be useful when it has to be cleared out. We are not sure that glazed pipes are any better than unglazed ones, certainly not so good to make joints with. It is best, when first lighting a fire after it has not been used for a long time, to light it in the day with the door and ventilators open. There will then be a little smoke or offensive smell in spite of the most secure joints, but when the flue gets warm this goes off. Beurre means buttery, but not all Peas to which this prefix is applied are so in fact.

VINES AND OTHER FRUIT TREES FOR A HOUSE (*C. A. C.*).—As you do not contemplate heating your house 30 feet long by 10 feet wide, you ought only to plant such kinds as ripen well with little heat. As you do not mention whether the front wall is an arch or not, we conclude it is not; and as it is advisable to utilize the house as early as possible, we would advise planting Vines both inside and outside, say eight or ten in all. They might consist of three Black Hamburgs, and one each of Foster's White Seedling, Gros Colman, Buckland Sweetwater, Alicante, and West's St. Peter's, and the two old sweetwaters you have. We would plant five Vines inside, and the same number outside. The former may consist of two Black Hamburgs, and one each of Buckland Sweetwater, Alicante, and Gros Colman. The outside Vines may be introduced through the front wall, and as those planted inside increase in growth, the others may be taken away, or partly taken away from both. Of course, care should be taken in planting that they are not opposite each other. If all go on well they ought to reach the top of the house the first season, so that it is not of much use planting anything against the back wall; or, if you do so, another Vine or two might be useful. Should you prefer Peaches, try Early York, Royal George, and

Violette Hative, say maiden trees, and not to be much pruned the first year, but roughly tied to the back wall, as we do not think if the Vines do well that you will have the help of the Peaches more than one or two seasons. Then as to the character of the border. If you can manage to obtain turfy sods from a good pasture resting on a sandstone, we do not think you will want anything else either for the Vines or the Peaches, for the soil, probably, already contains sufficient sandy matter to keep it open, and lime is not needed; in fact, we often think it is too thoughtlessly applied to the Vine border. As your house is not much forced you need not take out the Vines in winter, and we think you will not do much with other kinds of fruit trees in pots, unless it be Vines, which you could set in the front and train up the roof along with the permanent Vines, and if the canes are good, some good fruit may be grown this way. You may also try Strawberries in the house the first season, and, in fact, a few every year, as they ripen by the time the leaves of the Vines occupy the house, which is not the case with Plums and Pears; and your house will be found handy in many ways.

EUCALYPTUS GLOBULUS (St. Honoré).—It is a native of Van Diemen's Land. It may be obtained in pots from any of the nurserymen and florists who advertise in our columns. The following is an extract from one of Paxton's works:—"There is, however, no reason why it should not thrive out of doors in the south-west of England and Ireland, where the climate is as mild as in Van Diemen's Land. It has angular branches which, when young, droop, and are of a pale dull green colour. The leaves are firm, opaque, and unyielding, as if stamped out of horn, ovate-lanceolate, long-stalked, and curved in the form of a sickle; sometimes they are wider at the base on one side than on the other, and, by a twist of the stalk, always stand with their edges vertically instead of horizontally. The white flowers are almost 2 inches across when the stamens are expanded, and are produced singly or in clusters of three; sometimes, when the leaves fall off, the fruits seem as if in spikes. The calyx is singularly knobby and rugged, with an angular tube, and a cover shaped like a depressed cone, or like a convexity with a rude boss in the centre. These flowers are covered before expansion with a thick glaucous bloom. The fruits are hard, woody, angular, rugged, knobby, nut-shaped bodies, with five openings into the cavities of the capsule. The early discoverers of this tree reported it to attain the height of 150 feet; but they were far within the truth, as is shown by the blocks in the Great Exhibition, one of which near the base is 5 feet 7 inches in diameter; and another, cut from 134 feet above the first, is still 2 feet 10 inches in diameter. We learn from the Proceedings of the Royal Society of Van Diemen's Land (vol. i., p. 157) that, on the 11th of October, 1848, a paper was read by Mr. H. Hull descriptive of a gigantic tree of the Gum tribe, occurring in a gorge on the declivity of the Mount Wellington range near Tolosa, about six miles from Hobart Town. Mr. Hull describes it as a Blue Gum (*Eucalyptus globulus*), and says 'it stands close to the side of one of the small rivulets that issue from the mountain, and is surrounded with dense forest and underwood. . . . It was measured with a tape, and found to be 25 yards in circumference at the ground (more than 9 yards in diameter), and 36 yards in circumference at the height of 6 feet. The tree appeared sound, except at one part, where the bark had opened, and showed a line of decayed wood. The full height of the tree is estimated to be 320 feet.'"

STONE NEWINGTON CHRYSANTHEMUM SHOW.—We are requested by Mr. Rainbow to state that Mr. Monk was first, Messrs. Ponsford second, and himself only third, for plants grown as for cut blooms.

GRAFTING VINES (An Old Subscriber).—You may graft the Vines as you propose, after the shoots both on the stock and scion have started into growth. The scions should have the ends inserted in soil, and be placed in heat to start them. The growths of the stock should be started about an inch when the grafts are inserted. The Trebbiano is not a good stock for the Muscat, nor the Champion Hamburgh for Golden Champion. Muscat of Alexandria is the best stock for Golden Champion. It also succeeds well on Royal Ascut.

SOLANUM CAPSICASTRUM BERRIES (W. S.).—Perhaps some of our readers can inform our correspondent if the berries of this plant are poisonous. It belongs to a genus of plants of which the berries of some species are virulent poisons. The berries of *S. Dulcamara* are readily eaten for Currants by children, and will cause death in a few hours. *S. nigrum* is equally injurious.

EUPHORBIA JACQUINLEFLORA CULTURE (J. H. B.).—It requires to be grown in a stove or warm greenhouse, and to have a light airy position. During growth it should be well supplied with water, but lessen the amount towards autumn or when growth ceases, yet keep the soil moist; and when the plant is showing for flower water more freely, but at no time must the soil be sodden by heavy waterings. After flowering keep rather dry for a few weeks, then cut-in, and encourage growth with a moist atmosphere, re-potting when the shoots are an inch or two long. A compost of two parts light fibrous loam, and a part each of leaf soil and sandy peat, with a sixth of silver sand and good drainage, will grow it well.

CELERY INFERIOR (Ilem).—The small size is a general failing of Celery this season, probably owing to the dryness of the early autumn. More liberal manuring, and more copious waterings, and applications of liquid manure would have increased the size. But you say you have a great deal of wet, therefore the cause may rest with the late planting. The want of whiteness is owing to the plants not having been sufficiently long earthed-up to ensure the bleaching of the stalks. A month to six weeks will be sufficient to ensure bleaching, but all bleaching to be good must also take place during growth. The kinds are good. The white kind, we should say, will be better than the red or pink—we mean better bleached, and we should use it first. The other variety is excellent.

FLOWER BEDS PLANTING (P. T. B.).—We cannot undertake to plant flower beds; we only criticise proposed arrangements.

PROPAGATING MELBAN (Ilem).—The tips or seeds should be taken out as soon as the fruit is ripe and sown immediately in light soil, covering them about an inch deep. The seeds usually take two years to vegetate. Grafting is the most eligible mode of propagation, the Pear being probably the best stock for ordinary soils, the Quince in moist soils, and the White Thorn where the soil is sandy and dry. The wood used should be of the previous year's growth, and shortened so as to free it of the flowering parts. The scion must have wood buds. Grafting is also an eligible mode of propagation.

PINES FOR MARKET (A Constant Reader).—Your space is rather small for two rows of plants, and in length it will only accommodate thirty-two plants, or with two rows sixty-four plants. To suit two rows of plants it should have been 2 feet wider. About one hundred fruit may be had from such a pit in a season, and, considering the space, the fruit would not average more than 1½ each; but a good deal depends on the treatment. You would need a space equal to the fruiting bed for necessary plants. The kinds we advise

are the Queen for summer, and the Montserrat or Black Jamaica and Smooth-leaved Cayenne for winter.

TRAINING CLEMATIS JACKMANNI IN BEDS (F. J.).—Both the old and young shoots may be trained evenly over the surface of the beds, pegging them down to prevent their being blown about by the wind; or the shoots may be secured to a flat trellis from 4 to 6 inches from the soil.

PLANTING MANETTI-STOCKED ROSES (Ilem).—It will not be too deep if those with 6 or 8-inch stems on the Manetti stock be planted so that the stems will be entirely covered with soil, the buds being an inch below the surface.

VINE PLANTING IN GROUND VISERY (Ilem).—Nothing will be gained by planting the Vine in the intended ground visery and growing it a year before the frame is placed over it, as the Vine in our climate does not ripen its wood in the open ground without the aid of glass. We should keep the Vine in a cool house until spring, and when the shoots are an inch or two long plant, placing the frame over it, and keeping close and shaded until re-established. It should be grown under glass from the first.

NEAPOLITAN VIOLETS IN POTS (Celia).—Keep them near the glass in an airy position, with water sufficient to keep the soil moist. You can do nothing more to bring the plants into flower at once, unless you give them a temperature of 45 to 50°, which we hardly think can be necessary if the summer treatment has been suitable, as we have them now in flower in a cold pit.

NAMES OF FRUIT (F. E., Whittin Dean).—Your Grape is Royal Muscadine, (*F. J. K.*)—16, King of the Pippins; 17, Sturmer Pippin; 18, Scarlet Nonpareil; 19, Golden Knob; 22, Kirkston Pippin; 23, Nonpareil; 24, London Pippin; the others we cannot identify. (*Centurion*).—1, Reineette Blanche d'Espagne; 2, Tower of Glamis; 3, Hughes' Golden Pippin; the Pear is not recognised. (*S.*)—1, Lamb Abbey Pearmain; 2, Winter Greening; 3, King of the Pippins; 5, Manx Codling; the Pear is Aston Town. (*Subscriber*).—4, Calville Blanche d'Iver; 2, Wyken Pippin; 3, Carl's Seedling; 1, Striped Holland Pippin. (*P. C.*)—The Apple is Pear's Pippin, but we do not recognise the Pear. (*G. C.*)—Your Apple is very like Cockle Pippin. (*M. S. B.*)—1, Not known; it is a very worthless Pear; 2, Bergamotte Esperen. (*H. Slought*).—1, Christie's Pippin; 2, Bradick's Nonpareil. (*R. C. Carter*).—1, Autumn Colmar; 2, Winter Nells; 3, Seckle. (*Centurion*).—9, Marie Louise; 6, Margil; 7, Barton's Incomparable; 8, Autumn Colmar; 5, Golden Harvey; 4, White Westling. (*W. G.*)—Wormsley Pippin.

POULTRY, BEE, AND PIGEON CHRONICLE.

CRYSTAL PALACE POULTRY AND PIGEON SHOW.

OUR notes on this Leviathan Show must necessarily be brief, seeing that the prize list which we give alone occupies so large a portion of our space. The Show, as most of our readers are aware, commenced on Monday last, and will close this evening.

THE POULTRY.

In Coloured Dorking cocks the prize birds were good and in beautiful condition. Coloured Dorking hens were a first-rate class, no less than ten being noticed besides the four prize birds. In Coloured Dorking cockerels Mrs. Arkwright secured the cup, third, and four prizes, the second going to Scotland. The class was good. Coloured Dorking pullets, though a large class, were not so good in quality as the hens in this class. Mrs. Arkwright took the cup and second prize, though very hard pressed by Mr. Henry Lingwood, who was third. In Silver-Grey Dorking cocks Mr. Raines, of Stirling, took the cup with a splendid bird. Silver-Grey hens were very good, Mr. O. E. Cresswell taking both first and second prizes. Silver-Grey cockerels were a much better class than the pullets. Blue or Cuckoo Dorkings, with the exception of the first and second-prize birds, were not good.

Buff Cochins adult cocks were a small class of eight entries, the birds being remarkably good. In Buff hens several excellent birds were exhibited, Mr. Taylor securing the cup. Buff Cochins cockerels were a really first-rate lot; the first-prize bird was very large and massive, good in shape and feathering, but too light in the hackle and saddle. Mrs. Acton Tindal's prize bird in this class was a real gem. Buff pullets mustered strongly, Mrs. Tindal deservedly taking first with a splendid pullet. In Partridge Cochins Mr. G. Shrimpton distanced all with a cock that could not be found fault with. Partridge hens were not a good lot, neither were the Partridge cockerels or pullets equal to what were seen some years ago. White Cochins mustered well, and were generally good. In Black Cochins there is a great deal of room for improvement, the most conspicuous fault being long stilty legs and want of crest.

Brahmas were a show in themselves; never before were so many really good birds brought together. The Dark cocks were excellent in quality, but many of the best birds not sufficiently recovered from moult. The Dark Brahma hens were the best we have ever seen. The Dark cockerels, though a very numerous class, did not strike us as being quite so good in quality as last year. The Dark pullets were the most numerous, and perhaps the best class in the whole Show, there being 101 entries with very few inferior birds amongst them. The greatest advance in any breed in the Exhibition was certainly in the Light Brahmas. The cup hen belonging to Mr. Maynard, the second-prize hen belonging to Mr. Crook, the cup cockerel belonging to Mr. Haines, and the grand pullets exhibited by Mrs. Frank Cheshire, were as near perfection as possible.

The *Spanish* classes, as a whole, were not good; the first and second-prize hens, and also the prize pullets, were the most worthy of notice.

In *French* fowls the Houdans appear to have made the greatest advance; many very excellent Crève-Cœurs were also exhibited. *Hamburgs* were all good classes.

In *Game* the Black Reds were not so good as we have formerly seen. The Brown Reds were very good. Undoubtedly the best Game cock in the Exhibition was the first prize Duckwing cock.

Polish were all good classes, especially the Silvers; Mr. Atkins taking the lion's share of the prizes in the latter variety.

Game Bantams were very numerous exhibited; all the great breeders competing.

Ducks were excellent, the cup going to splendid Rouens.

THE PIGEONS.

ONCE more I stand among the Pigeons at our truly-named "Great National Exhibition." A few words will describe it—"Larger than ever, and better than ever." There are 1159 pens of Pigeons; and when we consider that twenty of these pens contained each four pairs, and that there were many pairs of birds as well, the number rises to an extraordinary magnitude. But this is not all. Not only are the numbers so great, but in many classes the number of birds of the highest merit was so great, that the Judges were in a perfect dilemma as to how to select the very best, so many were so nearly equal in merit. They would willingly have given more prizes, but this could not be. So that it comes to this: A fourth prize would be frequently a first at other shows, and v.n.c. and n.c. would elsewhere represent prizes. But I opine that the difficulty of judging such a Show is not so great as the difficulty of reporting it. There are many judges, but one reporter. It is the work of hours, and head and eye-tiring work, to go steady from pen to pen. I found myself this Monday, Nov. 17th, in a wilderness of Pigeons, like a man thrust into the maze at Hampton Court, not knowing where the straight lines would lead him to, and whenever and wherever he would or could get out. I dismiss at once all the surroundings of the Show. The place is well known; the perfect light, the good arrangements, the pleasant meetings of brother Pigeon-fanciers; they would have been much more pleasant if one had had time for a chat instead of a hasty, though hearty hand-shake.

According to catalogue the first class of Pigeons is Class 112, *Pouters* (Blue pied), cocks, any age. This was a class fair, but nothing extraordinary. First-prize a fine bird, colour very good; second also fine, but nothing out of the way, and not so well-shaped as first; third-prize had Kite bars, but in crop beat all in the class. Black-pied, cocks, any age.—First-prize a grand bird, not quite raven black, being a trifle sooty; second-prize a better colour, but wide in limb; the third was heavily flagged, but an enormous bird, splendid as a stock bird. Red or Yellow-pied, cocks, any age.—These colours should not have been mixed. First-prize a Yellow. Second a Red, a little thick in girth. Third also a Red, a neat bird. I must notice No. 2325, a bird splendid in form, but of a bad colour. White, cocks, any age.—Nothing could be finer than this class, and none were ever seen that could beat them, as English, Scotch, and Irish fanciers all allowed. First-prize all that a Pouter should be; the second also first-rate, and fit for first anywhere; and of the third the same may be said. The Judges had hard work with these birds. Any Colour or Markings, cocks, any age.—These birds ought not to have been in the Show. Glasgow has now excluded them, and they must not appear any more; admissible in the loft, detestable at an exhibition. The first-prize, a Mealy, was a perfect giant; if his owner has no name for him I suggest "Anak," a most grand fellow, but a horrid colour. Having noticed "Anak," I purposely omit any mention of the rest; their colours at such a Show injured my eyesight! Any colour, cocks of 1873.—A fine class of young birds. First-prize a Black. Second and third both fine cocks, and equal to the first save in colour.

Pouters, Blue-pied, hens, any age.—The first prize and cup a perfect beauty, better far as a bird than any Blue Pouter shown; she has one only fault—viz., one of her wings is a little "bished." (N.B.—I am glad that neither of mine are!) Black-pied, hens, any age.—First was splendid, but surely she had been rubbed down and down to make what was good better. This was foolish, and she looked sleek and queer, and not natural. If the Judges could but have detected any colouring matter, no doubt "Disqualified" would have marked that pen. 'Tis stupid to try and scent the rose or paint the lily, as Shakespeare says. The second-prize good; the third very handsome, but short in tail. Red or Yellow, hens, any age.—First a Red, and good in colour. Second a Yellow, and a large bird. White, hens, any age.—So level and so good was this class, that the Judges must have been puzzled terribly. First prize admirable. Second a nicely-shaped bird. The third a lovely little bird, greatly admired, but a trifle small; this a Wiltshire Pouter, belonging to Mrs. Ladd, of Calne. Any Colour and Markings, hens, any age.—A very small and poor class. May

this be its last appearance. Any Colour or Markings, hens of 1873.—First and cup a beautifully-shaped bird, one of the very best as a Pouter in the Show. Third plucked in the thighs. The Pigmies were judged by the Pouter standards; the bare-shanked birds not noticed.

Carriers.—As a whole, in advance of other years, and very heavy judging; indeed, extraordinarily good birds. Black, cocks over one year.—First, fine style of bird, but bad wattle, not filled up in front. Second a good-wattled bird, but trimmed. Third excellent wattle again, but faulty in eye. 2464 (n.c.) a model of a Carrier; 2471 and 2472 very good birds. Black, hens, old.—First and cup a fine-carriaged bird, good style, not quite enough of wattle. Second and third and v.n.c. all first-class birds. Dun, cocks, old.—First and cup the best Carrier in the Show, the nearest to perfection ever seen. Second not a good bird, short in neck, short legs, short flight and tail. Third a good Pigeon in beak, wattle, and carriage. Dun, hens, old.—First very grand all over. Second good hen, good beak, good wattle, fairish eye, and stands well. Third a good-eyed Pigeon. Cocks, any colour or age.—First splendid in every point but colour. Two also splendid. Three good colour, but that is all. 2530, v.n.c., only wants age to make him a No. 1. Hens, any age and any other colour.—First somewhat short in neck, and wattle might be better. Second good in beak, wattle, eye, and colour. Three good colour, bad wattle, too full in gullet. Black cocks, young.—First a good Pigeon, rather Roman-nosed, and rather ragged in wattle. Second as near perfection as a young Carrier can be. 2585 and 2586 models. Dun cocks, young.—Pair only. Cocks, any colour, young.—First would have looked better had his eye not been washed. Second and third promising birds, will make good Pigeons.

Dragoons, Blue, any age.—First and cup perfect specimen of a genuine old-fashioned Blue Dragoon, black beak, good deep blue throughout. Second good colour. Third too light in rump, otherwise good. 2711, Mr. Tegetmeier's, might have well been placed second prize. Silvers (black bars).—First and cup good head, beak a little awry. Second not deserving its place. Third a better Pigeon. Silvers (brown bars).—Mr. Bishop's first, second, and third just the birds I like; may be exhibit more such. Yellows and Reds.—First grand all over. Second quite as good. Third nearly as good. 2770 unnoticed but good, many more in this class admirable. Judges would have gladly given more prizes. 2804 a real blood red, only one in the Show. Whites or other colour.—First and cup, bad, ragged wattle. Second, better Pigeon. An old-fashioned good Grizzle and a good Chequer in this class. Dragoons were wonderful, specially Mr. Betty's Yellows, which were marvellous.

Almond cocks any age.—A richly feathered class. First and cup, a very fine Pigeon. Second not too worthy. Third a much better bird. Almond hens, any age.—First so good that it would pass for a good cock. Second well spangled all over. 2852 only wants age to be excellent.

Tumblers, Any other variety.—Cocks, first, Agate Mottle, first-class in head, beak, eye, and carriage. Second Kite, good Pigeon. Third Red, a perfect gem, worthy of any cup or prize. Hens, any other variety.—First, a well-known winner among Agates. Second Kite, best head-and-beak hen in the Show. Third, Red and Pity.

Barbs, Black or Dun, cocks over one year.—Extraordinarily good class, and prizes well awarded. Cocks, any other colour.—First, most extraordinary-skulled bird. Second, splendid bird, grand colour. Third, good Pigeon, but one diseased. Black or Dun hens.—First only wants age to develop wattle, then perfect. Second, a very fine hen. Third, a good Pigeon all over. Barb hens, any other colour.—First a Yellow, little too long in face, but cleanest colour in class. Second Yellow, good little hen, but bad colour. Third also Yellow. Young Barbs, any colour.—First not so good as its next neighbour, 2961b. Second first-class bird. Third a mistake; not good in beak, eye, or skull.

Jacobins, Red or Yellow.—First too long in face, too little hood, too open in chain. Second an excellent bird. Third, grand in hood, mane, and chain, but too low in cut. Jacobins, any other colour.—First a very pretty little bird in mane and chain, but not good in colour. Second and third nice birds.

Fantails.—A grand class, which must have troubled the Judges. First out of condition in tail. Second a gem.

Nuns.—First a good bird, but not deep enough in bib. Second very good. Third, a better bib than first.

Trampeters.—First and cup an excellent Pigeon in rose, crest, beak, colour, and markings. Second also a very good bird. Third good, but out of condition.

English Owls.—First and cup, grand bird. Second, first-class but deficient in frill. Third perhaps even better than first. A fine show of English Owls. Stick to them, fanciers. Not so tender as Africans, and suit well flying fanciers. African Owls.—First worthy of its place. Second small charming bird. Third light in rump.

Turbits, Blue and Silver.—First, very excellent. Second very

GAME (Duckwing).—Cock.—1 and Cup, 2, P. A. Beck. 3, Duke of Sutherland.

GAME (Duckwing).—Cockerel.—1, R. Hall, Cambridge. 2, S. Matthew. 3, E. Bell.

GAME (Duckwing)—Hen or Pullet.—1, E. Aykroyd, Eccleshill. 2, Mrs. A. Tudal. 3, D. Boulton, Bradford. *hc*, E. Hall, S. Matthew.

GAME (Pile)—Cock or Cockerel.—1, H. C. & W. J. Mason, Drighlington. 2, J. Brassington, Newport, Salom. 3, C. W. Brierley. *hc*, R. Hall.

GAME (Pile)—Hen or Pullet.—1, G. F. Ward. 2 and 3, E. Woodburn. *hc*, H. C. & W. J. Mason.

GAME (Black or Brassy-winged).—Cock.—1, Cup, and 2, C. F. Montresor. 3, G. F. Ward.

GAME (Black or Brassy-winged).—Hen.—1 and 3, G. F. Ward. 2, E. Kendrick, Jun.

GAME (Wheaten).—Hen.—1, W. C. Phillips. 2, Baker & Charnock, Hingworth. 3, Withfield.

SELLING CLASS (Game, any variety).—Cock and Hen.—1, W. Perrin. 2, G. F. Ward. 3, C. W. Brierley. 4, S. Field.

POLISH (Gold-spangled).—Cock.—1 and Cup, P. Unsworth, Linton. 2, E. J. Reeves, Haywards Heath. 3, Capt. F. G. Coleridge. *hc*, H. Beldon; W. A. Taylor; J. Robinson.

POLISH (Silver-spangled).—Hen.—1, W. Silvester, Sheffield. 2, H. Beldon. 3, E. J. Reeves. *hc*, P. Unsworth; W. Harvey; W. A. Taylor.

POLISH (Gold-spangled).—Cock.—1 and 3, G. C. Adkins, Lightwoods, Birmingham. 2, H. Beldon. *hc*, S. Probert; J. Hinton.

POLISH (Silver-spangled).—Hen.—1, 2, and 3, G. C. Adkins. *hc*, G. C. Adkins; H. Beldon. *c*, T. Edwards, Lyndhurst; C. Bloodworth.

POLISH (Black, or any other variety).—Cock.—1, D. Mutton, Brighton. 2 and 3, P. Unsworth. *c*, A. Darby; T. P. Edwards; Mrs. Procter, Hull.

POLISH (Black, or any other variety).—Hen.—1, A. Darby. 2, T. P. Edwards. 3 and *c*, D. Mutton.

MALAY.—1, J. Hinton. 2, E. Walton. 3, F. Harding, Clapton.

SILKES.—1, S. A. Wylie, East Moulsey. 2 and 3, R. S. Woodgate. *hc*, A. Darby.

ANY OTHER DISTINCT VARIETY.—1, H. Feast. 2, Mrs. E. E. Llewellyn, Court Colman. 3, R. K. Fowler, *hc*, Miss Mill (2); R. Loft, Woodmansey; T. Moore; J. Watts; J. Long; S. Probert; J. W. Todman, Elmham (5).

SELLING CLASS (Dorkings, Brahmas, Cochins).—Cock.—1, R. W. Beachey. 2, J. Clark, Fochabers. 3, D. Young. 4, W. A. Burnell. 5, Lord Turnour. *hc*, E. Barker. 6, Lokesley; C. Sidgwick; Mrs. Griggs; C. W. A. Burnell; G. W. P. Pette, Norwood; Hon. Mrs. A. B. Hamilton; W. Birch, Barnale; E. Tudman; E. Pritchard; S. Salter, Oxford; Mrs. Griggs.

SELLING CLASS (Dorkings, Brahmas, and Cochins).—Two Hens.—1, H. S. Fraser. 2, D. Young. 3, Rev. J. D. Hoysted. 4, H. Tomlinson. 5, F. Bennett. *hc*, C. Bloodworth; H. Ford; R. W. Richardson; J. Webb, Romford; R. W. Beachey; F. Sear, Linton. *c*, Mrs. S. Vigor; Hon. Mrs. A. B. Hamilton; J. Webb; W. Birch; Lord Turnour; T. Sear; F. Webber, Dulwich; Mrs. J. G. Hepburn.

SELLING CLASS (Dorkings, Brahmas, Cochins).—Cock and Hen.—1, Mrs. J. G. Hepburn. 2, R. W. Richardson. 3, H. B. Morrill. 4, Mrs. E. Williams. 5, W. Birch. *hc*, H. Allen; C. Sidgwick; J. Hill; Miss Mill; W. Mansfield; Hon. Mrs. A. B. Hamilton; E. Pritchard; T. Sear. *c*, H. L. Frist; W. A. Burnell; Col. F. C. Hassard; E. Tudman; H. J. Fitzcoy, Edlington; Mrs. J. G. Hepburn.

SELLING CLASS (Any other variety except Bantams).—Cock.—1, J. Hinton. 2, P. A. Beck. 3, Mrs. Procter. 4, Capt. F. G. Coleridge. 5, Miss C. F. Palmer. *hc*, R. Ogle, Penge; W. Dring (2); A. E. Smith; Rev. W. Serjeantson; T. Moore; G. D. Harrison; Hon. and Rev. F. Dutton, Banford; Rev. N. J. Radley; J. Walker; H. Brown. *c*, F. Bennett; A. E. Smith, Southsea; W. Dring (2).

SELLING CLASS (Any other variety except Bantams).—Two Hens.—1, Rev. W. Serjeantson. 2, H. Wilmson, Early. 3, Mrs. Procter. 4, Rev. N. J. Radley. 5, Mrs. J. Pattison. *hc*, Rev. C. C. Ewan (2); Rev. J. D. Peake; H. Brown; A. C. Faulkner, Bampton; A. Barnford, Mifflon; J. Hinton. *c*, Mrs. J. Pattison; F. Bennett; J. Smith; J. Walker; T. Moore; Mrs. B. Williams; J. Watts.

SELLING CLASS (Any other variety, except Bantams).—Cock and Hen.—1, W. A. Taylor. 2, T. P. Edwards. 3, J. Chesters. 4, Miss Mortimer. 5, Miss E. Brown. *hc*, J. Walker; T. Moore; Miss Mortimer; T. W. Cowan; J. Hinton; C. Bloodworth.

GAME BANTAMS (Black Red).—Cock.—1 and Cup, J. Eaton, Grantham. 2, Capt. Wetherall, Loddington. 3, W. Bontcher, J. Smith, Southwell. 5, C. F. Hore. *hc*, Capt. Wetherall; W. F. Entwistle; J. Rollinson; J. Nelson, Hexham; G. Hall. *c*, W. F. Addie, Preston; G. Maples, juv., Wavertree.

GAME BANTAMS (Black Red).—Hen.—1, Mrs. G. Hall. 2, W. Adams, Ipswich. 3 and 5, W. F. Addie. 4, J. Nelson. *hc*, H. P. Leech, Woolpit (2). *c*, C. F. Hore; W. Adams.

GAME BANTAMS (Brown Red).—Cock.—1, W. F. Entwistle. 2, J. Anderson. 3, S. Beighton, Farnfield.

GAME BANTAMS (Brown Red).—Hen.—1, Cup, and 3, S. Beighton. 2, G. F. Ward.

GAME BANTAMS (Duckwing).—Cock.—1 and Cup, J. Eaton, Millom. 2, H. J. Nicholson. 3, G. Hall. *hc*, W. F. Entwistle; F. Shumack, Southwell.

GAME BANTAMS (Duckwing).—Hen.—1, J. Eaton. 2, F. Shumack, 3, E. Hall. *hc*, J. Smith; R. Youll, Sunderland.

GAME BANTAMS (Pile).—Cock.—1, W. F. Entwistle, Westfield, Bradford. 2, E. Hall, Chester. 3, E. E. Wylie, Kirekhill. *hc*, J. K. Fletcher, Stonecrough; G. H. French, Henckley, Worcester; A. Ashley, Worcester (2); S. Smith, Northowram, Halifax; J. Eaton.

GAME BANTAMS (Pile).—Hen.—1, F. Steel, Halifax. 2, J. R. Fletcher. 3, E. Partington, Worcester. *hc*, E. Hall (2).

GAME BANTAMS (Wheaten).—Hen.—1 and 2, Mrs. G. Hall, Kendal. 3, J. Seton.

BANTAMS (Black).—1, Cup, and *c*, W. A. Taylor. 2, H. Beldon. 3, C. Reed, Cambridge. *hc*, H. M. Maynard; T. E. Thurtle, Lowestoft; J. Watts; R. H. Ashton, Bletcham.

BANTAMS (White-footed).—1, Cup, and *hc*, R. S. S. Woodgate. 2, W. A. Taylor. 3, Rev. C. Spencer, Pershore. *c*, Mrs. Taylor, Brighton; Rev. C. Spencer.

BANTAMS (Scheiblich).—1 and 3, M. Leno. 2 and *hc*, N. Cook, Chawmont.

ANY OTHER VARIETY.—1 and 2, S. A. Wylie. 3, Rev. W. Serjeantson. *hc*, Hon. Mrs. A. B. Hamilton; G. Ames, Catford; Mrs. A. Woodcock. *c*, W. Kitson, Ipswich; W. W. Boulton, Beverley (2).

BANTAMS (Nankin).—1, A. M. Piggott. 2, O. E. Cresswell. 3, Miss R. C. Frew, Kirkcaldy.

SELLING CLASS (Bantams, Any variety).—Cock and Hen.—1, J. R. Fletcher. 2, P. Lingham & Gill. 3, H. P. Leech. 4, F. Steel. *hc*, Rev. E. S. Tideman; J. Walker; N. Cook (2); J. R. Fletcher; G. Hall. *c*, W. F. Entwistle (2); H. Beldon; H. P. Leech; G. F. Ward; G. Hall (3); C. Reed; J. Watts; W. W. Boulton.

DUCKS (Avleybury).—1 and 2, J. Walker. 3, J. K. Fowler. *hc*, J. Hedges, Aylesbury. 4, W. M. Lysley, Winkfield.

DUCKS (Woburn).—1, Cup, and 3, E. Gladstone, jun., Court Hey, Liverpool. 2, W. Evans. *hc*, H. Dowsett (2); F. Chesman, W. H. Robson, Lincoln; F. Parlett; J. Harvey, jun.; J. Newton; F. E. Arter, Barham; J. Walker; J. N. C. Pope; Mrs. Brassey, Battle; P. Unsworth; J. K. Fowler; T. F. Upsher, Sutton, Ely. *c*, T. Wakefield; E. Ponting, Frome; Miss H. C. M. Davies.

DUCKS (Black).—1, Rev. W. Serjeantson. 2, J. J. Malden. 3 and 4, G. S. Sainsbury, Devizes. *hc*, G. S. Sainsbury (2); J. W. Kellaway, Merston, Isle of Wight; J. J. Malden.

DUCKS (Any other or Ornamental Water Fowl).—1, Rev. W. Serjeantson. 2, S. A. Wylie. 3, H. B. Smith, *hc*, M. Leno; (3); J. Walker; W. Bontcher; H. B. Smith, Broughton, Preston (2); R. Wilkinson; W. Binns, Padesy (2).

GRESE.—1, J. K. Fowler. 2 and 3, J. Walker. *hc*, J. K. Fowler; W. Wise.

TURKEYS.—1, E. Kendrick, jun. 2, Mrs. A. Mayhew, Great Baddow. 3, F. Warde, West Fatchig. *hc*, Rev. N. J. Radley. *c*, Mrs. Brassey.

TURKEYS.—Cockerel.—1, J. Walker. 2, F. Lythall, Leamington. 3, F. Warde. *hc*, Mrs. Nutt, Edingely, Coventry; Mrs. A. Mayhew; E. Arnold, Witleford; W. T. Jones, Foston; J. F. Foster; J. B. Esel, Whitechurch.

TURKEYS.—Hen.—1, F. Lythall. 2, E. Kendrick, jun. 3, E. Arnold. *hc*, J. K. Fowler; F. Warde.

PIGFONS.

POUTERS (Blue-pied).—Cock.—1, N. Hill, Ealing. 2, W. Harvey. 3, J. Baker. *hc*, R. Fulton, New Cross. *hc* and *c*, F. Gresham, Shefford.

POUTERS (Black-pied).—Cock.—1 and Cup, H. Pratt, Knowle. 2, R. Fulton. 3, F. Gresham. *hc*, J. Baker. *hc* and *c*, F. Gresham.

POUTERS (Red or Yellow).—Cock.—1, W. R. Rose, Kettering. 2, M. H. Gill, Ramsgate. 3, G. J. Taylor, Fartown, Huddersfield. *hc* and *hc*, R. Fulton.

POUTERS (White).—Cock.—1, F. Gresham. 2, W. Ridley, Hexham. 3, W. R. Rose. *hc* and *hc*, R. Fulton. *c*, Mrs. Ladd, Calne.

POUTERS (Any colour or markings).—Cock.—1, F. Gresham. 2, R. Barrett, Stroud. 3, A. Heath. *hc*, Guthrie & Hope, Hexham. *hc*, F. Gresham.

POUTERS (Any colour).—Young Cocks.—1, W. R. Rose. 2 and 3, F. Gresham. *hc*, R. Fulton. *hc*, A. H. Stewart, Birmingham. *c*, R. Fulton.

POUTERS (Blue-pied).—Hen.—1, Cup, and 3, F. Gresham. 2, A. H. Stewart. *hc*, R. Fulton. *hc*, Rev. C. S. Ewan. *c*, N. Hill.

POUTERS (Black-pied).—Hen.—1, A. H. Stewart. 2, G. J. Taylor. 3, R. Fulton. *hc*, J. Baker. *hc*, W. R. Rose. *c*, R. Fulton.

POUTERS (Red or Yellow-pied).—Hens.—1, 3, and *hc*, R. Fulton. 2, N. Hill. *hc*, W. Ridley. *c*, W. Harvey.

POUTERS (White).—Hens.—1, F. Gresham. 2 and *c*, R. Fulton. 3, Mrs. Ladd. *hc*, W. Ridley. *hc*, W. R. Rose.

POUTERS (Any colour or markings).—Hens.—1, F. Gresham. 2, R. Fulton. 3, J. E. Spence, Broughty Ferry.

POUTERS (Any colour).—Young Hens.—1, Cup, 2, and 3, F. Gresham. *hc*, R. Fulton. *hc*, A. H. Stewart. *c*, Mrs. Ladd.

POUTERS (Pigmy or Austrian).—1 and Cup, W. Harvey. 2, W. B. Tegetmeier, Finchley. 3, R. Fulton.

CARRIES (Black).—Cocks.—1, W. Siddons, sen., Aston, Birmingham. 2, G. J. Taylor. 3, R. Fulton. *hc*, H. M. Maynard; J. Montgomery, Belfast; R. Fulton (2). *hc*, H. M. Maynard; J. Montgomery.

CARRIES (Black).—Hens.—1 and Cup, W. Siddons, sen. 2 and 3, R. Fulton. *hc*, H. M. Maynard; R. Fulton. *hc*, E. Walker.

CARRIES (Dun).—Cocks.—1 and Cup, J. Montgomery. 2, T. Crisp, Southall. 3, H. Heritage, Mortlake. *hc*, R. Fulton. *hc*, J. C. Ord, Fulham.

CARRIES (Dun).—Hens.—1, W. Siddons, sen. 2 and 3, R. Fulton. *hc*, E. Walker, Leicester; J. Montgomery; R. Fulton; W. B. Ford, Weymouth. *hc*, J. Montgomery.

CARRIES (Any other colour).—Cocks.—1, R. Fulton. 2, C. E. Duckworth, Wavertree. 3, R. Cant, Brompton Road. *hc*, W. Massey; W. G. Hamcock, Spalding. *hc*, W. Siddons, sen. *c*, S. Watkins, jun., Barking Road; R. Fulton; W. B. Ford; G. Keumpton, Islington.

CARRIES (Any other colour).—Hens.—1, W. Massey. 2, R. Fulton. 3, C. E. Duckworth. *hc*, J. C. Ord; W. E. Nalder, St. John Street Road. *hc*, S. Watkins, jun.

CARRIES (Black).—1, W. Massey. 2, H. Heritage. 3, J. Montgomery. *hc*, H. Heritage; W. Quickfall, Shanklin; M. H. Gill; J. Montgomery; R. Fulton; W. G. Hamcock, Hford (2); E. Walker. *hc*, H. Heritage; J. Montgomery; R. Fulton; W. E. Nalder.

CARRIES (Dun).—1, Cup, and 2, R. Fulton. 3, Col. F. C. Hassard. 4, E. Walker. *hc*, J. Montgomery.

CARRIES (Any other colour).—1, E. C. Stretch. 2, W. G. Hamcock. 3 and 4, J. C. Ord.

CARRIES (Any age or colour).—1, C. Cork, Shoreham. 2, E. J. J. Holmes. 3, J. Watts, Birmingham. *hc*, W. Sefton.

DRAGONS (Blk).—1, Cup, and 2, F. Graham, Birkenhead. Equal 3, W. Hill; W. H. Mitchell. *hc*, S. Cliff, Nantwich; H. Yardley, Birmingham; F. Graham; W. Hill; W. B. Tegetmeier (2); W. H. Mitchell.

DRAGONS (Silver, Black Bar).—1, Cup, 2, and 3, F. Graham. *hc*, W. Gibson; R. Brierley, Bury, Lancashire.

DRAGONS (Silver, Brown Bar).—1, Cup, 2, and 3, W. Bishop, Dorchester. *hc*, H. Aliso, Birmingham (2); W. Gamon.

DRAGONS (Red or Yellow).—1, Cup, 1, 2, and 3, S. E. Betty, Gloucester Gate, Regent's Park. *hc*, F. Graham (5).

DRAGONS (White or any other colour).—1, Cup, 1, and 2, F. Graham. 3, A. M. Philpott, Clapham. *hc*, H. Jacobs, Sandown (2).

TEMPLES (Almond).—Cock.—1, Cup, 1, and 2, T. Hallam, Birmingham. 3, J. Ford, Monkwell Street, London. *hc*, F. Hallam; J. Ford; H. Adams, Beverley.

TEMPLES (Almond).—Hen.—1, R. Fulton. 2, J. Ford. 3, T. Hallam. *hc*, R. Fulton; H. Adams; J. Baker, Spring Grove.

TEMPLES (Any other variety).—Cock.—1, W. G. Hamcock. 2, G. J. Taylor. 3, B. Adams. *hc*, W. R. & H. O. Bienkinsip, Newcastle. *hc*, T. Hallam; R. Barrett; A. Millar, Kilmarnock; J. Baker; J. Ford; R. Fulton (2).

TEMPLES (Any other variety).—Hen.—1, W. R. & H. O. Bienkinsip. 2, R. Fulton. 3, J. Ford. *hc*, T. Hallam (2); J. Baker; G. J. Taylor.

BARNS (Black or Dun).—Cock.—1, Cup, 1, and 3, J. Firth, Dewsbury. 2, R. Fulton. *c*, J. Firth; J. Montgomery. *c*, R. Fulton.

BARNS (Black or Dun).—Hen.—1, J. Firth. 2, H. M. Maynard. 3, J. Fielding, jun., Rochdale. *hc*, H. M. Maynard; J. Montgomery; P. H. Jones.

BARNS (Any other colour).—Hen.—1, J. Montgomery. 2, J. Baker. 3, R. Fulton. *c*, J. Montgomery; P. H. Jones; R. Fulton.

BARNS (Any other colour).—1, J. Firth. 2, J. Firth. 3, J. Firth, 3, Major J. H. Croyer, Newport. *c*, P. H. Jones.

JACOBS (Red or Yellow).—1, A. A. Vander Meersch, Lower Totting. 2, Capt. Heaton. 3, R. Fulton. *hc*, Capt. Heaton, Worsley (3); E. M. L. Cockledge; K. Fulton (2). *c*, G. J. Taylor.

JACOBS (Any other colour).—1, J. Thompson, Bingley. 2 and 3, R. Fulton. *hc*, Capt. Heaton; G. Roper, Croydon; A. A. Vander Meersch (3). *c*, J. Baker.

FANTAILS.—1, J. E. Spence. 2, H. M. Maynard. 3, R. Blair, Johnstone. *hc*, H. M. Latt, Houghton; J. F. Loversidge; H. Yardley; J. Walker, Newark; H. W. Webb. *c*, J. Walker.

NUNS.—1, Rev. A. G. Brooke. 2 and *hc*, W. Croft, Ripley. 3, R. Fulton. *c*, J. B. Bowden, Blackburn; J. Watts; W. Harvey.

TRUMPETERS.—1 and Cup, R. Fulton. 2 and 3, J. Lederer, Rottle. *hc*, W. Harvey. *hc*, T. Rule, Durlam. *c*, C. W. Rice.

OWLS (English).—1, 3, and Cup, E. Lee, Nantwich. 2, H. J. Clark, Kew Bridge. *hc*, Ward & Rhodes, Oldbury; T. W. Townson, Bowden (2); J. Chadwick, Taunton; P. H. Jones; W. Binns.

OWLS (Foreign).—1 and *hc*, T. W. Townson. 2, J. Fielding, jun. 3, J. Baker. *hc*, P. H. Jones; J. Baker.

TERRITS (Blue and Silver).—1 and 3, E. T. Dew, Weston-super-Mare. 2 and *hc*, W. Croft. *hc*, C. A. Crofer, Warrington; J. B. Pinder, Harpurhey; E. T. Dew; G. H. Gregory (2); P. H. Jones.

TERRITS (Any other colour).—1 and Cup, G. Roper. 2 and 3, W. Croft. *hc*, C. A. Crofer; W. Croft (2); J. B. Pinder; W. E. Easton, Hull; G. Roper; O. E. Cresswell; A. A. Vander Meersch (2); S. Salter; R. Fulton (2); P. H. Jones.

MAGPIES.—1, J. B. Bowden. 2, C. G. Hitchcock. 3, P. H. Jones. *hc*, J. B. Bowden; J. E. Crofts (2).

CRANS (Any colour).—1 and 2, T. D. Green, Saffron Walden. 3, H. Yardley. *hc*, J. S. Price, Potter's Bar (2).

FLYING TUMBLERS (not Short-faced).—1 and 3, R. Fulton. 2, J. Ford. *hc*, J. Ford (3); R. Blair.

ANSWERS (Short-faced).—1, W. H. Mitchell, Moseley. 2, J. T. Theobald. 3, W. B. Bull, Newport Pagnell.

ANSWERS (Homing).—1, Capt. J. G. Edwardes, Hyde Lodge, Hammersmith Mall. 2, J. Robertson. 3, J. Huydon, Carlshall. 4, F. R. Hall. *hc*, T. Foster, Bingley (2); J. P. Jones, Plumstead; J. Robertson (2); R. Briceley.

ANY OTHER VARIETY.—1, R. Fulton. 2, J. Wallace, Burnbank, Glasgow. 3, J. B. Bowden. *hc*, H. Yardley. 4, A. Stewart. F. Braund, Euford; H. J. Dwyler, Beckham; W. Hill, A. A. Vander Meersch; S. A. Wylie.

CLASSIC (Single Bird).—1, M. Gardner, Dalston Lane. 2, H. B. Massey, Spalding. 3, C. Cork. 4, S. Salter. *hc*, F. Gresham; A. A. Vander Meersch; P. H. Jones. *Pair*.—1, L. Watkin, Northampton. 2 and 3, J. Ford. 4, S. A. Wylie. *hc*, L. Whitehead; C. Cork; Ward & Rhodes; C. Reed; G. H. Gregory; E. Stocker, New Wandsworth; W. B. Tegetmeier; P. H. Jones; S. Salter.

COLLECTION OF FOUR PAIRS (exclusive of Carriers, Pouters, and Tumblers).—1 and Cup, Rev. W. Serjeantson. 2, W. Vernon. 3, equal, J. Muntel, Newport Pagnell; R. Fulton. *hc*, J. Baker. *hc*, J. F. Loversidge; T. Kule; W. Davis; Sparrow & Cotton, Berkeley Square (2); R. Fulton.

SPECIAL FLYING CLASS OF HOMING ANSWERS.—1 and Cup, C. L. Sutherland, Coombe, Croydon. 2, J. Sparrow & Co. 3, J. T. Theobald. 4, Col. F. C. Hassard. 5, F. Lubbock. 6, W. B. Tegetmeier.

RABBITS.

LOP-EARED (Self-coloured).—1, Cup, and 2, F. Banks, Foundling, London. 3, F. Loveband, Grove Road, London. *hc*, B. W. Mason, Hull (2).

LOP-EARED (Tortoiseshell).—1, 2, and *hc*, F. Banks. 3, J. Boyle, jun., Blackburn.

LOP-EARED (Yellow-and-white).—1, F. Banks. 2, C. Winward, Bolton. 3, J. G. Quick, Bryanstone Square. *hc*, W. Canner, Leicester. *hc*, C. King, St. Paul's Wood.

LOP-EARED (Any other colour).—1 and Cup, J. Cranch, St. John's Wood. 2 and 3, F. Banks. *hc*, J. Hallas, Huddersfield; F. J. Smith, East Dereham. C. Winward; F. Loveband.

SILVER GREY.—1, J. Boyle, jun. 2, H. W. Wright. 3, Master W. H. Anns, Clapham. *hc*, J. Boyle, jun.; S. Hall, Bradford; Master W. H. Anns. *hc*, J. J. Ellis, Reigate; G. Beckley, Shepherds Bush; Master W. H. Anns. *c*, T. J. Inman, Hackney.

SPANISH.—1 and Cup, H. White, Rochdale. 2, W. H. Tomlinson. 3, J. Hallas. *hc*, J. Barow, Rochdale; H. White; C. Arthur, Melksham. *hc*, E. S. Smith; H. W. Wright. *c*, H. W. Wright; W. H. Tomlinson.

ANGORA.—1, T. Garner, Kidzesthorpe. 2 and 3, W. Bowes, Darlington. *hc*, Rev. J. Richardson; F. J. Smith. *hc*, W. Whitworth, jun.; G. Godfrey. *c*, A. Barr, Victoria Park.

BELOAN HARE.—1 and Cup, G. P. R. Hackett, Haverstock Hill. 2, J. Boyle, jun. 3, H. B. Massey. *hc*, W. Whitworth, jun.; J. Boyle, jun.; W. Whitworth, jun.; E. S. Smith; A. Hudson. *c*, Mrs. A. Tindal.

ANY OTHER VARIETY.—1, J. Mason, Hull. 2, G. P. R. Hackett. 3, J. Irving, (Dutch Doe). *hc*, J. Boyle, jun.; J. Mason; T. J. Inman. *hc*, J. Irving, Birmingham (Dutch Doe); S. Simkin, Wolverhampton; C. Winward (2). *c*, J. Boyle, jun.; J. Hallas; C. Winward.

SELLING CLASS.—1 and 2, C. Kirk. 3, F. Banks. *hc*, J. Hallas; W. Whitworth, jun.; G. Beckley, Shepherds Bush; C. Arthur. *hc*, F. Banks. *c*, W. Whitworth, jun.; E. S. Smith; J. Cranch; C. Arthur; F. Loveband.

KILMARNOCK POULTRY SHOW.

This took place on the 14th and 15th inst. The entries were very numerous. The prize list is as follows:—

SPANISH.—1 extra, H. L. Horne, Airdrie. 2, A. Walker, Kilmarnock. 3, R. Begg, Dalry. 4, J. R. Rodhard, Wrington. *hc*, W. McIntyre, Ochiltree; D. Heggie, Glasgow; H. Wilkinson, Farby; J. Mair, Kilmarnock. *c*, J. T. Parker.

BAHAMA POOTERS.—1 extra, H. Wilkinson. 2, H. Wise, Bishopscroft. 3, W. G. Milligan, Springfield, Belfast. 4, A. Robertson, Kilmarnock. *hc*, R. Maxwell, Dumfries; J. Ashworth, Burnley; A. Semple, East Kilbride.

COCHIN-CHINAS.—1 extra, J. Drinnan. 2, W. S. Guest, Drumfrock, Helensburgh. 3, H. Wyse. 4, T. Bruce, Busby, Glasgow. *hc*, R. Maxwell; J. Wyse.

DOBKINGS.—Silver-Grey.—1 extra, D. Draper, jun., Falkirk. 2, T. Smilie, jun., Kilmarnock. 3, J. Turnbull, Larbert. 4, Q. Feltigree, Camlang, Dalmeilington.

DOBKINGS.—Coloured.—1, J. Robinson, Garstang. 2, J. Turnbull. 3, A. Gibb, Ayr. 4, J. White, Warley, Northalberton. *hc*, R. White, Paisley.

GAME.—Black-headed or other Bats.—1 extra, J. Nelson, Cockshaw, Hexham. 2, J. F. Walton, Horncliffe, Rawtenstall. 3, J. Mason, Worcester. 4, J. A. Mather, Nithside, Closeburn. *hc*, W. G. Mulligan; A. C. Penwan, Kelly, Blair Adam; J. A. Mather.

GAME.—Any other variety.—1, Z. H. Heys, Barhead. 2, J. M. Indoe, Barhead. 3, H. C. & W. Y. Mason, Drighlington. 1, J. McKay, Cross Arthurie, Barhead. 2, J. Rooney, Kilmarnock.

GAME or BANTAM.—Chickens.—1, Miss J. M. Frew, Kirkcaldy. 2, J. Laughead, Kilmarnock. 3, J. Jardine, Kilmarnock. 4, T. Mackie, Stewarton.

HAMPSHIRE.—Golden-spangled.—1, A. Robertson. 2 extra, T. Walker, jun., Denton, Manchester. 3, T. Mackie. 4, D. Beaton, Waterford, Busby. *hc*, J. Crawford, Beith. *c*, A. Franks, Perceon; A. Begg, High Blantyre.

HAMPSHIRE.—Golden-pencilled.—1 extra, D. Gilmore, Kilmarnock. 2, H. Beldon, Goukston. 3, W. Nelson, Johnston. 4, J. Robinson. *hc*, J. Ashworth, Marsden Heights, Burnley; J. Bowness, Newburgh, Manchester (2).

HAMPSHIRE.—Silver-spangled.—1 extra, H. Stanward, Burnley. 2, T. Boulton, Handford, Stoke. 3, J. M. Campbell, Bunny Kelly, Turiff. 1, W. Husband, Kilmarnock. *hc*, R. Moore, East Banton.

HAMPSHIRE.—Silver-pencilled.—1 extra, H. Beldon. 2, R. Moore. 3, J. Stevenson, Airdrie. 4, J. M. Laren, Kilmarnock. *c*, J. Bowness.

HAMPSHIRE.—Blue.—1 extra and 1, J. Bowness. 2, T. Walker, jun. 3, H. Beldon. *hc*, Scott & Booth, Bury, Lancashire.

POULTRY OF OTHER VARIETIES.—1, H. Beldon. 2, A. McEllan, Barhead. 3, J. Robinson. 4, A. Wylie, Johnston. *hc*, J. Smart, Carnoustie; J. C. Shaw, Barhead; W. Hearpark, Airdrie & Steple; J. Laird, Johnston.

SCOTCH GREYS.—1 extra, T. Wallace. 2, W. Robertson, Newton, Ayr. 3, J. Fullan. 4, A. Watson, Loans, Troon. *hc*, T. M. Martine, Kilmarnock; A. Gray, Beith.

ANY OTHER VARIETY.—1, J. Robinson. 2, J. Lambie, New Cumnock. 3, J. F. Watson. 4, G. Anderson, Abernethy. *hc*, J. Stoddart, Dalmeilington; R. Little, Loans.

GAME BANTAMS.—Black-headed or other Bats.—1 extra, J. Nelson. 2, Z. H. Heys. 3, G. Anderson. 4, T. Barrow, Burnley. *hc*, R. Muir, Craigm; R. Wingfield, Worcester; W. A. Orr, Kilmarnock; W. Rogers, Sunderland; R. Brownlie, Kirkcaldy. *c*, W. Rogers.

GAME BANTAMS.—Any other variety.—1, J. Taylor, Johnston. 2, J. Nelson. 3, Miss K. C. Frew, Kirkcaldy. 1, J. Nelson. *hc*, R. Wingfield; J. Aitken, Glasgow.

GAME BANTAMS.—Black or White.—1 extra, W. H. Shackleton, Bradford. 2, R. H. Ashton, Mottram. 3, H. L. Horne. 4, T. B. Carver, Langthorpe, Broughbridge. *hc*, W. H. Robinson, Long Lee, Keighley; S. Clapham, Keighley; K. Bryden, Loomabean.

BANTAMS.—Not Game, Any other variety.—1, H. B. Smith. 2, H. Beldon. 3, D. McNaught, Kilmarnock. 4, D. Holden, Irvine. *hc*, W. Montgomerie, Kilmarnock.

BANTAMS.—Ivy-bushy.—1 extra, T. B. Carver. 2 and 3, A. Robertson, Kilmarnock. 4 and 5, J. Beck. *hc*, Z. H. Heys; J. Robinson; A. Robertson. *Roan*.—1, W. G. Mulligan. 2, J. Nelson. 3, J. A. Mather. 4, A. Robertson. *hc*, J. G. Stott;

A. Robertson. Any other variety.—1, 2, and *hc*, H. B. Smith, Broughton, Preston. 3, Miss E. Robertson, Kilmarnock. 4, G. H. Nicoll, Dundee.

GESE.—1, W. G. Mulligan. 2, A. Yundall, Galston. 3, J. Kerr, Kilmarnock. TURKEYS.—1, T. Fullarton, Loans, Troon. 2, T. E. Andrews, Kilmarnock.

SELLING CLASS.—1, H. L. Horne. 2, G. Willison, Kilmarnock. 3, H. Beldon. 4, R. Wingfield. *hc*, J. Reid, Galston; R. Reid, Canobie.

PIGEONS.

POULTERS.—Black or Blue.—Cock.—1 extra, E. Horner, Harwood, Leeds. 2, H. Thomson, Glasgow. 3, A. Yuill, Glasgow. 4, D. Munn, Kilmarnock. *hc*, J. Mitchell, Glasgow; H. Thomson; H. M'Naught; W. Rutherford, Edinburgh.

POULTERS.—Any other colour.—Cock.—1, W. Ridley, Hexham. 2, E. H. Mer. 3, A. Yuill. 4, J. Mitchell. *hc*, W. Rutherford. *Hen*.—1, A. Yuill. 2 and *hc*, J. Mitchell. 3, J. S. & A. Robb, Haberston, Alloa. 4, J. Hamilton.

CARRIERS.—Cock.—1 extra, E. Horner. 2, S. D. Baddeley, Hereford. 3, D. Lawrie. 4, W. Ridley. *hc*, E. Horner; H. Bankhead, Kilmarnock; J. Chadwick, Bolton; G. Brown, Kilmarnock. *Hen*.—1, S. D. Baddeley. 2 and 3, E. Horner. 4, G. Brown. *hc*, H. Yardley, Birmingham; J. M'Crac, Kilmarnock; J. Chadwick; G. Brown. *Young*.—1, A. Brown. 2, E. Horner. 3, R. Baird, Kilmarnock. 4, A. Richmond, Kilmarnock. *hc*, W. Ridley; R. Crow, Larkhall; J. Conkie, Darvel; A. Brown.

BARBS.—1, H. Yardley. 2, D. Lawrie. 3, J. Glen, Bushby Hill, Cambuslang. 4, E. C. Stretch, Ormskirk. *hc*, J. C. Renshaw, Gate, Littleborough; W. Brydone.

TRUMPETERS.—1 extra, J. Lederer, Bootle. 2 and 3, E. Horner. 4, J. & W. Towerson, Egremont.

FANTAILS.—1 extra, A. Smith, Broughty Ferry. 2, R. Blair, Thornhill, Paisley. 3, P. R. Spencer, Hereford. *hc*, J. F. Loversidge, Newark (2); J. Kemp, Haslingden; J. Galt, Kilmorie; J. Caldwell, Johnston; A. Robertson; W. & A. Crawford, Beith; V. J. Baird, Galston; R. Blair.

JACOBIANS.—1, W. Brydone. 2, A. A. Vander Meersch, Lower Tooting. 3, V. J. Baird. 4, G. H. Greaves, Blackburn. *hc*, W. M'Clive, Ayr. C. T. Newbitt, Epsom; J. Lambie.

TURBITS.—1 extra, J. Mair. 2, W. Ridley. 3, J. G. Orr, Beith. 4, R. Gibson. OWLS.—English.—1, J. Chadwick. 2, W. & R. Davidson, Montrose. 3, A. Yuill. 4, J. Muir. *hc*, H. Yardley; T. & W. Oddie, Burnley.

TUMBLERS.—short-faced.—1 and 2, J. Macquis, Wishaw. 3, F. Moore, Burnley. 4, E. Horne. *hc*, W. Brydone, Dunst. 5, E. Horner.

TUMBLERS.—Self-coloured, not short-faced.—1 extra, J. D. S. Crawford. 2, E. C. Stretch. 3, J. Glen. 4, D. M'Whirter, Ayr.

TUMBLERS.—Blue-barred, or any other colour not short-faced.—1, J. Glen. 2, A. H. Imrie. 3, H. Fulton, Beith. 4, Richardson & son, Southwam. *hc*, W. M'Clive; W. Ridley; A. H. Imrie, Ayr; J. Grierson; A. A. Vander Meersch; W. Brown; E. C. Stretch; R. Blair; J. Orden, Kettering.

COMMON.—1, J. Richmond. 2, J. Hamilton, Dalry. 3, Cumming & Jamieson, Beith. 4, A. Gray.

NUSS.—1, V. J. Baird. 2 and 4, A. H. Imrie. 3, R. Young, Galston.

ANY OTHER VARIETY.—1, W. Brydone (Foreign Owl). 2 extra, E. Lee, Nantwich (Dragons). 3, A. Silver, Sheffield. 4, J. H. Watkins, Hereford. *hc*, R. Wingfield; W. Allan; A. A. Vander Meersch; J. & W. Towerson (Whiskered Owl).

SELLING CLASS.—1, R. Kitchen, Whitehaven (Archangels). 2, J. Grierson, Strathaven (White Pouters). 3, J. & W. Towerson. 4, C. Aird, Kilmarnock (Pouters). *hc*, W. M'Clive; S. D. Baddeley (Silver Dun Dragons); W. Brydone; A. H. Imrie; Cumming & Jamieson; F. R. Spencer (Trumpeters); J. and W. Towerson. *c*, D. Mackie, Tarbolton (Fantails).

CANARIES.

YELLOW.—Clean.—Cock.—1, W. Campbell, Kilwinning. 2, R. White, Paisley. 3, W. Wright, Greenock. 4, R. Dean, Kilmarnock. *Hen*.—1, Extra, and 4, D. Reid, Kilmarnock. 1, D. Dick, Kilmarnock. 2, P. Harrington, Beith.

BUFF.—Clean.—Cock.—1 and Extra, W. M'Arthur, Rutherglen. 2, D. Holden. 3, T. Jameson, Kilbarchan. 4, A. Harkness, jun. *Hen*.—1, J. Graham, Kilmarnock. 2, H. Davidson. 3, R. Dean. 4, A. Connell, Stewarton.

PIEDAL.—Yellow.—Cock.—1, A. Borland, Galston. 2, J. Kerr, Kilmarnock. 3, A. Kelly, Paisley. 4, W. Hunter, Kilmorie. *Hen*.—1 extra, R. Bryden. 2, A. Kelly. 3, J. Wilson. 4, J. Sloan, Overton, Kilmarnock.

TRIAL.—Buff.—Cock.—1 extra, J. Patison, Rutherglen. 2, A. Lyon. 3, R. Bryden. 4, J. Ritchie, Selkirk. *Hen*.—1, W. M'Clulloch, Galston. 2, R. Banton, Kilmarnock. 3, J. Lyon, Crookholm. 4, R. Baxter, Beith.

GOLDFINCH MILES.—Yellow.—1, A. Dunlop, Kilmarnock. 2, W. Littlejohn, Overton, Kilmarnock. *Buff*.—1, G. Goudie, Ayr. 2, Miss E. Robertson. 3, D. M'Guire, Beith.

GOLDFINCH.—1, T. Reyes. 2, T. Conn, Kilwinning. 3, D. Reid.

SELLING CLASS.—Canary.—1 extra, D. Holden (Buff). 2, R. Calderwood, Kilmarnock. 3, H. Dick (Buff). *Hen*.—1 extra, D. Dick. 2, W. Laughland. 3, J. Calderwood (Clean Yellow).

HOME OR FOREIGN BIRDS.—1, A. Yuill. 2, Mrs. J. M. Wilson, Kilmarnock. 3, C. Aird.

RABBITS.—Any fancy variety.—1 and 2, W. J. Mayell & F. Puroer, Bedford. 3, J. W. Harrah. 4, J. Boyle, jun. *hc*, J. Boyle, jun.; J. W. Harling; J. Orden (2). *Common*.—1, D. Lawrie, jun. 2, A. M'Naughton, Kilmarnock. 3, G. Ritchie, Kilmarnock. 4, M. Robertson, Kilmarnock.

JUDGES.—Poultry: Mr. R. Teebay, Fulwood, Preston. Pigeons, &c.: Mr. F. Esquilant, 4, Effra Road, Brixton, in lieu of Mr. W. B. Tegetmeier, London, prevented by illness. Canary Birds, &c.: Mr. R. Paterson, Cochran Cottage, near Howwood; Mr. S. Brown, 100, West Street, Calton, Glasgow; Mr. R. Calderwood, West Langlands Street, Kilmarnock; Mr. C. Aird, High Street, Kilmarnock.

MOUTING OF NECK HACKLES.

The fact noted in your last number by the Rev. E. Spenser Tiddeman, relative to the moulting of the neck hackle of a Silver-Grey Dorking cock is one of frequent—nay, I may say, of regular recurrence in the Golden and Silver-spangled Polish fowl. About July the cock birds lose their old hackles, which are replaced, not by pure golden or silver-coloured feathers, but by much shorter ones, each with a large black spangle upon it. These remain until their annual moult, when they are replaced by their voluminous successors. This fact will, I dare say, have been noticed by other Polish fowl breeders.—G. W. BOOTHBY.

CAMBRIDGE POULTRY SHOW.—As Mr. Hewitt's name has been announced through your advertisement columns to judge at our Show on December 10th and 11th, will you allow me to state that Mr. Teebay has consented to judge the poultry, as Mr. Hewitt is suffering from ill health, and has been obliged to with-

draw? Trusting this notice may satisfy exhibitors.—F. W. METCALFE, *Hon. Sec.*, 2, Clarendon Street, Cambridge.

DARLINGTON ORNITHOLOGICAL SOCIETY'S SHOW.

This was held in the Mechanics' Hall, Darlington, on the 14th and 15th inst. The following are the awards:—

BELGIAN.—*Clear, Ticked, or Variegated Yellow*.—1, 3, *hc*, and *c*, J. Rutter, Sunderland. 2, R. Hawman, Middlesbrough. *Clear, Ticked, or Variegated Buff*.—1, 2, and 3, J. Rutter. *hc*, J. Rutter; J. N. Harrison, Belper.

NORWICH.—*Clear Jongue*.—1, Lamplough & Bexson, Derby. 2, Holmes and Doyle, Nottingham. 3, J. Audley, Leicester. *hc*, J. Adams, Coventry (2). *Clear Buff*.—1, Holmes & Doyle. 2, J. Atkins, Stoke, Coventry. 3, Lamplough and Bexson. *hc*, J. Atkins; Holmes & Doyle; Lamplough & Bexson. *c*, J. Adams; Brown & Gayton, Northampton.

NORWICH.—*Ereunty-marked Jongue*.—1, Lamplough & Bexson. 2, J. Adams. 3, Holmes & Doyle. *hc*, Imhoff & Carnall, Hullfield, Coventry; Lamplough and Bexson. *c*, H. & D. Audley, Leicester; J. Audley. *Ereunty-marked Buff*.—1, 2, and *c*, Lamplough & Bexson. 3, J. Adams. *hc*, H. & D. Audley; Imhoff and Carnall; Holmes & Doyle; J. Abersuch; J. Adams.

NORWICH.—*Ticked or Ereunty-marked Jongue*.—1, W. Carrick, Middlesbrough. 2, T. Tenniswood. 3, J. Adams. *hc*, J. Adams; J. Audley; Lamplough and Bexson. *c*, J. Adams; Lamplough & Bexson. *Ticked or Ereunty-marked Buff*.—1, J. Adams. 2, W. W. Ellerton, Darlington. 3, and *c*, Lamplough and Bexson. *hc*, Holmes & Doyle (2); Lamplough & Bexson.

NORWICH.—*Any variety of Crested Yellow*.—1, R. E. Triffitt, York Castle. 2, Lamplough & Bexson. 3, W. Watson, jun., Darlington. *hc*, Cox & Hillier, Northampton. *c*, S. Tomes, Northampton. *Any variety of Crested Buff*.—1, Martin & Griffin, Northampton. 2, S. Tomes. 3, W. Wood, Harrogate. *hc*, J. Hurrell, Sunderland; Lamplough & Bexson; —Baxter. *c*, J. Devaney, Knatesbrough; W. Booth, Brompton, Saltburn; J. Hurrell; Lamplough and Bexson; Cox & Hillier; W. Wood.

LIZARD.—*Goldenspangled*.—1, W. Watson, jun., 2, R. Ritchie, Darlington. 3, J. N. Harrison. *hc*, W. Watson, jun.; W. W. Ellerton; R. Ritchie, Darlington. *c*, J. Athersuch, Coventry. *Silverspangled*.—1 and 3, W. Watson, jun. 2, R. Ritchie. *hc*, R. Ritchie (2); J. Goode, Leicester; J. Martin, Salford; S. Bunting, Derby. *c*, W. Watson, jun.; L. Belk, Dewsbury; J. N. Harrison; J. Taylor, Middlesbrough, *hc*, Martin.

LIZARD.—*Goldenspangled with broken cap, or pied wings or tail*.—1, W. Watson, jun. 2, R. Ritchie. 3, J. Taylor. *hc*, W. Watson, jun. (2); R. Ritchie. *Silverspangled with broken cap, or pied wings or tail*.—1, R. Ritchie. 2, W. Watson, jun. 3, R. Layfield, Croft. *hc*, W. Watson, jun.; R. Ritchie (2). *c*, W. Watson, jun.; J. Taylor.

CANNON.—*Jongue*.—1, J. Adams. 2, Lamplough & Bexson. 3, J. Devaney. *hc*, Lamplough & Bexson; Cox & Hillier; W. Smith, Birmingham. *c*, J. Audley; J. Taylor. *Buff*.—1 and 2, Lamplough & Bexson. 3, Cox & Hillier. *hc*, R. Simpson, Whitley; J. Adams; Brown & Gayton. *c*, J. Adams; J. Taylor.

YORKSHIRE.—*Clear Yellow*.—1 and 2, W. Hutton, Baildon. 3, C. Holdsworth, Harrogate. *hc*, G. Ward, Crook; J. Rowland, Skelton; J. Harrison; W. W. Johnson, Northallerton; J. Whitaker, Great Horton; J. Shepherd. *c*, J. Thackrey; W. Howard, Harrogate; J. Clemison, Darlington; L. Belk. *Clear Buff*.—1 and 3, W. Hutton. 2, J. Whitaker. *hc*, G. Ward; W. Bulmer; W. Boothby. *c*, J. Thackrey; J. Clemison.

YORKSHIRE.—*Ereunty-marked Yellow*.—1, L. Belk. 2, J. Stevens, Middlesbrough. 3, J. Shepherd, Great Horton. *hc*, J. Whitaker. *Buff*.—1, P. Rawley, Ledgate Green. 2, G. Brown. 3, J. Shepherd. *hc*, T. Tenniswood; J. Whitaker; L. Belk; C. Burton. *c*, T. Robinson, Norton, Malton; J. Shepherd.

YORKSHIRE.—*Ticked or Ereunty-marked Yellow or Buff*.—1, J. Stevens. 2, M. Corner, Darlington. 3, J. Whitaker. *hc*, J. Clemison. *c*, J. Garbutt.

ANY OTHER VARIETY OF CANARY.—1, W. Hutton. 2, J. Spence, South Shields (Green). Extra 2, W. Cotton (Cobly Crest). 3, R. Robinson, Middlesbrough (Evenly-marked Cinnamon). Extra 3, —Baxter. *hc*, R. Hawman; W. Bulmer, Stockton (Cobly Crest); J. N. Harrison; J. Brown (Evenly-marked Cinnamon). *c*, J. Rowland; J. Adams.

SELLING CLASS.—1, W. Watson, jun. 2, W. Hutton. 3, Brown & Gayton (Norwich). *hc*, R. Simpson (Jongue and Buff Norwich); S. Tomes; J. Audley; Lamplough & Bexson. *c*, C. Holt; W. W. Ellerton; J. Garbutt; K. Layfield; W. Smith.

CAGE OF SIX CANARIES.—*Variety and Plumage*.—1, R. Layfield. 2, T. Clemison. 3, J. Clemison. *hc*, R. Ritchie.

GOLDFINCH MULE.—*Ereunty-marked*.—1, R. Hawman. 2, W. & C. Barniston, Middlesbrough. 3, P. Eawnsley. *hc*, J. Spence; J. Whitaker. *c*, W. Harland, York. *Dark*.—1, Lamplough & Bexson. 2, W. & C. Barniston. 3, Cox and Hillier. *hc*, C. Holt, South Stockton; W. Lister, Ripon. *hc*, J. Stevens. *c*, M. Corner.

MULE.—*Any other variety*.—1 and 3, R. Hawman. 2, and *hc*, J. Spence. *hc*, W. Hutton.

FOREIGN BIRDS.—1, J. Calvert. 2 and 3, W. Edlison, Darlington. *hc*, G. Boves, jun., Darlington; W. & C. Barniston; W. Hodgson; W. Lister (2). *c*, W. Wood.

GOLDFINCH.—1, W. Hutton. 2, R. Wilson, Lofthouse. 3, J. Martin. *hc*, T. Tenniswood. *hc*, W. Wass, Darlington. *c*, W. Robinson.

LINNET.—*Brown*.—1, J. Beazey, Middlesbrough. 2 and *c*, M. Stelling, Willington. 3, W. Carrick. *hc*, C. Dunbar, Darlington. *hc*, T. Tenniswood.

BLENDED.—1, Brown & Gayton. 2, W. Lister. 3, R. D. Wate, Norton, Malton. *hc*, R. Pearson, Whitley. *hc*, J. Devaney; J. N. Harrison.

ANY OTHER VARIETY OF BRITISH BIRD.—1, G. Wallace (Thrush). 2, W. Thornton, Darlington (Lark). Extra 2, C. Holdsworth (Missle Thrush). 3, W. & C. Barniston. *hc*, R. Ritchie (Blackbird) and Stirling. *hc*, W. Hodgson (Starling); W. Thornton (Starling); Cox & Hillier; T. Pigg, Darlington (Thrush).

JUDGES.—Mr. G. J. Barnesby, Derby; Mr. J. Calvert, York; Mr. T. Clark, Sunderland.

[We are promised some notes for next week.—Eps.]

THE FORTHCOMING DEVIZES SHOW, AND BLACK DUCKS AT DEVIZES.

There was once in years far back—that is, far back for such modern things, a Devizes poultry show; I believe it was in the year 1861. Then there was a long pause, and no show until 1871—a decade of change and progress in the poultry world. New names had come up; old names, some gone altogether, and some gone from the world of poultry-fanciers; and many others come. Those that are still poultry folks have a little changed in those ten years. Hair will get thin at the top of the head, or retreat from the forehead, or get a shade whiter over the ears: that is very unkind of Father Time, for the hat cannot hide these bits of white, which will peep out. But to leave

moralising alone. A Devizes Show there was, and then after ten years came up a Wilts County Show, held at Devizes. As to place of exhibition, that Corn Exchange there is perfect. Earnest workers there are too; but somehow the Committee were out of pocket in 1871, and again out of pocket in 1872. Now it is not nice with hard work to have pecuniary loss, neither is it fair. So to avoid this in future a meeting was held at the Town Hall to have a talk about the show of the future, and it was decided that a show there should be; next, that certain fanciers or encouragers of poultry should, in addition to their subscriptions, form a guarantee fund, which might not, indeed, have to be drawn upon, but would be ready in case of need. Thus, then, a show there will be this year, and some money is guaranteed, and more no doubt will be forthcoming. Devizes fanciers having done their duty, others will follow in their course. I could but think as I sat in that Town Hall (a capital hall it is), with the portraits of former M.P.'s and other notorieties looking down upon us, to what various uses a town hall is put. I looked in at the large room; there were many tables clothless and desolate, for there had been a Mayor's dinner the night before. No remnant of conviviality left save a large clothes-basket full of nutshells—remains fit to match the headaches and dyspeptic stomachs of many of the guests, the consumers of those nuts. The last time I looked into that hall everything was prim and prepared for a teetotal meeting, and a large water decanter full, quite full, was on the green-baise-covered table, a fit emblem, like the nutshells, of the entertainment (?) connected with it.

All being right about the future of the poultry show, and a nice harmonious and plucky spirit having been manifested at the meeting, I and my host, Mr. G. S. Sainsbury, turn homewards relieved of a weight of anxiety. I inspect the Black Ducks that he has at home, and find them better than ever; I watch a little dusky fleet of them on the water at the end of his pretty garden, and am to see more, many more, to-morrow. The morrow's morning comes, and I am driven on "a high and giddy" dog-cart. (N.B.—I prefer to have four wheels under me. N.B. 2.—I did not, now I remember, care so much about having four wheels twenty years ago. N.B. 3.—Why is this? A fit subject for meditation next Lent.) But if the dog-cart is very high, so are the clouds, and a fine bracing autumnal breeze is blowing. There is a nice, healthy, down-like taste about the air near Devizes. I am driven towards Seend, once famous for Mr. Awdry's roses; but the roses, like invalids got into years, now live in Bath—yes, live and flourish too, as old clergymen who have sold their livings and reside in "The Queen of the West" always seem to do, as the purchasers of their livings tell you with rueful faces. I reach a gate leading to a brickfield, get off that high dog-cart, being able to reach the earth in process of time, and soon enter the brickfield, and in the deep pools always at such places find out the Ducks. These are driven to land, and in a sunny corner, some thirty of them, and most beautiful birds they are. Such good ones, and so many together I never beheld—glittering jet black—black without a white feather, and their green glossy plumage set off by the sun of that bright morning. I own I felt a longing for a piece of water at my home, on which to be able to keep such exquisite pets. Mr. Sainsbury has been a fancier for some twenty years, and like every man who sticks to a thing, whether in business or fancy matters, has succeeded, and gone to the top of the Black Duck-fanciers—witness the exquisite pair he showed and won with at Worcester; such form, such body colour, and such bloom!—WILTSHIRE RECTOR.

MOTTLE, BALD, AND BEARD TUMBLERS.

I do not agree with "A WOULD-BE EXHIBITOR" as to the advisability of offering an occasional extra prize at a show for the purpose of encouraging the exhibition of the above varieties: neither do I think it desirable to help those who will not help themselves. What is required is a properly-organised fund for the purpose of providing systematic encouragement not only to Pigeon-fanciers to take these birds up, but also to show-committees to offer prizes for them. "More haste is worse speed" in sober earnest in all matters relating to fancy Pigeons; and I therefore think that, under present circumstances, the best mode of procedure is for those interested in these neglected breeds to club together and let the Pigeon world know that, in order to encourage those who are breeders of them to persevere, and those who are not to become breeders and to do likewise, they will use their best endeavours to have classes provided for the Mottle, Bald, and Beard at the great shows of the next and future seasons.

This system, if backed by the hearty co-operation of show-committees, breeders, and exhibitors, would be far more likely to succeed than the plan of at once offering silver cups and other glittering attractions to be snapped-up by the few exhibitors who now possess good specimens of the varieties in question.

I therefore beg to submit the following proposals for the approval of those who have the interests of the Mottle, Bald,

and Beard at heart, firmly believing that many other fanciers are able greatly to improve upon them, and regretting that some pen abler and older than my own has not been employed on the subject. I propose—

1. That all those interested in the Mottle, Bald, and Beard at once establish and subscribe to a fund for the purpose of encouraging these varieties, and that such fund be called, "The Mottle, Bald, and Beard Fund."

2. That the subscribers to the so-called fund elect from their midst a certain number of gentlemen whom they constitute "a committee," and another gentleman whom they constitute "a secretary."

3. That the Committee at discretion, whenever the finances admit, direct the secretary to request the committees of such shows as those of Birmingham, Crystal Palace, Edinburgh, Glasgow, Manchester, Newcastle, &c., to devote the sum of £10 10s. to the purpose of providing three separate classes for these varieties, with prizes of £2, £1, and 10s. in each class: offering, in case of compliance, to subscribe the sum of £5 5s. to that object on condition that, should the entrance fees and the £5 5s. subscribed exceed the £10 10s. given in prizes, the surplus, or such part thereof not exceeding £5 5s., be paid over to the benefit of the Mottle, Bald, and Beard Fund.

4. That the Committee be empowered to offer what assistance they may be able and deem proper to give to the committee of any minor show on the same or similar conditions.

Such a system, when once established, would, I am confident, work well, and in a short time we should see the following six classes at the great exhibitions—viz., 1, Mottle (black); 2, Mottle (red or yellow); 3, Bald (solid colour); 4, Bald (barred colour); 5, Beard (solid colour); 6, Beard (barred colour).

In conclusion let me express a hope that some gentleman, whose name has sufficient weight amongst Pigeon-fanciers, will come forward and consent to be a secretary and treasurer *pro tem.*, in order to test the practicability of the system herein advocated.—TURKEY QUILL.

NEWCASTLE-UPON-TYNE PIGEON SHOW.

(From a Correspondent.)

COMMENCING with Pouters, Blue or Black, the classes consisted chiefly of Blues; the prizes for cocks of that colour went to birds pretty equal in length of limb and feather, yet the one wanting style which the other showed to advantage. In hens, first came a Blue and second a Black, neither extra in size but of good limbs and slender make. In Red or Yellow cocks, birds of the former colour, of good length of feather, took the first and second prizes. In hens, Yellow were first and Red second, the latter much the neater, but not so long in feather. In cocks, any other colour, two very fine Whites won the prizes, the first beating in style, yet the other having the better legs. But how the Judges could give the cup to a White minus two properties in preference to such Pied Pouters as were exhibited, was the wonder of many. It would appear that to win a Pouter cup it is only necessary to have a bird which shall measure well, not only as regards length of feather but also round the waist, allowing nothing for slenderness, colour, and markings. In the White hen class a very fine bird was first, and a nice slender and good-limbed bird second. The Pouter classes contained about fifty really good birds, and many disappointments were of course experienced.

In Black Carrier cocks the first-prize bird was up in head points, yet wanting a little more boldness of front. The second was also a very fair bird, being narrow-headed, with good eyes, yet rather abort in beak. In hens certainly a mistake occurred, for, considering all points, the second was much to be preferred to the first-prize bird. In the class for cocks of any other colour Duns won both prizes; first a capital-headed bird, yet coarse and unslapely. The second-prize pen was very taking. In hens both first and second prizes went to excellent Duns, and but for the second bird being a little out of health it would certainly have been placed first.

In the Dragoon classes Blue or Silver stood first, and, as usual, nearly all were Blues; but large as the class was, there were not more than a dozen really good birds. The first prize went to, what is much fancied, the Blue-rumped, a very fair bird with exceedingly narrow bars. The second prize was awarded to a Silver of similar build, and pleasing to the eye. The Red or Yellow class was not so large, but all the birds were good. The first prize went to a splendid Yellow, a strong and noble bird. Many might be preferred to the second, it being rather light in build but of exquisite colour. The Reds had no chance against such rich Yellows, although one or two were highly commended. In Whites or any other colour there was not much quality of the Dragoon.

We come next to the darling little Tumblers, and hear all around exclaiming, "What lovely little gems!" Here were Almond cocks in good numbers. It is only a pity to see the best birds passed over, the first prize falling to a coarse-beaked bird, and wanting in width and height of head; second was a

very fair bird, yet there were two or three others much to be preferred. The hens were a grand class and properly placed, the first beating the second in fineness of beak only, and both very rich in colour. The class also contained some very grand birds highly commended. In cocks of any other colour a good little Yellow Agate was first, but by no means the best-headed bird. A Mottle was second. Many Whole-colours superior to either, and an exquisite little Red were amongst the commended birds.

In Barb cocks Black was first and Red second; four good birds were highly commended. In hens, an excellent Black, good in every way, was first, and a nice-eyed bird second, yet there was a Dun much superior to the latter.

For Foreign Owls, Blue or Silver, a very fine powdered blue was first, a sky blue second, and a very fine bird highly commended. Any other colour was a larger class, all Whites save one Black, two very fine little gems taking the prizes.

Of Trumpeters the Mottled class was small and destitute of merit, every bird being wanting in some property, Mottles without feet feathers being deservedly passed over. For Any other colour a half-bred Black was first, and a very fair White second. Only one of the new type was present, and it was not a complete Black.

In Fantails, White were a large class, yet only about a dozen really good birds were shown; large-tailed birds with coarse bodies, and little and good-carried birds shabby in tail. In Any other colour a good though large Silver was first, and a very fair Blue second.

Jacobins, Red or Yellow, contained a few very good birds. A little Yellow was first; it was rather long in face, yet rich in colour with a very fair chain. A good Red was second, with a nice chain and head, but coarse and a little too large. The Black class was very well filled, the first prize going to a model Jacobin in every point, yet wanting brightness of colour; the second by no means the next best, it having some black flights that ought of course to be white.

Turbits, Pointheaded, Red or Yellow, were an unusually good class although some were poor in colour; a rather foul but fine-frilled Yellow was first, and a rich Red second. Any other colour Pointheaded was also a large class; a Blue was first, seemingly an aged bird, yet good enough to beat all faulty ones, Black taking second, exceedingly rich in colour and clean-marked, but a little crested instead of a nice point. In Shell-crested, Red or Yellow, a really good Yellow was first, and an indifferent Red second.

English Owls proved a profitable class. The best bird, arriving too late, was an exquisite little Silver, well frilled and having a proper Owl-like beak.

The greatest feature and what caused much interest was the Collection class, four pairs of any breeds except Carriers, Pouters, Tumblers, or Barbs competing for a three-guinea cup; there were eleven entries, and each lot grouped as one large pen. The winning collection consisted of Foreign (Mottled) Trumpeters, rich little Red and Yellow Jacobins, and White Fantails. The second, forming a very nice lot, consisted of Mottled Trumpeters, Blue Turbits, Red Jacobins, and Subians.

Too much praise cannot be bestowed upon the ever-attentive and energetic Secretary, Mr. J. G. Dunn. A word is also due to the Committee at large (not forgetting the veteran little Jamie Bell) who are all hard-workers, doing everything with a good will.—IMPARTIAL.

[We have omitted much that was noticed in our report last week.—Eds.]

BEE-FARMING IN 1873.

For many years I have presented to the British public an annual balance-sheet of bee-farming. As I keep bees for profit it is of importance to me to have an account of income and expenses. Though the last five years have in this neighbourhood been rather unfavourable for honey-gathering, our industrious little servants have never failed to give a small balance of profit. In 1869 my profit from bee-keeping was £32, in 1870 it was £50, in 1871 £42, and in 1872 £67. The present year has been more unfavourable for bee-keepers than any year since 1861. In unfavourable seasons like 1873 the income from bees is not only small, but the expense of feeding them is great.

A highly respectable working man called here about ten days ago to seek advice. For the last three years he has increased his stocks from a small beginning to fourteen in number, but this year he has spent £10 for sugar to keep them alive. Being a mere beginner, and having unfavourable seasons to fight against, he was somewhat discouraged. My advice in all such cases is not to abandon bee-keeping, but struggle on till more propitious seasons come. Sell stocks or swarms for money wherewith to buy sugar to feed rather than abandon bees, for in my opinion there is nothing more profitable for working people, or more easily managed by them, than a few hives of bees. If next season be a favourable one for honey my friend with the fourteen hives may realise £40 profit. In an ordinary year he should realise from £25 to £30 profit, his expenses being comparatively small.

My own income from bee-keeping this year is £47 17s., and expenses £32 16s., giving the very small margin of £15 profit.

I sincerely hope that no one will be deterred from bee-keeping by such heavy items of expense—for as I manage bees the expenses are always considerable.

At this time last year I thought my stocks were too heavy, and valued them at prices ranging between 20s. and 40s. each—

CONSUMPTION OF EGGS.—The importation of eggs increases. According to the official table just issued, the declared value imported in the last ten months was £2,105,681, against £1,545,938 in the preceding year, and £1,033,391 in 1871.

OUR LETTER BOX.

DORRING COCK'S SOLES SWOLLEN (W. E. C.).—You should have told us the age of the bird. If he is an old one, he is bumble-footed, and the case is hopeless; it is the fate of all heavy birds.

RATS IN POULTRY-HOUSE (J. H. E.).—We, also, are much infested with rats, but we keep what our man calls "up-sides" with them by means of six of Brailsford's traps, two terriers, and a number of cats.

PULLETS LAYING (Idem).—Pullets ten months old should lay now. We believe they do, and if it were our case we should accuse rats of some kind of being fond of the eggs.

VARIETIES OF BRAHMAS (Don Quixote).—There are only two sorts of Brahmans: the Park, hen pencilled all over; the cock black or speckled breast, black tail, blue-barrel wing, light hackle and saddle; the Light Brahma, cock and hen alike, with white plumage, save the tail and thighs, which are black, and the hackle which is black-striped.

DUCKS FOR EXHIBITION (Roun).—You had better begin with early-hatched Ducks of 1873 mated with a drake of 1872.

DORRING PULLETS LAYING (D. A. S.).—Fast-grown, well-developed pullets now six months old will generally lay in January, but we should put more faith in those two or three months older.

FOWLS FOR PROFIT (A. R.).—Much must depend on the locality in which you intend to keep your birds, and the range you can give them.

BREEDING DRAGON PIGEONS (G. F.).—If you wish to breed good Dragons we should advise you not to use the two birds you describe as a Blue and a Mealy. To match your two hens you want long light-headed birds showing but little wattle.

WHAT PIGEONS TO KEEP (W. Clark).—We would not recommend you to keep Dragons and Tumblers together in confinement in so small a space;

the former are long-beaked powerful birds, and would persecute (ally the little Tumblers. Keep one sort only, whichever fancy inclines you to.

PROPOSED PIGEON HOUSE (E. B.).—Your place will do well enough. Have a copy of our "Pigeon Book" free by post for 1s. 7d. in stamps.

SALT CAT FOR PIGEONS (G. E. S.).—Have it in their cote, and let them pick it as their inclination dictates.

HIGH-COLOURED CANARIES (R. J. Troole).—We cannot spare more space for this controversy. Mr. Bemrose says that the high colour of his birds is caused by the feeding he adopts.

EXHIBITING CANARIES (J. A.).—We cannot insert your letter, you must insert an advertisement announcing your dissolution of partnership.

BEES BREEDING IN WINTER (C. F. O.).—Bees breed at this or any time of the year when vigorously fed. The half-hatched bees found on the ground below your hive were produced while you were feeding it.

ASPARAGUS KALE.—A Subscriber will be obliged by any of our readers stating the best mode of cooking this kale.

METEOROLOGICAL OBSERVATIONS,

CAMDEN SQUARE, LONDON.

Lat. 51° 32' 40" N.; Long. 0° 8' 0" W.; Altitude 111 feet.

Table with columns: DATE, 9 A.M., IN THE DAY, and Rain. Rows include dates from Nov. 12 to 18, 1873, with sub-columns for Hygrometer, Direction of Wind, Temp. of Sun at 1 ft., Shade Temperature, Radiation Temperature, and Rain.

REMARKS.

- 12th.—Fine frosty morning; sunny at noon, and very fine all day.
13th.—Rather foggy morning, but soon cleared off; very fine till afternoon; a very slight shower at dusk.
14th.—Fine till noon, then rather more cloudy, but fair all day.
15th.—Very fine early, and lovely day throughout.
16th.—A fair but not by any means a fine day; slight rain about 3 P.M.
17th.—Rather dark and dull all day.
18th.—Another fair but sunless day.
Very little rain, and sunshine nearly equally scarce; temperature lower again, with sharp frost on 13th.—G. J. SYMONS.

COVENT GARDEN MARKET.—NOVEMBER 19.

We have nothing to report different from last week as to the conditions and supplies of the markets.

FRUIT.

Table listing fruit prices: Apples, Apricots, Cherries, Chestnuts, Currants, Figs, Filberts, Gooseberries, Grapes, Lemons, Melons, Mulberries, Nectarines, Oranges, Peaches, Pears, Pine Apples, Plums, Quinces, Raspberries, Strawberries, Walnuts.

VEGETABLES.

Table listing vegetable prices: Artichokes, Asparagus, French Beans, Beet, Broccoli, Cabbage, Capsicum, Carrots, Cauliflower, Celery, Colewort, Cucumbers, Endive, Fennel, Garlic, Herbs, Horseradish, Leeks, Lettuce, Mushrooms, Mustard and Cress, Onions, Pickling, Parsley, Parsnips, Peas, Potatoes, Kidney, Round, Radishes, Rhubarb, Salsafy, Savoy, Scorzera, Sea-kale, Shallots, Spinach, Tomatoes, Turneps, Vegetable Marrows.

WEEKLY CALENDAR.

Day of Month	Day of Week.	NOV. 27—DEC. 3, 1873.	Average Temperature near London.			Rain in 48 years.	Sun Rises		Sun Sets.		Moon Rises.		Moon Sets.		Moon's Age.	Clock after Sun.	Day of Year.	
			Day.	Night.	Mean.	Days.	m.	h.	m.	h.	m.	h.	m.	h.	Days.	m.	a.	
27	Th	Length of Day 5h. 15m.	47.0	33.6	40.3	20	40	47	55	43	31	1	46	11	)	12	5	331
28	F		48.1	33.9	41.0	22	42	7	55	3	46	1	morn.		8	11	45	332
29	S	John Ray born, 1628.	51.3	33.8	42.5	20	43	7	54	3	0	2	10	1	9	11	24	333
30	Sun	1 SUNDAY IN ADVENT. ST. ANDREW.	48.0	34.5	41.3	22	45	7	53	3	14	2	36	2	10	11	2	334
1	M	PRINCESS OF WALES BORN, 1844.	48.5	34.9	41.7	22	46	7	52	3	30	2	2	4	11	10	40	335
2	Tu		47.4	33.7	40.5	19	48	7	51	3	49	2	28	5	12	10	17	336
3	W	Royal Horticultural Society's Fruit, Floral, and General Meeting.	47.0	35.8	41.4	24	49	7	51	3	14	3	55	6	13	9	53	337

From observations taken near London during forty-three years, the average day temperature of the week is 46.8°; and its night temperature 34.3°. The greatest heat was 62°, on the 1st, 1857; and the lowest cold 11°, on the 30th, 1856. The greatest fall of rain was 1.21 inch.

AUTUMN ROSES.



NDER (his heading Mr. Beachey, in No. 655, sings a "sweet melancholy" requiem over the fading glories of his flower-children the Roses, after their battles with the "rude winds of the equinox," and very fittingly closes his *oratio funebris* over the falling leaves and other signs of decay, with the promise of a bright to-morrow—another spring. The father of English poetry, in "The Flower and the Leaf," has struck this

last chord, too, most cheerily thus:—

"When shoures sweet of raine descended soft,
Causing the grounde felle times and oft
Up for to give many an wholesome aire;
And every plaine was clothed faire."

"With new grene, and maketh small floures
To springen here and there in field and mede,
So very good and wholesome be the shoures,
That it renueth what was old and dede
In winter time; and out of every sede
Springeth the herbe, so that every wight
Of this season waxeth glad and light."

In addition to the poetic vein, Mr. Beachey gives us, what is of practical value, a list of autumn Roses. I miss from that list a great favourite of my own, an autumn *Rosa par excellence*—Sombreuil. Possibly Mr. Beachey does not grow it; if he does, he has surely overlooked it. In spite of further storms since his observations were written, here, some hundred miles south-west of Newton, its beautifully-formed foliage is still unimpaired, its vigorous shoots are still rich in their hues of unchecked luxuriance, and its blooms more plentiful than at any other season. If I recollect rightly, about twelve months ago a lady wrote to the Journal calling attention to the charm of the Myrtle-like form and the deep green tint of its leaves; and if it never bloomed I should be tempted to grow it that sprays of it might serve as a setting for the dazzling glories of some of its more pretending kindred.

In addition to Sombreuil, and not included in the thirty-six named in the list, the following are still blooming finely here, and well deserve to rank with the best autumn Roses. They are not producing flowers merely, but from them "we are still cutting Roses that would not disgrace the benches of any flower show"—viz., Exposition de Brie, Prince Camille de Rohan quite as good as in the summer, Duke of Edinburgh, Jules Margottin, Madame Falcot, Safrano, Louisa Wood. As a general-purpose Rose I should certainly select Mlle. Marie Rady in preference to Madame Victor Verrier, Duke of Edinburgh in place of Senateur Vaisse, and Marie Baumann before Emilie Hansburg. This year, out of upwards of one hundred sorts, I have found no Rose so good in every particular as La France. I unhesitatingly give it the first place. It lacks no good quality. Its form is perfect; it blooms freely and is most fragrant, and the delicate loveliness of the satiny silver tint of the recurved petal, reposing on the rich rosy hue of the body of the Rose, is "beautiful exceedingly." It certainly does best on the Briar. Mr.

Beachey points out what is worth remarking—viz., that out of thirty-six Roses he has given, no less than eight were sent out in the year 1870. It would be difficult, I think, to name a quartette issued in any one year that should beat Catherine Mermet, Louis Van Houtte, Marquise de Castellane, and Mlle. Eugenie Verdier; any selected twelve ought to contain them.

I agree with Mr. Beachey in his estimate of Perle de Lyon (Tea), it is good in colour, substance, and form; and Cécile Berthod (Tea), very little noticed yet, will prove also, I think, a serviceable addition. Its chaste lemon colour is pretty and somewhat distinctive.

But, after all, did not Mr. Robson hit the right vein in his grumble about the new Roses running in a groove? Such varieties as the Persian Yellow and the old York-and-Lancaster might with advantage, as he says, be the types for the new varieties. Raisers of the new sorts are certainly running sameness very close. What would a *Rosa* of Catherine Mermet's texture and form be worth if it had the Persian Yellow colour? Possibly, however, such a consummation had better remain an ideal one, lest the enthusiastic homage to our flower queen, which is now so widespread, should develope into a mania as absurd as that which attacked the Dutchmen in their rage for Tulips.—CORNUA.

ADIANTUM FARLEYENSE.

THE distinct evidence of this superlatively beautiful Fern renders a special note on its successful culture desirable. It is a gem amongst Ferns, and is finding its way into every collection, and when procured for the first time it is justly regarded as a treasure to be cherished for its attractive features, and as demanding special care to bring out its charms to the fullest degree of perfection. In the hands of many cultivators not the slightest difficulty is experienced in producing a free healthy growth: but, on the contrary, with many others its satisfactory progress is coveted but not invariably secured. This is manifest by frequent inquiries and by the interest which is centred on a plant in the full bloom of health. Really the plant is of easy growth, but still it is a fact that many otherwise-good Fern-growers "cannot," as they say, "get on with it," and in this case the disappointment of the owner is not greater than that of the grower. It may be reasonably urged in explanation that propagation has been conducted under high pressure, and that plants are circulated extremely tender and of delicate constitution, and to which, in transit or on arrival—by varying temperature, or atmosphere, or degree of light—a check has been given at the outset which is not soon recovered. Having seen several failures, and at the same time being fairly successful, a little history of a plant may be useful, and at the request of more than one or two visitors I venture to submit it in the columns where so many look for information, and seldom look in vain.

This little matter-of-fact narration will show nothing extraordinary, and the sole object in view is the interest of others seeking a line of guidance which has proved

itself correct—a little help by the way—which one gardener should always be ready to give to another, and feel himself richer by the giving. The plant under notice was received in June, 1872. It was in a 3-inch pot, and had two fronds. The one plant has increased to thirteen, the largest being close on 3 feet through, on all sides perfectly furnished with fine spreading fronds. In the first place, none of these plants had bottom heat. Bottom heat is, in my experience, not only not necessary, but often detrimental to Ferns. When given, a plant may push quicker, but it is not invariably solid lasting growth, and some failures with this plant are, I have no doubt, due to overhaste in plunging the roots into a heated bed, which seems contrary to their nature. In growing-on young plants some were set on a wooden trellis and some on slate, and those on slate established themselves the soonest, and were in all respects the best. The cool continuously-moist base of slate showed to decided advantage against the drier, warmer stage of wood. The plant was shifted into a 5-inch pot in July in a mixture of turfy peat and bruised charcoal in nearly equal parts, but with a few nodules of burnt loam and a liberal dash of sand. It was potted rather deeply, in view of future division. In September it was given a 7-inch pot, adding a little more loam to the soil, and making it altogether more lumpy and open. Now a slip was stolen off, well rooted by the deep potting; it was put into a 5-inch pot, and in these the plants were wintered. By November the pots were filled with roots. Less water was now given, just enough to sustain health, but not to induce fresh growth. The winter night temperature was never above 60°, and frequently as low as 55°.

With the natural rise of temperature in spring parent and child awoke from their rest and pushed away with vigour. A shift into a 9-inch pot was given to the parent, stealing away another stout offset, and the child of September was divided into four. After this the original plant was not mutilated further, but was potted higher, the object being not to foster a further spread of crowns, but to concentrate strength to form one good plant, leaving the young ones to increase. This they have done, and their number is twelve, looking very happy in a square wooden box with a large sheet of glass over; for Ferns like a shady quiet habitation.

The original plant was in June of this year given a 12-inch pot, using equal parts of peat, loam, and charcoal, all thoroughly rough and open—indeed, the finer particles had been sifted out, and the composition was such as an Orchid would have delighted in. In this it thrived vigorously, and in this it will pass its second winter in a state of rest and quiet, in the hope that it will not add one inch to its size for the next three months. But in resting it must not be starved. In this matter evil is sometimes done. Ferns may be rested without being starved. The soil must never be really dry. Careful thoughtful watering is the secret of success with other plants besides Ferns.

With this plant and its increase very rough soil, very careful watering—the summer abundance being gradually reduced with a falling temperature to a winter minimum—and a quiet shaded atmosphere have been the conditions aimed at. Also (and this is not conjecture), the plant is altogether better than it would have been had no slips been taken from it, and had it still been one instead of thirteen. If a fine plant is required there is nothing like throwing the whole root-force into a single crown to begin with, and preventing its superficial spread by rather high potting. The stool of this plant, 3 feet through, is certainly not 3 inches in diameter.

In growing large plants of *Adiantum cuneatum* for cutting from, I have frequently observed the force of crown-concentration. I have two plants side by side, for instance, of the variety last named—one is 4 feet and the other only 2 feet in diameter. They were both in 5-inch pots in the spring of last year. The stool of the large plant is 6 inches in diameter, while the crowns of the small one are spread over the entire surface of a 13-inch pot, and the root-power is far too much divided to produce large fronds. This result was foreseen at the time of potting; but as a mass of stuff to cut from, and not showy plants, was the end in view, the one plant answers its purpose as well as the other, or rather, perhaps, the smaller is the more useful, as giving a greater number of handy fronds and taking up less room than the large one. It may, however, be useful to note the difference and the reason of it in the ultimate size of two plants equally healthy and of the same age. It was by acting in accordance with this principle that *A. farleyense* was at first potted low to induce root-and-crown spread to increase stock, and then by potting high to concentrate strength, a fine and promising parent with a family of

twelve are provided for enjoyment. Let me say that in the spring shift, probably the final one, burnt rough loam will be increased and peat decreased, and in this stronger food sustenance will be more lasting.—OLD FRIEND.

ORNAMENTAL PLANTING.—No. 11.

DETAILS OF PLANTING.

The season for the planting of trees and shrubs is upon us, and much work is now being done that will bear its mark in future generations. The culture of crops of a few weeks' or even months' duration is of comparative insignificance; success is therefore doubly important, and the most careful attention should be given to every detail of this work in order to insure it. It was only a few months ago, before it had been requested that these papers should be written, that some notes explanatory of the general details of this operation were published; since then, during the past summer, several instances of failure have come under my notice, some of them of so glaring a nature as to be quite painful to behold. In one remarkable instance nearly the whole of the shrubs surrounding a small lawn were dead or dying, and as many of them were large enough to be expensive, it was all the more vexations. Nor is this simply the experience of a solitary season, but it is noticeable year after year, so that I shall not hesitate to repeat some part of former statements now.

When the planting is on an extensive scale, it is important that the stations should be in readiness for the trees before they are received from the nursery, so that no time may be lost in the planting, it being one of the principal conditions of success that the roots shall be exposed as little as possible to the air; but, when practicable, I would always prefer to have the shrubs in hand first of all, so that each may be planted when the station is prepared, because after soil is newly stirred it becomes more quickly saturated, and for a time retains moisture in a greater degree than that which has remained undisturbed. In a wet season, consequently, one has sometimes to wait for many weeks after the stations are prepared before the soil is in a suitable condition for planting, it being undoubtedly a mistake to place the roots in soil that is so saturated as to be wrought to the consistency of mortar by the action of the tools, to which it adheres in huge clods, so that the work cannot be done either with a hearty will or so carefully as it ought to be, and the hard crude mass into which the soil subsides is about as unkindly a staple for plant-food as well can be.

Another objectionable plan is the elaborate trenching and mixing of the soil of new borders and beds before the planting. Apparently this is good practice, but in reality it is not so. If the trenching and planting could only be done together, all would be right enough, but it is only in exceptional instances that this can be managed, as, for example, when the labour power is unlimited. Generally speaking, this is not the case. It is, therefore, advisable that beyond any necessary levelling nothing should be done till after the planting; then by thoroughly digging or trenching, the space between the plants is left untrdden and in the best condition for the roots. Moreover, the surface presents that dressed and finished appearance which it is always desirable to secure. When stations are prepared upon a lawn, or in any position where the surrounding soil will not be broken-up, care should be taken to insure the free passage of superfluous water, for the roots will perish in a waterlogged soil, and it is self-evident that a hole that is excavated in a stiff heavy loam or clay must be drained artificially, or the plant will die. The remedy is very simple: Lay a row of 2-inch drain pipes across the centre of the bottom of the hole among a layer of rough stones, and continue the drain from the hole to a lower level, where the water can escape freely.

In preparing the soil, never forget that the fungus which invariably forms on decaying wood is fatal to trees, spreading from the dead wood over the living roots with wonderful rapidity. Every scrap of broken branches, roots, or chips ought, therefore, to be picked out. The importance of this matter should always induce a close supervision of the work, it being very difficult to get proper attention given to it by labourers.

A strong loam suits most shrubs best; if it cannot be obtained, and the soil is poor, a little old well-rotted manure will greatly improve it. Very much of this work of preparation depends upon the kinds of shrubs which it is intended to plant. Last season some trees of *Picea pectinata* were planted

in a shallow, poor, but well-drained soil without anything being done to it by way of preparation. But for some Wellingtonias close by, holes were excavated 6 feet deep and wide, and filled with rich soil to an elevation of 2 feet above the common level, thus forming a sound rich mass of nearly 300 cubic feet for the roots to revel in, and the growth of this year affords ample proof of the suitability of this soil. The necessity for such an elaborate and expensive station may be thought questionable, and I grant that a tolerable degree of healthful vigour might be obtained without it for a few years, such as would suffice to produce an ornamental shrub of considerable size and beauty, but I should not expect it eventually to develop the proportions of a noble tree, such as this particular kind is capable of doing. The nature of the Silver Fir is altogether different; it is a surface-rooting tree, growing so freely in a poor soil, that it and the Wellingtonias were planted with a feeling of confidence in the future success of both.

A glance at the growth of trees that are indigenous to the soil affords ample evidence to the practised eye of what necessity there may be for the preparation of stations, and beginners may take it as a very safe guide that where the Oak flourishes other deep-rooting trees may be planted; and where the Beech or Yew are found to succeed and the Oak to fail, or rather to make a slow and stunted growth, surface-rooting trees are only to be depended upon. Therefore, unless there is a special reason for planting such deep-rooting trees as the Wellingtonia, much labour and expense may be avoided. Close by the spot where I had to excavate such large holes the maximum height attained by the Oak does not much exceed 50 feet, while *Picea pectinata* reaches 100 feet; but in a valley that is only a little distance off, where Oaks of the same age are upwards of 80 feet high, and with huge boles and limbs that proclaim the depth and fertility of the soil, other Wellingtonias and some *Abies Douglasii* have been planted without any special preparation. It will be a curious and instructive lesson to watch and compare the future progress of two such free-growing Conifers in what I regard as the most favourable situation that could be found for them.

I hope to discuss some other details of planting next week.—EDWARD LUCKHURST.

ROSES.

I WAS much pleased this summer to read of Mr. Camm's many victories at exhibitions, but was sorry to read of the death of many of his Roses on the Manetti stock, and equally surprised to see that the deaths were attributed to over-manning—a new doctrine to me. I never before heard of or experienced such a thing. The deaths, I imagine, were produced by insufficient winter protection, followed up by a late, bad spring and a droughty summer. I "coddle" up with clean straw, litter, or fern over the point of union, drawing the earth over the material. This saves the plant, however much the wood above the line of protection may be injured. A good deal of very strong wood has died back in my plants this summer, which with soft and secondary wood I am now cutting out. Had I not "coddled" I should, in this exposed and severe Vale of Blackmoor, have lost many hundreds of Roses, whereas I lost only three or four in the winter, and about ten plants have since died. Zero is a useful servant but a hard master. Mr. Rivers told me years ago that frost five or six degrees below zero would kill a Rose plant.

"Coddling" up, as practised here, does not produce orange fungus. I had none at all this year worth speaking of, but usually sniffer much from it. Roses that are neither strawed nor "coddled" will suffer from it. It seems to depend more upon soil, situation, and other circumstances. Both white fungus and orange fungus may, in some measure, be called the daughters of drought, for very little of either is seen in showery summers. The same observation also applies to honeydew. After the first winter and spring-frosted buds were cut away the Roses bloomed here finer than I ever had them for the last twenty-one years, but they have not bloomed so abundantly at the fall as usual.

I have great pleasure in speaking highly of Mr. Prince's seedling Briar Roses. They have shown no brood whatever, and have done him credit. I recommend them to all growers of Roses on the Briar in place of the half-dead, soft-spined hedgerow and copse Briars. The French standard Briars are superior to the English, being cleaner in their skins and firmer in the spine; I have, however, only seen a few of them. I always buy-in a quantity of Manetti Roses at this time of year

in case of deaths in the winter. My recruits are 24 Charles Lefebvre, the premier H.P.; 18 Pierre Notting, the finest globed Rose; 6 Maurice Bernardin, a beautiful Rose; 9 Felix Genero, excellent, and the admiration of all the ladies. They are excellent growers, free and continuous bloomers. I have also, from seeing them bloom nicely in the Donet nurseries, bought one plant each of Etienne Levet, Abbé Bramerd, and Madame G. Schwartz. The Abbé is very handsome in its colours, deep crimson, dark-shaded. It is, however, better adapted for ornamentation than exhibition. I have one plant each in dormant bud on strong Manetti stocks—I rarely buy "infants"—of Madame Lacharme, Pierre Seltzky, and Claude Levet. Till Roses are on strong and suitable stocks and tried in the open ground I do not like recommending them. Unless the electors tell us these things we shall not be able to determine the value of the Roses recommended. Glass experience is worth nothing.

I hope we shall soon have some variegated autumnal Roses. If they are as good, or half as good, as the summer variegated Roses—namely, *Châlet Parfait*, *Tricolore de Flandres*, and *Madeleine*, I shall be delighted. The first is small, tender, but the most beautiful; the second is larger and of robust constitution, and beautiful. It casts its side buds over the main flower. It was raised by Van Houtte and figured in the "Flore." The last is the delight of the young ladies at Bath. "It is not a Bath ball without Madeleine," said the late Mr. Tiley to me, of whom I bought it in 1852. There is also another very pretty bouquet variegated Rose, *Perle des Panachées*, but it is not, like the others, suitable for exhibition.

One word more. The best Roses to look well in foul weather are the crimson, purple, maroon, and yellow Roses. The purple and maroon Roses here are much admired—viz., *Pierre Notting*, *Dr. Jamain*, *Baronne Pelletan de Kinkein*, one of the finest, *Souvenir de W. Wood*, *Empereur de Maroc*, and *Baronne Chaurand*, one of the best dark Roses, of which I have planted twenty in a bed to please the ladies, and myself too.—W. F. RADCLIFFE.

P.S.—Some years ago the late Mr. Francis told me, in a letter, to dig a trench and fill-in alternately with soil and manure, and to tread the earth hard against the Manetti-stocked Roses. He did not warn me against orange fungus. The first and best Manetti Roses I ever saw came from him to the Blandford Nurseries.

GRAPE MISNAMED SYRIAN.

BEING an uncompromising advocate for a correct nomenclature of plants and fruits, I have been very much surprised to see in the report of the great shows both at Edinburgh and Glasgow the enormous bunches of White Nice Grapes designated the Syrian. This is misleading those who take an interest in these matters. I knew the White Syrian Grape sixty years ago, and find it correctly described in Dr. Hogg's "Fruit Manual." The difference between the two sorts is so great that no one can mistake. I know no better means of bringing the matter before the public than your giving this a place in your Journal, which is extensively read in Scotland.—WILLIAM DEANS, *Anna Nurseries, Jedburgh.*

VEITCH'S BLUE LOBELIA.

I WAS pleased to see Mr. Taylor's remarks in the *Journal* of October 30th (page 329), respecting the heading *Lobelia White Perfection*. I can fully endorse what is there stated about it. But I am not going to write about Veitch's White Perfection *Lobelia*, but about Veitch's blue *Lobelia speciosa*, as I think a good flower should be as generally known as possible for the good of all. Veitch's blue *Lobelia* comes true from seed with me—I cannot say as much for every one's *Lobelia* seed. A gentleman came here during the past summer, and he exclaimed, "Veitch's *Lobelia*!" "Yes, sir," said he, "it is the best strain out." At several places that I have visited during the past summer, where good gardening is carried on, Veitch's *Lobelia* from seed distanced all other competitors. It is dwarf, good habit, a beautiful blue, for hives or masses A.1." Great credit is due to Messrs. Veitch for the care taken in sending out such a good strain.—G. H. COOKE.

TOMATOES FROM CUTTINGS.—Your correspondent, "G. C." (page 381), need not be afraid of striking Tomatoes from cuttings at any time, provided he gets nice short-jointed pieces

about 6 inches long, and not too "sappy." We have some here struck the first week in August, that are now supplying us with ripe fruit, and from all appearances will continue to do so until spring. They are growing in a succession Pine stove, where the temperature averages about 60°.—H. C., *Grimston*.

ASSOCIATIONS OF ROSARIANS.

I AM desirous of compiling a list of the existing associations in Great Britain for the growing, or showing, or both, of Roses. I should require the name of each such Rose Association, its officers—*i.e.*, President, Treasurer, and Secretary; its terms of membership, its entrance fee, and yearly subscription. If these particulars are supplied to me I will ask you to insert the list, when completed, in "our Journal."

I am not aware that such a thing now exists, and incline to think that it might be useful in two ways, both in paving the way for some general code of rules for exhibiting, to be framed by representatives of the principal associations; and, also, possibly, to the organisation of competitions between associations as well as individuals.—ALAN CHEALES, *Brockham Vicarage, Reigate*.

THE ROYAL HORTICULTURAL SOCIETY.

I HAVE just read Mr. G. F. Wilson's letter on this subject in the columns of "our Journal." I am, of course, as a Fellow of the Society, much interested in its welfare, and as a considerable exhibitor I am, perhaps, somewhat even selfishly interested.

Living as I do at such a distance from London I am unable to attend the regular meetings of the Society, but I have read and seen enough during the past year to make me feel certain that something is very wrong somewhere, though I am unable to put my fingers upon that something.

I cannot put my name down for ten Fellows, feeling doubtful whether I could command that number here, though I might do so possibly. I will, however, gladly subscribe £10 10s. for the next three years if required, hoping that by that time matters will have righted themselves. I daresay my example will speedily be followed by others. It is quite time that the Society was placed in a more satisfactory condition, and surely this may be done, though it will require an effort.—T. M. SHUTTLEWORTH, *F.R.H.S., Preston, Lancashire*.

[This is one instance of many which no doubt exist of the interest which those who love gardening take in the Royal Horticultural Society, provided it were so relieved from its present trammels as to be able to act up to its profession of being a horticultural society. Some years ago, when the Society was in danger, between £2000 and £3000 was subscribed in a twinkling to relieve it from its difficulties; but then it was free. Let it be free again, and every friend of horticulture will rally to its aid.]

I wish to answer questions arising out of my letters in your numbers of the 13th and 20th inst.

1st, Ought we not to have gone first to the Council? Answer, To which Council? The old Council had decidedly resigned. The new Council, brought in mainly by votes of the householders living round the garden, is said by a great law authority to have been illegally elected; and besides, it would have been rather awkward to ask from a Council in office through Kensingtonian interest, assistance in detaching its horticultural part from the Society, which horticultural part gives its only excuse for keeping South Kensington Garden as a private recreation ground for the neighbourhood. A Committee existed which had been appointed to watch events in the interests of horticulture. This, if it had no very great power, was at least legal and in being, so its leaders were consulted, and their names head the "appeal to the Fellows."

2nd, Why cannot the guinea-Fellow plan be grafted on the Society in its present state? Answer, This would make the Society still more cumbersome and unmanageable even than at present.

And now let me make another appeal to horticulturists in the country to come forward, and at least say what they think of the guinea proposal.

You have, I believe, many hundred clergymen subscribers, a class which, I believe, does quietly more for horticulture than any other in this country. Would they join a guinea Society? or, as there are some with so many calls upon them that they have still better uses for their guineas, and who yet

have great power and influence, would they bring in some neighbours? Will any country gentlemen or ladies subscribe for themselves or for their gardeners? Will any leading gardeners subscribe for themselves?

It seems most desirable that the reconstituted Society should, like horticulture itself, embrace all classes; while it is well known that there are good horticulturists near the throne. I can speak to having been more than once quietly round a show with a Royal Highness, who not only knew flowers and fruit well, but who, judging by his criticism, would stand first on the list as a judge of table decorations. Who has not seen small cottage gardens with clumps of white Lilies, or yellow Crown Imperials, or double lilac Primroses, which the finest garden might envy?

Let me remind anyone who may be considering the subject of fellowship, that the proposal is that the tickets shall be transferable, though restricted from financial reasons to the same person the same day; so that any country gentleman could for a guinea be really helping the formation of a healthy horticultural society, be able to vote by proxy on its management, and at the same time send his transferable ticket, admitting to all shows, to some relative or friend in town.

And now let me say that there are influential horticulturists in London ready and willing to construct a real working Royal Horticultural Society; but to enable them to do so the horticulturists through the country must come forward and say that they wish for such a society, and will join it and help its progress. If they will do so we shall have at last a Society with real power; but if they will not do so the plan cannot at present be carried out. But I cannot think that this last will be the case. Everything points not only to increased numbers of gardens, but only to increased love of gardening, and flowers, and fruit, but to increased study of them. The facts that a gardening journal has been recently "permanently enlarged to thirty-six pages," and that a chronicle has to detach itself from agriculture because horticulture wants all the room, and this after the establishment of a well-printed and illustrated new-comer which has had no injurious effect on the circulation of any of its predecessors—surely these facts speak volumes, and surely everyone who takes in a gardening paper ought to become a guinea Fellow, and *vice versa*.

But let us for one moment take the gloomy view and suppose that the country horticulturists will make no sign. All that then can be said is that it may be hoped that there will be no more unkind criticisms; no more saying, "The Society is only an appendage of South Kensington Museum," that "the influence of the Commissioners is paramount in the Council," that "the main object of the Horticultural Society's funds is to keep up a great brick-and-mortar garden for the use of the nursemaids and children of the neighbourhood, therefore we do not hold out the hand of good fellowship to the Society." It now rests with the country horticulturists to make the Royal Horticultural Society free, independent alike of Kensingtonians and of H.M. Commissioners; and in the opinion of those who know it best, until this happy result be accomplished the Society can never be really vigorous or worthy to represent British horticulture.—GEORGE F. WILSON, *Heatherbank, Weybridge Heath*.

The open signs of a healthy reaction among the members of the Royal Horticultural Society cannot but be a matter for hearty congratulation amongst those who, like myself, have loved, honoured, and laboured for it for years. As far as I am concerned the project of policy forwarded from Sir Daniel Cooper, and embodying the principles contained in Mr. George Wilson's letters, has my hearty support. The idea of an appeal to the Commissioners to agree to a termination of the lease seemed to me to involve a difficulty, as such a transaction could only be effected by a Council, and before anything of the kind could be done it would be necessary that the Fellows should know who are their Council. I have, however, sent in my name to Sir Daniel by this post.

The raising of the Society again to its place among the nations has been with me the dream of years. In spite of many a buffet while struggling against the tide of circumstances, and suffering from the passions and prejudices of men, it has, I say still, deserved well of its country, and the more or less high and educated intelligence of its four or five thousand members now demands aloud that it should appear before the world and be in reality a working Society, practical, scientific, *pure et sans reproche*.

But before looking too complacently into a brilliant future,

it will be necessary for Fellows to turn their attention to a painful and cloudy present, and to face it with courage and determination. They will have to make themselves acquainted with the charter of the Society, its powers and prohibitions, and more especially its bearings in the case of the bye-laws which have been, and may in future be, passed at their official meetings. They will require also to know now whether the proceedings of last February were legal or illegal. It is very certain that the Commissioners cannot on their parts give a release from covenant to a deputation of Fellows, nor can any such transaction be carried on till we have a Council whose legality is established, to treat with a corresponding body on the part of the Commissioners. It will be hardly necessary to say that the vote by proxy must be a *sine qua non* in the Society of the future.—R. TREVOR CLARKE, *Welton Place, Daventry.*

NOTES ON GERANIUMS AND OTHER BEDDING PLANTS.

AFTER having tried over a hundred varieties of bedding Geraniums I must hold the opinion I expressed last year—that *Vesuvius* is in all respects the very best scarlet variety for colour, habit, and profusion of bloom, lasting well into the autumn, and thriving equally well in wet or dry seasons. Next in the order of merit I place *Jean Sisley*. *Ianthe* does well with me, and is unique in colour, being a bluish crimson. *Mrs. Upton* is a fine pink bedder with a very dwarf habit. *Monsieur Commer*, although an old variety, must not be discarded, the trusses being of immense size and very showy. *Waltham Seedling* is in my opinion the best of the dark sorts, and a very free bloomer; *Morning Star*, a decided improvement on either *Stella* or *Cybister*; *Masterpiece*, an immense trusser. Of the still older varieties there are some which should be retained in every garden, such as *Indian Yellow*, *Orange Nosegay*, *Trentham*, *Rebecca*, *Sutton's Scarlet Perfection*, *The Hon. Gathorne Hardy*, and *Tom Thumb*.

Whilst at Rockingham Flower Show (Northamptonshire) last July, held in the extremely beautiful grounds of Rockingham Castle, the seat of G. L. Watson, Esq., I was much struck with a bed of dwarf blue Campanulas, which was one mass of bloom, so much so that the foliage was scarcely visible. On inquiring of the gardener (Mr. John Brown), he told me it was the *Campanula Bouvardiana*, a perennial, propagated by division of the roots, and that by attending to it and picking off the dead blooms it lasts well into the autumn. I think, now that blue flowers are so much in request, this *Campanula* only wants to be better known to be more cultivated.

I think it is not sufficiently well known that persons who have not the advantage of greenhouses or frames may winter bedding *Calceolarias* by merely inserting small cuttings with one joint in the open ground, and then covering them with a bell-glass, which should be pressed tightly down, and then not disturbed, and never shaded even in the most severe frosts, until the following March, by which time they will be well rooted, and may then be taken up and put in boxes, and encouraged to grow.—E. C., *Oakham.*

FLOWERS FOR OUR BORDERS.—No. 21.

SALVIA BICOLOR.—TWO-COLOURED SAGE.

THE genus *Salvia* is best represented in our gardens by the tender and half-hardy species, of which *patens*, *splendens*, *involverata*, and *gesneriflora* may be taken as illustrations. The hardy section includes, however, many desirable species, of which the *S. bicolor* here figured is an example.

Its blossoms taken individually are, perhaps, less attractive than those of the now common *S. patens*; but, on the other hand, they are far more abundantly produced, and are much less fugacious, remaining expanded several days after their full development. In any moderately good soil the plant attains the height of 3 or 4 feet; and clothed as it is with very handsome foliage, an established specimen forms, when in flower, an exceedingly interesting object. Its blooming season extends over a period of two or three months if prevented from ripening seed.

It is, moreover, perfectly hardy, and requires, therefore, none of the attentions necessary to preserve its more tender congeners from the rigours of our winters. So numerous, in fact, are the claims of the *Salvia bicolor* to attention, that it seems surprising that this species should be comparatively so little known. It was first introduced into this country as

early as 1793, but appears to have been almost entirely lost until its re-introduction about 1815 from the north of India by Messrs. Standish & Noble, Bagshot.

Salvia bicolor may be readily increased either by division of the roots in spring or by seed, which generally ripens freely, but which must be gathered just before it is fully mature, or, like that of the *S. patens*, it falls from the nodding calyx.

It should be sown on a gentle hotbed early in spring, and the seedlings, when an inch or two high, must be transferred singly to small pots of light soil, and subsequently shifted into larger, until the plants are fit for turning into the borders in May. They will usually flower the first season, as is the case with nearly all the *Salvias*, though not, indeed, so early as older plants.



Salvia bicolor.

In the absence of a hotbed we have no doubt that seeds of our present subject would readily vegetate if sown in a warm border about the end of April, especially if assisted by a hand-glass, or protected at night from frost and snails by having a flower-pot turned over them.

There are many other species of *Salvia* not commonly grown, which are equally deserving of attention with the *S. bicolor*, the genus containing, indeed, not less than two hundred species, a considerable number of which are tolerably hardy. Those most generally found in cultivation have chiefly flowers of various shades of purple, blue, or scarlet; but other tints are by no means absent in this family. There are several species with yellow, and at least twenty with white blossoms; others have bright pink, lilac, or violet flowers, and there are a few into the composition of whose colouring nearly all the tints we have named may be said to enter.

Among those most worthy of cultivation may be named the indigenous *pratensis*, with its several varieties *alba*, *rosea*, and *lupinoides*, the latter a very effective plant with blue and white flowers; *indica*, a tall species with large violaceous blossoms spotted with white and yellow; *chamaedryoides*, a neat dwarfish species with small blue flowers; *chionantha*, a comparatively recent introduction from Lycia, with large pure white flowers in copious racemes; *obtusata*, a species often cultivated under the name of *rosea*, with numerous small rosy earmine flowers, and foliage strongly redolent of Black Currants; *bracteata*, a very showy plant, with large conspicuous white floral bracts tinged with rose; *glutinosa*, one of the very few hardy species with yellow flowers; *argentea*, almost

equally interesting for its white flowers and ample foliage, the latter being copiously clothed with silky tomentum; and lastly *angustifolia*, a rather tall species, of which there are several forms, with narrowly lanceolate foliage, and long spikes of pretty blue flowers, the only defect being that they are developed at too late a period of the summer. All the foregoing have the advantage of being easily procurable either in the form of seeds or plants.

From the diversity of colour presented by this genus it is quite possible—we may, perhaps, even venture to say probable—that many interesting varieties might be originated by hybridising. We have now a white *S. patens*; what obstacle presents itself to the production of a pink, scarlet, violet, or yellow variety of the same plant, by crossing with the pollen of some other species? We need hardly remark, that in addition to the gratification which would naturally be felt by the raiser of a new variety of this or any other species, a more palpable reward might reasonably be reckoned upon.

Although *Salvia bicolor* has been found, as we have already intimated, in the north of India, it appears also to be a native of Barbary, from which country it was first introduced. This plant must not be confounded with the blue-and-white variety of *pratensis*, commonly sold under the name of *bicolor*.—(*W. Thompson's English Flower Garden, Revised by the Author.*)

CHURCHYARDS.

"OFF from the haunts of work, and mirth, and play,

By pensive thought and meditation led,

Hither with slow and silent steps I stray

To mark the recording mansions of the dead."

And I remember not one from which I returned without a note worthy of preservation in my diary. I will turn no further back than last summer for a few illustrations, beginning with the Isle of Anglesea, and will chiefly confine my quotations to subjects fitted for your pages. I never entered one of the churches or churchyards of that Welsh county in which I did not find monuments, either from their antiquity or from the relationships of those they commemorate, that deserve illustration. One or two instances must suffice.

In Llandefan, the mother church of Beaumaris, against one of its walls is an excellent medallion portrait of Thomas Davis, gent., full face, half length, with his arms emblazoned beneath. He died in 1649, after serving Princes Henry and Charles, and being messenger to the latter when king. His charitable bequest of twelve loaves weekly to the poor is still distributed. His were perilous duties in perilous times. I have sought for more relative information, but have been unsuccessful. Yet they exist.

Again. Away in the N.E. corner of the island is Penrhos Iygywy, the mere name of which deserves a note in your pages, for it means the Head and Moor producing Orach; and numerous plants of both *Atriplex portulacaoides* and *littoralis*, *Shrubby* and *Sea Orach*, are to be found there and on the shores of Pulas Bay in its close vicinity. In this Penrhos was born Lewis Morris, known to a few as an antiquary by his "*Celtic Remains*;" yet he was a poet, gardener, and botanist. But who has ever searched for what he gathered in the latter science? He has left this note of himself—"What little stock of knowledge I have attained to was in a manner by dint of nature. My masters were chiefly Sycamore and Ash trees, at best a kind of wooden masters." "I have retired to a little villa of my own, where my garden, orchard, and farm, and some small mine works take a good part of my time, and a knowledge in physic and surgery, which brings me the visits of the poor; botany, having been my favourite study, is now of use to them." It is stated that "he died at his residence of Penbryn in Cardiganshire, April 11, 1765, leaving behind him about eighty volumes of manuscript written in Welsh, now deposited in the library belonging to the Welsh Charity School in Grays Inn Lane, London." What has become of those MSS., and who knows their contents?

Permit me to occupy one more sentence relative to Penrhos and its adjoining parish Llanallgo. Beneath the turf of their churchyards lie the remains of all the bodies recovered of the 450 to whom the wreck of the "*Royal Charter*" brought death. I have a little volume open before me minutely detailing the events of that terrible catastrophe, and no fiction that the best-skilled tragic writer ever penned surpasses that narrative of truth. I walked among the graves of the drowned and of those who had died in rescuing their remains and comforting their relatives. Among these relatives was Charles Dickens,

Some of the Hogarths, kindred of his wife, were among the lost. This induced his visit to the wreck; and he thus records his estimate of Mr. Hughes, who never recovered from the consequences of his exertions, the Rector of Llanallgo.

"I had heard of that clergyman as having buried many scores of the shipwrecked people; of his having opened his house and his heart to their agonised friends; of his having used a most sweet and patient diligence for weeks and weeks in the performance of the forlornest offices that man can render to his kind; of his having most tenderly and thoroughly devoted himself to the dead, and to those sorrowing for the dead. I had said to myself, 'In the Christmas season of the year I should like to see that man,' and he had swung the gate of his little garden in coming out to meet me not half an hour ago. . . . He had the church keys in his hand, and opened the churchyard gate, and opened the church door, and we went in.

"It is a little church of great antiquity; there is reason to believe that some church has occupied the spot these thousand years or more. The pulpit was gone, and other things usually belonging to the church were gone, owing to its living congregation having deserted it for the neighbouring schoolroom, and yielded it up to the dead.

"Forty-four shipwrecked men and women lay here at one time awaiting burial. Here, with weeping and wailing in every room of his house, my companion worked alone for hours, solemnly surrounded by eyes that could not see him, and by lips that could not speak to him, patiently examining the tattered clothing, cutting off buttons, hairs, marks from linen, anything that might lead to subsequent identification, studying faces, looking for a scar, a bent finger, a crooked toe, comparing letters sent to him with the ruin about him.

"The ladies of the clergyman's family (his wife and two sisters-in-law) came in among the bodies often—it grew to be the business of their lives to do so. Any new arrival of a bereaved woman would stimulate their pity to compare the description brought with the dead realities. Sometimes they would go back able to say, 'I have found him,' or, 'I think she lies there.' Perhaps the mourner, unable to bear the sight of all that lay in the church, would be led in blindfold. Conducted to the spot with many compassionate words, and encouraged to look, she would say with a piercing cry, 'This is my boy,' and drop insensible on the insensible figure. From the church we passed out into the churchyard. Here there lay, at that time, 145 bodies that had come ashore from the wreck. He had buried them, when not identified, in graves containing four each. He had numbered each body in a register, describing it, and had placed a corresponding number on each coffin and over each grave. Identified bodies he had buried singly in private graves in another part of the churchyard."

I must copy no more, but pass away, as I actually did, to another churchyard in the extreme south of England; yet I will pause for a brief space in the churchyard of Fulham, by which I passed in journeying thither. In that churchyard is a headstone thus inscribed—"Under this stone are deposited the remains of Nathaniel Rench, late of this parish, gardener, who departed this life January 18th, 1783, aged 101 years." Mr. Thoms will deny he was so old; but I shall not search the parish registers for confirming testimony, because I mention him for a very different purpose—namely, to tell what very few of your garden-loving readers, amateur or professional, know, that that centenarian and his father were men of mark in the annals of horticulture. They lived at South Field Farm, near Parson's Green, which had been in the possession of the family during more than two centuries, and cultivated as a nursery and market garden. Faulkner, in his "*History of Fulham*," states that the father of the centenarian "produced in this garden the first Pine Strawberry and Chinese Strawberry, and also the first Auricula ever blown in this country. He also instituted the first annual exhibition of flowers, and died at the age of ninety-nine years, having had thirty-three children." The son surpassed the father in some of these achievements, for he lived two years longer and had two more children—twenty-three by his first wife, and twelve by his second. Faulkner adds that he "reared here the largest *Arbutus* trees in England, several being 50 feet high; was a successful cultivator of variegated Hollies, and gave premiums for the discovery of new varieties. He was the first who introduced the Moss Rose tree into this country, supposed to be from Holland. Gerard makes no mention of the Moss Rose. Mr. Rench planted out of his own nursery the Elm growing in the Bird-Cage Walk, St. James's Park."

Now I pass into Sussex, and to that little town on its coast, Seaford—so quiet, so open to the pure breezes from sea and down, that no wonder it was chosen for the site of the Convalescent Home.

As usual, I wandered about intent on visits to the village churchyards around, and by happy chance I reached that of Blatchington, the most beautiful God's-acre I ever visited—a pattern which every authority in a Christian parish should emulate; and I earnestly repeated—

"May I when death shall seal my doom,
And I beneath the grass-green sod shall lie,
Rest on throughout the sabbath of the tomb,
Garn'd thus fitly for the bliss on high."

I deprecate planting the churchyard with dark-foliaged evergreens, as if its gateway should bear the inscription, "All hope abandon, ye who enter here." And I vituperate in no measured language those who pasture sheep on the churchyard grass, and those who so neglect the enclosure that the verse is justified—

"All buried here seem to oblivion hurl'd,
For Docks and Nettles hide them from the world."

Contrast all such with the churchyard of Blatchington, and well pleased am I to pay this tribute to its rector, the Rev. R. N. Dennis, for his great taste and care in making it suggestive of hope to the survivors and of happiness to the dead. Long before I reached the churchyard the perfume of the Clematis was perceptible in which the church porch is embowered, for to term it covered would give too faint an idea of its profusion. The churchyard is level—a grass plat, smoothly mown and unpatched green as a lawn. No elevations mark the graves, but each is enclosed by a low stone border, and each of those enclosures is planted with choice flowers. There were blooming Fuchsias, Geraniums, Antirrhinums, Roses, Evening Primroses, Carnations, Lobelias, and many other garden plants, all well arranged and cultured. The walls are covered with Ivy and other evergreens, and borders beneath the walls were rich with flowering plants. The day following that of my visit was Sunday, and was to be one of thanksgiving for the harvest. Most appropriately and tastefully was the church decorated. Garlands of flowers were round each lamp; the pulpit was panelled with ears of Wheat and bossed with flowers; the font had wreaths of mingled flowers and fruits around its base and margin, and on the water within floated white Water Lilies amid their leaves. Over the communion table were three miniature sheaves of corn, and beneath them the words, "I am the Bread of Life."

More than once I returned to that churchyard, and each time came from it bettered. Nor was any jarring feeling induced in my way back through the village, for each cottage is neat. There are no broken window-panes plugged with a clout, but most of the windows looked cheery with potted plants, and the cottage gardens were well stocked—all bearing testimony that the rector's care is not restricted to the dead.—G.

MORE NOTES ON ROSES FOR EXHIBITION— NOMENCLATURE OF ROSES.

The present election of and discussions about Roses being amongst the most interesting papers in THE JOURNAL OF HORTICULTURE, may I be permitted to introduce to notice another phase of the question of exhibiting? I am at many shows in this neighbourhood a far from unsuccessful exhibitor, and in this capacity endorse very thoroughly every syllable of Mr. Farren and Mr. Cheales as to the rogery of unscrupulous exhibitors, and the injury thereby to those who have consciences. I officiate also as judge at the shows of others of my neighbours, and have, therefore, some opportunity of seeing the relations between committees and exhibitors; but as secretary of the very considerable show in my own town, numbering some of the principal exhibitors in the kingdom, I should like to suggest that exhibitors are themselves sometimes, failing in their duties.

First. Exhibitors very often do not make their complaints of unfairness with sufficient promptitude, nor to the proper authorities. If a society wishes to act honourably it ought to pay its prizes speedily, and without causing the prizewinners unnecessary trouble in applications and delay. Exhibitors knowing of foul play ought to make their complaints to the proper officials, and within the time specified in the schedules, in preference to talking *ex cathedra* when too late to rectify. In my own society any complaint would certainly be bottomed,

but I must admit that many committees often prefer that things should run smoothly rather than fairly.

Second. Exhibitors usually make their entries at random, and fulfil them at —, well, I won't say what. Many societies are faulty in this matter by requiring an unreasonable length of entry; but even where, as here, only three days are required for entry (with proper interest on the part of officials this is enough to regulate the space required), many, whom a sudden storm, absence of expected sun, furious rain, or violent wind renders unable to show-up, never think of expending a half-penny in a postcard, or a shilling (if it come to the last push) in a telegram, to enable the officials to properly apportion space so as to be free of overcrowding or gaps. I fear even Mr. Farren must plead *mea culpa* in this.

A press of engagements prevented me "putting in" to the "Election of Roses" again this year, but my votes would only have substantially increased the majority of the winners. A suggestion I made last year, and which Mr. Hinton kindly introduced, does not yet appear to have had any practical effect—viz., the absurd mode of christening Roses after various members of the same family, and with various names that an average gardener or a weather-worn tally will reduce to one and the same. Are our dictionaries so worn-out, or our brains so impoverished, that we cannot find distinctive names for distinct varieties?

Mr. Cheales is quite right in saddling upon committees the *onus* of making provision for the physical wants of exhibitors. I can only say that while committees generally have a good feed on the ground, they ought to welcome exhibitors. I know we do.—GEO. F. BARRELL, *Spalding*.

SOUTH ESSEX CHRYSANTHEMUM SOCIETY.

This Society's Exhibition was held in the Town Hall, Stratford. There was an excellent display of plants as well as of cut flowers, and the quality of both was far above the average; indeed, this was admitted to have been the best exhibition of Chrysanthemums held in the neighbourhood of London in the present year.

Pompon varieties came first in the schedule, and in both the open classes Mr. J. Douglas, gardener to F. Whitbourn, Esq., of Loxford Hall, had the best plants; they were large, well-trained specimens, and covered with bloom. Mr. D. Donald, gardener to J. G. Barclay, Esq., of Leyton, and Mr. Forayth, of Stoke Newington, also staged good plants. For plants of the large-flowered section, Mr. Donald took the highest position with the best-flowered specimens we have seen this year. Mr. Simmonds, gardener to Alderman Finnis, Wanstead, and Mr. Douglas also showed good specimens. Four very good standards, finely flowered, were sent from the nurseries of Mr. J. Rainbow, London Road, Clapton.

No less than fifty stands of cut blooms were staged, but there were very few new varieties amongst either section of them; the old sorts are staged year after year. As the Messrs. Salter, of Hammersmith, have been forced to give up the trade in new introductions, it would surely pay someone else to take it up. It is certain that no good incurved sorts have been introduced since their collection has been dispersed, except as sports from old sorts. White Venus is a notable example of this, and Golden Mrs. Bunde, exhibited recently, will, if constant, be a standard sort.

Messrs. Veitch, of Chelsea, exhibited incurved and Japanese varieties; their stand of Japanese was the best we have yet seen, and contained fine varieties. *Roseum punctatum*, The Tycoon, Bismarck, *Erecta superba*, Fair Maid of Guernsey, Elaine, and Rob Roy were notable examples.

Collections of fruit were sent by Messrs. Douglas and Donald, the former had the best collection; it contained good Grapes, Pines, Tangerine Oranges, and twenty sorts of Apples and Pears. Mr. R. W. Waites filled in the recesses with handsome specimens of fine-foliaged plants, and hardy and exotic Ferns.

KEW GARDENS.—No. 5.

HAVING made the tour of the grounds and the conservatories, it only remains for us to direct attention to the Museums of Economic Botany, of which there are three. To use the words of Professor Oliver's "Handbook":—

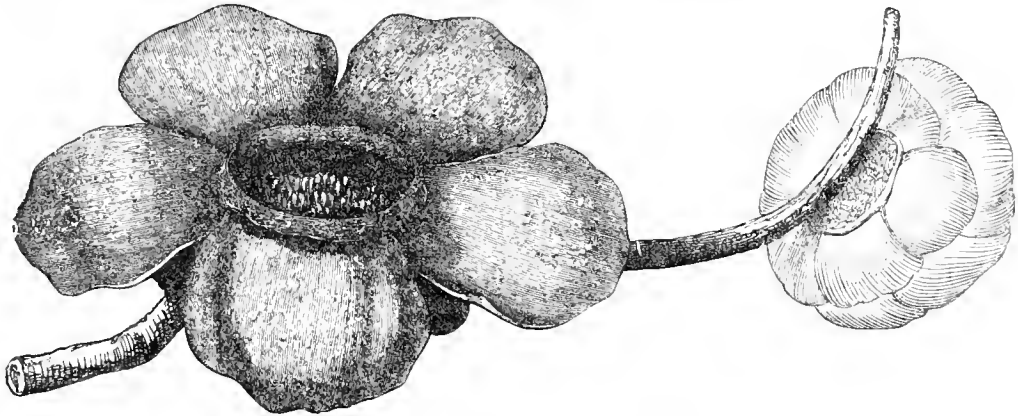
"We learn from them the sources of the innumerable products of the vegetable kingdom for our use and convenience, whether as articles of food, of construction and application of the arts, of medicine, or curiosity. They suggest new channels for our industry; they show us the variety in form and structure presented by plants, and are a means of direct instruction in most important branches of useful knowledge. We see from them the particular points upon which further information is needed,

especially as to the origin of some valuable timbers, fibres, and drugs, in order to perfect our knowledge of economic botany; in brief, the museums tell us how little as well as how much, we know; of the extent of which herbs, shrubs, and trees contribute to our necessities, comforts, and numberless requirements."

Crowded as these museums are with curious vegetable productions from roof to floor, we can only notice the more striking and noteworthy of them. As we are nearest the Museum No. 3, which is in fact the old orangery, to be seen immediately on the right hand on entering the gates of the gardens, let us proceed towards it. This museum is chiefly devoted to a collection of specimens of colonial timber, mainly derived from the Exhibition of 1862. No approach to a scientific classification is attempted with these specimens, as in the other museums; in fact, many of them are only duplicates of those contained in the arranged collection, but on account of their magnitude were not capable of being included with them. One of the most striking objects which attracts the attention on entering the building is a bowl-like cup worthy to form a goblet for Neptune. It is the receptacle in which the root of the double Cocoa-nut actually grows, in the form of a wooden bowl with a rough picturesque exterior perforated with holes through which the roots of the tree pass. The double Cocoa-nuts themselves, which before their discovery on the Seychelles near Madagascar were found floating about in the Indian Ocean, were considered great rarities, and sold for enormous sums. Another very curious plant in a glass case is *Welwitschia*

mirabilis. [For an account and figure of this plant see "JOURNAL OF HORTICULTURE," vol. xxiii., page 326.] This plant is closely allied to the Pine family, and is certainly one of the most singular-looking products of the vegetable kingdom. It consists of two leaves only, which lie flat upon the ground, extending each for 6 feet. These leaves are said to live the whole life of the plant for one hundred years, and become dried and torn to rags. The flower is a foot across. It was found growing in a hard stony soil in South-west Tropical Africa.

Another most remarkable plant, or fungus, is close at hand, modelled in wax, the *Rafflesia Arnoldi*, a parasite which grows upon the stem of some of the Vine order in Sumatra. The flower is the most gigantic in existence, measuring from 3 to 6 feet across. It has neither leaves nor stem, and may be considered a vegetable prodigy. [*Rafflesia Arnoldi* is not a fungus. It was found in Sumatra by Dr. Arnold, who accompanied Sir Stamford Raffles to that island, and the generic name was given by Brown in honour of the latter, the specific name in honour of the former. This singular plant has neither stem nor leaf, only a flower, and grows on the stems of various species of *Cissus*. We reproduce a representation of it from the ninth volume of our new series, where a detailed account of it will be found on page 10.] The space in this museum is taken up with specimens of colonial timber, more interesting in a constructive point of view than any other; but we must not leave its doors without noting the very ingenious method of toy-turning, of which there are specimens



Rafflesia Arnoldi, with bud, growing on the stem of a *Cissus*.

sent from Saxony. It will be seen that the rough forms of different animals are first turned in a circular piece of wood, and from these segments are cut, and afterwards rounded so as to represent nature. We can, after seeing this rapid method of production, understand how it is that a whole menagerie in a Noah's Ark can be purchased for sixpence. To the archaeologist the relic of Herne's Oak, blown down in Windsor Forest, and presented by the Queen, will prove interesting.

If we pass over westward we come to Museum No. 1, which is situated at the bottom of the ornamental water facing the Palm stove. This museum is devoted to flower-bearing plants. The examples are contained in cases in which the orders and families are duly noted on the outside. The orders are ranged in different floors. It would be tedious to dwell upon these specimens which, however, are highly instructive to the scientific inquirer. On the ground floor are some very curious examples of the use of the different English woods, and under the Willow order are specimens of the ancient Exchequer tallies. Up to the year 1830 the accounts of the Exchequer were kept by means of these tallies, which were made of Willow or Poplar wood. The amount of money they represented was noted on them by means of notches cut in the side of the flat tally. These were easily split, and the counter tally served as a check upon the original one. Such is the life in old customs in England, that were it not that the accidental firing of one of these bundles of tallies set fire to the old House of Commons it is quite possible that the tally system might still have been in vogue. Among the curious examples of old Oak, showing the power of this wood to resist change, may be mentioned a portion of a pile of old London Bridge, taken up in 1827, which must have been in use 650 years, and yet seems

as sound as the day it was put down. Some of the bog Oaks are also very curious; and a portion of the "Maria Rose," lost at Spithead in the reign of Henry VIII., is still perfectly good.

Museum No. 2 is at the bottom of the herbaceous garden, and is appropriated to specimens of the products of those plants which are commonly regarded as not bearing flowers, such as Mosses, Ferns, Sea-weeds, Lichens, and Mushrooms. There are only two floors to this museum. In the rooms of the ground floor are many curious specimens which are interesting. Let us note ivory nuts from the Vegetable Ivory Palm, with specimens of chessmen and other ornaments cut out of the ivory; the method of carrying tea in Paraguay in the skin of the great ant-eater; specimens of wood stained green by *Peziza aruginosa*, and used for the manufacture of Tunbridge-ware. Here also we may see specimens of the Gulf-weed, which forms such immense masses in the eddy of the Atlantic to the west of the Azores, as to offer impediments to the navigation of vessels.

It may be asked how Kew Garden has fulfilled the scheme of such a natural garden as was foreshadowed by the late Dr. Lindley? what imperial purposes has it served? what has it done towards proving itself a nursing mother to our colonial possessions? This is a very important question, and we think the Director can with pride reply. From these Gardens have issued the *Cinchona* plants which are now clothing the hills of India, and from the produce of which quinine is now largely manufactured in the Nilghiri mountains, and in the Sikkim Himalaya. The importance of the introduction of this life-giving drug to the holders of India, and to all fever-stricken populations, cannot be exaggerated. The cultivation of *Ipeca-*

Quanha in the same country from seeds sent from Kew, and under the care of Kew gardeners, is another fact which cannot be dwelt upon with too much pride by Dr. Hooker. It was made known as early as 1618 by the physician Piso that this powder was a cure for dysentery, but this knowledge seems to have been forgotten until the present time, when it was found to be really a specific for the disease when taken in large doses. The value of such a drug as this and the Cinchona bark to Europeans in the East is certainly incalculable; but the Director of Kew Gardens, with the large view he has taken of the true value of such a botanical centre as he directs, has made efforts to disseminate throughout our wide domains many other valuable plants, valuable in a commercial as well as in a medical sense. He has recognised in the reports that he annually issues the remarkable fact that, notwithstanding the extent of our colonies in tropical countries, not one of them produces tobacco! To meet this great want he has sent gardeners to cultivate this invaluable herb in Jamaica, and we hear that the produce is equal to the best grown in Cuba. In Natal, through his instrumentality, plantations have sprung up, and now, we hear, they are sufficient to supply the demands of the gold-diggers in their neighbourhood. The island of Bermuda has, by his direction, been planted with valuable products. In short, the nursing mother at Kew has done good service in enriching our colonies with valuable plantations, which will conduce to the welfare of their inhabitants for all future generations.

The method of transferring plants where it is necessary to do so, is by means of the convenient Wardian cases, in which the most tender plants can be conveyed safely and in good condition. Before these were invented plants were conveyed in a ship's hold, subject to all the impurities of salt water and air that such places of carriage are liable to, which rendered the safety of transport of delicate trees and shrubs very problematical. Now, with a little care, the most delicate growths are conveyed from one hemisphere to another quite safely. For years the exchange of floras has been going on; trees as well as settlers are migrating to our colonies, and the vegetable world of the far distant temperate zone is slowly making a footing in our fields and pastures. Of this imperial work the public know nothing; it is carried on systematically and in silence, and the mere holiday folk who throng to these Gardens, imagining that the beauty they see is merely for their gratification, would be astonished to find that from this heart, so to speak, every dependency of the empire is nourished and supplied with the plants and vegetation that is useful to it.

And not only our colonies are so supplied, but the home demand is also considerable. From the nurseries of Kew Gardens Battersea, Hyde, and the Victoria Parks have been planted and renewed with trees. One of the best testimonies to the smooth working and the beneficial action of this public establishment under the present directorship is the harmony that exists between it and the proprietors of different private nurseries in the country. The profusion of gifts of rare flowers and shrubs constantly flowing in from them not only shows the high estimation in which Kew is regarded as a botanical garden, but the liberal manner in which its resources have been judiciously dispensed among themselves. Of the estimation in which the gardens are held by the public it is scarcely necessary to speak. The crowded steamers that pass up the river on every holiday, and on Sundays and Mondays, are a sufficient answer. A few figures, however, will suffice to show the boon the opening of these gardens has been to the public as a mere pleasure-ground to all classes of the people, for we scarcely know which class seems the most thoroughly to enjoy them. During the first year, 1841, after the grounds were opened to the public, the number entering the gates was 9174. A gradual increase took place year by year until 1850, when 179,627 passed the gates. The next year, the Great Exhibition year, saw the number increased to 327,900. Even this large number very speedily became surpassed by the visitors of ordinary years, the number during 1872 being 553,219. No doubt the figures for the entire present year will give the largest number of visitors Kew Gardens has yet received. The Director, thoroughly taken up as he is with the scientific character of the gardens, yet has not neglected their popular character. The broad avenue leading towards the Palm house, during the early spring and summer months is a triumph of floriculture as regards mere masses of colour. The Rhododendron beds, when in bloom, are perfectly matchless, and the turf beside them a carpet of the most brilliant dyes. However ardent a botanist, this much Dr. Hooker

wisely concedes to the vast crowds who come here merely to enjoy the delights of a glorious garden, set in a still more glorious pleasure-ground and park. We heartily rejoice to think that the temporary differences which had arisen between this truly eminent man and one of the departments of Government are now entirely at an end, by the transfer to another office of the person who had occasioned them. But however trying it may have been to Dr. Hooker to be engaged in so unworthy a contest, he was backed in it by the strenuous support of the whole scientific world, and he received the strongest assurances of the confidence and gratitude of the public.—(*Edinburgh Review*.)

SOLANUM CAPSICASTRUM BERRIES NOT FOISONOUS.

IN answer to your correspondent, "W. S.," I can state a little incident that occurred this summer. I planted out about fifty plants of this *Solanum* in the spring, with the intention of lifting them again in the autumn, as by this plan I find their berries very much better. Several times during the summer I saw my children eating the green berries, and I was rather frightened the first time, but as no evil consequences ensued I took no further notice. On many occasions since, I have seen them eating the berries, and last week I saw them eating some ripe berries which they had picked from some plants that had come within their reach.—WILLIAM GOLDBY, *The Nursery, Matern Street, Sparkbrook, Birmingham.*

IN reply to your correspondent, "W. S.," in No. 660, I can state that the berries of *Solanum Capsicastrum* are not poisonous, at least not to mice, as, in defiance of cats and traps, I lost every berry last winter. I believe they did not eat the seeds, but only the fleshy part of the berry.—THOS. PROSSER, *Gardener, Bridge Hill, Canterbury.*

MOLES.

WE have plenty of practice, moles being plentiful here. Wherever moles "rise" (as it is here called) in gardens or pleasure grounds, the best plan is to find the main run if possible; this can be done by treading the soil that the mole has raised to the point where the run makes an entry into the garden or grounds; here we place the trap. The soil must be cleared, so as to leave sufficient space to put the trap in the run. All loose soil should be taken out of the run, and the same made quite smooth, as if a mole had just passed along it; then insert the trap. Now take some of the soil around, press it together in small lumps; put these over the run around the trap to prevent the fine soil from falling into the smooth run. After all holes round the trap are stopped finish off with fine soil, covering trap and all, thus leaving the run quite dark. The kind of trap used here is the old wooden trap common in many parts of the country, but without the sticks to keep it in its position and to form the spring. Instead of the sticks we have a piece of wire about the thickness of a drawing pencil bent in four coils, so as to form a spring—thus,

O. The lower end is fitted to the centre of the trap on the upper side; the top wire receives the string which is to strangle the mole. Traps with these springs require no pegs to keep them in position in the run. Good places to set traps are where the run crosses a path, or where the surface of the soil is solid. We have also caught a good many at the foot of the garden walls. The months in which we catch most moles are July and August, when they seem to run more at the surface of the ground, especially after heavy rains.—G. H. COOKE, *Peniarth.*

POLYANTHUS.—I read with pleasure the observations of "PHILANTHOS," but find it difficult to cultivate the Polyanthus, because of slugs and birds. The former are kept at bay by a rim of lime, but this is so hideous that I would rather dispense with the plants. "PHILANTHOS" is fortunate to have had such success near a Holly hedge. With respect to thrum-eyed seedlings, I have found that when planted in rich soil some have become pin-eyed. I have never seen this noticed in any work. G. S.

OLD Furber, who wrote in Queen Anne's time, alludes to this fact. He says, "Only this I can assure them, that I have had several of them that have been what they call thrum-eyed

one year and have been pin-eyed the next, and have still kept their colours."

THE MUSSEL SCALE OF THE APPLE.

SOME persons are only just beginning to be awake to the serious damage wrought in certain seasons by the scale insects—insects which, unfortunately, it is rather difficult to operate upon, owing to their very cautious habits and their small size. Also, so far as it is known at present, they enjoy, in the case of several species, a comparative immunity from the attacks of parasitic foes. The above-named scale, known in science as *Aspidiotis conchiformis*, should be looked after in autumn and winter. This attacks the trunks and branches of both Pear and Apple trees, and where these are neglected, the insects increase so rapidly that they will produce almost as unpleasant an appearance as the American blight or Woolly Aphis, despite their small size. Upon the Pear another scale (*A. ostreaformis*) occurs, which is not so common; it has been thought by some to be identical with the Apple Mussel Scale, yet the form suggests a specific difference.

The scale under consideration was so named from the seeming resemblance in form to the mollusc, the exterior of the scale being hard and shining, with margins woolly beneath, and adhering firmly to the substance on which it may happen to be. From their occurring at times crowded together in large numbers, these insects appear to have a turn for sociality. The shell or shield of the female, as in others of the Coccidæ, forms a nidus for the young, each being the parent, as it is stated, of forty or fifty; these are short and whitish in colour, and soon after they have hatched run about with agility. The living mature female is more of a livid green hue, this changing to a brown as she dies-off.

Some have strongly recommended washing the trunks of the trees and syringing the branches, when the leaves have fallen, either with boiling water or a weak solution of carbonate of ammonia; or lime water may be well applied with a brush, care being taken to get this fully into all crevices. Scraping the bark needs to be done very judiciously. McIntosh advocates the use of spirits of tar, and others have even advised the bedaubing the branches with a mixture of train and linseed oils. The remedy Mr. Waterton found so efficacious in the case of the American blight, might be as valuable if tried for the scale insect. He says, "I mixed clay with water till it was of such a consistency that it could be put on to the injured parts of the tree either with a mason's trowel or with a painter's brush. I then applied it to the diseased places of the tree, and it soon smothered every bug. A second coat upon the first filled up every crack which showed itself when the clay had become dry, and this resisted for a sufficient length of time the effects both of sun and rain." Where the Apple scale occasions most annoyance is when it suddenly shows itself upon the fruit-bearing branches in May, as it occasionally does through having been overlooked in the preceding year. The sacrifice of the fruit is then almost unavoidable.—J. R. S. C.

NEEDLESS FASTING AT THE CRYSTAL PALACE.

I SEE that one or two of your correspondents complain of not being able to obtain breakfast early enough at the Crystal Palace on Rose-show days. Allow me to say that several years ago, when I used to go with my Roses, I experienced the same disappointment. The next year, however, a few days before the show wrote to the contractors for refreshments, asking them whether it would not be possible for me to have some breakfast about ten o'clock on the Rose-show day. I had a very polite reply, stating that I could have coffee or tea at that or any other hour that best suited me, with hot or cold meat, or bacon and eggs. Accordingly I and a friend who accompanied me had about ten o'clock as good a breakfast as man could desire in one of the private rooms. The charges, too, were reasonable.—P.

SHEPHERDIA ARGENTEA.—My specimen is swarming with small drupes or berries for the first time. Whether they are spoiled by frosts, which have been very severe for many weeks past, I cannot say; but from the first they resembled an Ivy berry, clammy and acid, more suitable for birdlime than eatable fruit. The blackbirds, &c., never touch them, though they are pegging-away at Mountain Ash, Spindle tree, and

many very bitter sorts on the adjoining bushes.—J. GILLBANKS, Cumberland.

PRIZES FOR VIOLETS.

I PURPOSE giving £7 10s. in prizes (see schedule of the Royal Horticultural Society, Feb. 18th) for Violets, in four prizes each—viz., £2, £1, 10s., and 5s., for The Czar, and the same amount for Lee's Victoria Regina, two plants each, to be shown in 32's, about 7-inch pots. My particular wish being that Victoria Regina should stand upon its own merits, I have thought this would be the fairest way of procedure. So three extra strong plants will be supplied to each exhibitor gratis, except package, which will be charged 1s. each lot, on condition that two plants be exhibited, otherwise they will be charged 15s. for the three plants, and each person applying will be required to sign a printed form to that effect. I do not supply The Czar.—GEORGE LEE, Market Gardener, Clevedon, Somerset.

BLUE BELL AND RUFFORD ABBEY BLUE PANSY.

THIS extremely useful class of bedding plants is becoming very popular. I am always on the outlook for something cheap and useful, especially if it can be raised from seed. I therefore ordered a packet each of the above, with others of proved merit. I find Blue Bell is a showy interesting variety, but it must be weeded-out with an unsparing hand, as so many of the seedlings are worthless and spoil the good effect of those which come true. It is a pity that an otherwise good variety should be submitted for public approval before the strain is properly fixed. I presume that I have the right variety; the plant is very dwarf and compact, and there are many shades of colour, but I prefer that which is about three shades darker than Perfection. It is much dwarfer in growth, and the flower of a truer Viola shape than in this well-known variety. It has, moreover, a yellow disc, which gives it a striking appearance. Altogether I think when this variety is "fixed" it will take a place for edging small beds equal to any of the best kinds, and to do this, propagating it by cuttings seems to be the only sure way. After awhile, when nothing but the true colour is grown, I see no reason why it could not be obtained true from seed as well as Perfection. This I have as true as seed be from seed, with only just two really distinct shades produced.

New as to the Rufford Abbey Blue Pansy. I was led to believe by the catalogue that this would be found a valuable acquisition, but it has turned out badly. Never did I come across such a deception. It is really the draughts of the whole family of Violas, and is best designated the Rufford Abbey mixture, wherein anything can be found from the old Viola tricolor to—what shall I say? Well, really there was not a flower that a person would admit into a back border. As I have said, there was our wild V. tricolor, some V. lutea, and the rest were Pansies, mostly disagreeably-marked yellows, with just two plants of a small dark blue about the size of a shilling. Plant growing rather strongly, with very few flowers; these have a small yellow disc, surrounded with a very dark velvety circle of round blotches. This on the ground of a few shades lighter blue is pretty enough, but the flower being so small and so sparingly produced, it is very far inferior to other varieties which we have. Can anyone say if the flower I have described is the right Rufford Abbey Blue? Never has it fallen to my lot to be more annoyed throughout the summer than I have been in the past season with plants raised from a 2s. 6d. packet of the above. I had, unfortunately, put them in a most conspicuous place at the end of a large ribbon border to form, as I thought, a blue fringe, but the result was a lesson which I shall not soon forget—that is, never to plant a Viola or a Pansy until after trial in the reserve garden.—J. TAYLOR, *Maesgwynne, South Wales*.

COMBE ABBEY.

THE SEAT OF THE EARL OF CRAVEN.—No. 1.

INQUIRING one day where good gardening could be seen, the answer was, "Go into the Midland Counties." Meekly asking "Where?" the answer was, "Go to Coventry." There was a look half of anger half of surprise on the one part, on the other a smile which showed no offence was meant—for "Go to Coventry" is often so intended. We remember in our schoolboy days—and the memory of those days strikes one more vividly as one grows older—what a lonely despondent

object was the boy "in Coventry," but unlike him "of that ilk," as the Scotch would say, we were not friendless there, for we remembered the skilful gardener at Combe Abbey; and his many achievements in the exhibition tent fully justified the remark, if you want to see good gardening "Go to Coventry." Instead, however, of going to Coventry we went to Brandon, a small station on the North-Western, nearer London and nearer Combe, but less convenient in point of time. On through the village, on through a long ride, and Combe Abbey is sighted from afar. It is yet a long way to the gardens, and whilst journeying thither we will endeavour to call upon our historical recollections.

Combe Abbey—that is, "The Valley Abbey," as it was named by the Cistercian Monks, for whom it was founded and given to them by Richard de Cauville, was erected in the reign of King Stephen, in the first half of the twelfth century. It was sup-

pressed in the reign of Henry VIII., and the following reign was granted to John Earl of Warwick, after whose attainder it was leased to Robert Keyway, Surveyor of the Court of Wards and Liveries, and by the marriage of his daughter it passed to Lord Harrington. Their daughter (Countess of Bedford) eventually inherited it; but her ruinous extravagance compelled its sale, and it was purchased by an ancestor of the Earl of Craven, its present possessor. That ancestor was Sir William Craven, Lord Mayor of London in 1610, and he gave £20,000 to his son William to be employed in purchasing a landed estate to be entailed. This money was invested in the purchase of Combe Abbey. His son was created Earl of Craven in the reign of Charles I.

The chief part of the mansion as it now exists was built by Lord Harrington on the ruins of the Abbey.

The park is about a thousand acres in extent, and though



COMBE ABBEY.

flat, is well wooded. The situation, however, is elevated, being a table land on what is termed the backbone of England, and Coventry is some 350 feet above the level of the sea. Chestnuts, Oaks, Elms, and Scotch Firs are represented by stately trees, and the rides, especially that called "Twelve-o'clock Ride," some two miles long, are, no doubt, in summer of great beauty, and even in winter they have a striking effect. The mansion, of which we give a representation of the west front, is not placed in a commanding position, for it lies somewhat in a hollow as compared to the general surface of the surrounding park. In front of it, as seen in the engraving, is a lake of great extent and fine outline, presenting a beautiful expanse of smooth water, and between it and the mansion there is nothing intervening save the two quadrants of close-shaven velvet turf sloping down to the water. The water also passes along the south front, where it is crossed by a bridge; here, however, it has far from an ornamental character, save where Mr. Miller has improvised a broken waterfall with stones from the old Abbey, planting the sides with Pampas Grass, Furze, &c. There is here an excellent view across the park from a terrace on the east front of the house, which portion, it may be remarked, is of recent erection. Forming part of the mansion on this side is a conservatory, but it is not well adapted for plant-keeping, like many other conservatories into the construction of which stone enters largely, and it is contemplated to turn it to other

purposes. At present it is principally filled with Orange trees and Camellias, with a noble pair of *Draecena australis*; but for plants requiring much light it is not suitable, and being, moreover, very inconvenient of access for attending to, removing, and replacing plants, it is intended to convert it to other purposes. Near the house the naturally flat surface has been diversified by the formation of banks and mounds with the soil thrown out from the lake, and these are appropriately planted with clumps of *Rhododendrons* and other evergreens. On one of these elevations are several fine specimens of *Wellingtonia gigantea* beautifully feathered to the ground; these were planted in nothing but clay which had been well exposed to the weather; and *Cupressus Lawsoniana* is everywhere plentiful and thriving, Mr. Miller having raised a large number of seedlings, some of which exhibit a considerable diversity of character. It is used also as a hedge-plant, and is found to bear the shears well. There is a broad avenue on grass extending nearly east and west for about 250 yards, partly planted with *Araucarias*, now 15 to 18 feet high, and for the remainder of the distance with *Spruce Firs* probably sixty years old. These had been deprived of their leaders when quite young, and have consequently thrown out a dense mass of branches all the way up, presenting the appearance of truncated cones, with the lowest branches spreading in a wide circle at the base.

There is no flower garden in immediate connection with the house, but on the east side of the *Wellingtonia* bank, before

noticed there is an arrangement of beds, having a conical mound in the centre, surrounded by two concentric beds, with an opening to give access to the mound, and on the face of the slope a number of oblong beds converging towards the centre and narrowing at their inner ends. Near this there are also a neatly laid-out rosery, and cones which in summer are covered with Geraniums; and a short distance from the horse-hoe-shaped croquet lawn is another small flower garden, having for its centre a raised circular bed, the wooden sides of which are covered with Ivy, and around it are neatly-designed beds of which it would be impossible to give a correct idea of the outlines without a diagram, but which form an harmonious whole. Before quitting the pleasure grounds we may mention that there are here and there other cones for bedding plants in summer, and that the most has been made of the situation by winding walks and the artificial eminences already noticed, and, finally, that to Mr. Miller is due the credit of laying-out the whole. Farther from the house are some noble specimens of Scotch Fir and Picea Pinsapo, together with fine avenues of the latter tree, Wellingtonias, and Deodars.

A CENTURY OF ORCHIDS FOR AMATEUR GROWERS.—No. 14.

CATTLEYA.

This genus is a very extensive one, and, moreover, contains some species which produce the largest and most richly-coloured flowers of any Orchids in cultivation, so that it is not at all surprising that they are great favourites with all growers of this order. They are all natives of America, some being found at considerable elevations in New Grenada, but the majority occur in Brazil. *Cattleyas* all make pseudobulbs, and the flowers are produced upon a raceme which issues from the apex, at the base of the blade of the leaf or leaves; the raceme in its young state is protected by a sheath, through which the flowers escape when approaching maturity. They grow in a state of nature upon the branches of forest trees, and sometimes upon rocks, and may be regarded as amongst the easiest plants to cultivate if a little care and thought are bestowed upon them. To these general remarks, however, there are a few exceptions, for some species I have found extremely difficult to manage. No doubt this difficulty arises from a want of knowledge of their peculiar surroundings in their native habitats, and consequently we have not been able to discover their requirements; but as these particular kinds will not be recommended to my amateur friends in this enumeration, we may dismiss them at once, and accept the general rule that *Cattleyas* are easily grown under the conditions already laid down. If desired they may be grown upon blocks of wood, but I am under the impression that, saving in a few instances, they succeed far best in pots; drainage must be good, and kept in perfect working order, and, to prevent recapitulation, I would advise my readers to bear in mind the remarks upon this subject in a former article.

For soil use good fibrous peat, from which nearly all the soil has been well beaten; use it in moderate-sized lumps, and mix with it some chopped living sphagnum moss and a little clean silver sand. The plant should be elevated above the rim of the pot, and care must be taken that the decumbent stem is not buried below the soil, or it will be very apt to cause the decay of the eyes. In the matter of water *Cattleyas* are somewhat particular, and although they like an abundant supply to their roots and in the atmosphere, they do not like much from the syringe, unless they are suspended upon blocks of wood; indeed I have seen the use of the syringe amongst them attended with very bad consequences through the decay of their young shoots, which often occurs from the water lodging in the large sheathing scales which envelope the pseudobulbs in a young state.

After the growing season is past most of the species belonging to this genus should have a good rest, but it is even quite possible to starve these until the pseudobulbs grown thin and wrinkled—a state which is sure to be followed by weak and puny growth; therefore I say, Rest them thoroughly, but do not carry system to such an extreme as to risk the health or destroy the vigour of the plant. By attention to the above simple rules I have had great success with the majority of the kinds now in cultivation, and therefore consider I am quite justified in saying they are easy to grow. I once heard a young man commence to read an essay upon their cultivation by saying that *Cattleyas* required a very rich and deep soil to send their long thick roots into; this assertion, however, pro-

duced such roars of laughter from the young gardeners assembled, that the poor fellow doubled-up his essay, put it in his pocket, and left the room in disgust, and was never afterwards heard to venture an opinion upon Orchid-growing; and as I never saw this deep-cultivation system carried out, it is quite beyond my power to give any details in these pages.

C. TRIANA.—A species which in growth very much resembles *C. Mossia*. It usually attains a height of from 12 to 15 inches, the pseudobulbs being stout, each bearing a single, thick, fleshy, rather pale green leaf. Unlike the last-named species, however, its lovely flowers are produced late in autumn and winter, a circumstance which is sure to endear it to the hearts of the majority of amateur growers, whilst those who only countenance summer-flowering kinds suitable for exhibition purposes do not find space for it in their collections; but by so excluding them they deny themselves of one of the richest and most gorgeous displays to be found amongst Orchids, second only to that produced by *C. Mossia*, and perhaps more appreciable than even that, on account of their serving to make the heart glad just at the time that Englishmen, in their dank and foggy atmosphere, are all supposed by some of our friends across the water to be brooding over suicide, and therefore as a preventive to a fit of melancholy I say grow a lot of *Cattleya Triana*. There are many varieties of this plant; that which is considered to be the normal state of the species produces flowers 5 or 6 inches in breadth, the sepals and petals are broad and rosy blush in colour; lip large, and of the same colour, the front being tipped with rich purple, and the throat stained with orange inside. The variations from this, however, are great. Some have the sepals and petals wholly clear rose with a rosy-violet lip; others have this deep-coloured lip with white sepals and petals; whilst one beautiful variety has pure white flowers, saving the orange-yellow throat of the lip, and a tinge of soft rose in front. These exquisite flowers are borne upon erect racemes, and remain in perfection nearly a month if kept in an atmosphere free from damp. Native of New Grenada.

C. MOSSIE.—This superb plant is grown by the dozen by many Orchid-growers, and amply it repays for any space or trouble which may be devoted to it. As a rule this species attains the height of 12 or 15 inches; occasionally, however, varieties are found far below this size, and also larger. The pseudobulbs bear a single, thick, and leathery dark green leaf, from the base of which and the top of the pseudobulb the racemes of flowers are produced, and which in their youngest and most tender days are enclosed in a fleshy sheath which grows up with the young leaf; the racemes bear from three to five flowers, each of which measures from 3 to 6 inches in diameter. As regards colour I am at a loss, for scarcely two plants can be found exactly alike, whilst the breadth of sepals and petals, as well as size of the labellum, is equally variable. Amongst the hundreds, however, which have come under my notice, I have not seen one which I could say was not worth growing, although, by comparison, some were infinitely inferior to others. As a rule the sepals and petals may be said to be deep blush, the lip large, stained at the base with orange, the centre in front being suffused with rich violet rose, the edges being paler and prettily fringed; these colours vary in intensity, as do also the fringed portions of the margins in the numerous varieties. The flowers of this species are produced during the months of June, and July, and continue in full beauty for several weeks. Native of La Guayra.

C. ACLANDIÆ.—In every respect different from the previously-named members of this family; it is a dwarf-growing species, the pseudobulbs being slender, and seldom more than 5 or 6 inches; these bear a pair of ovate or nearly round, thick, leathery, dark green leaves; the raceme bears several large flowers, the sepals and petals of which are tawny yellow, transversely barred with chocolate; the lip is spreading, and of a rich rose colour. These colours, however, vary considerably in different varieties. It blooms during June and July, and lasts nearly a month in full beauty. It appears to be tolerably plentiful in the neighbourhood of Bahia and several other parts of Brazil.

C. MAXIMA.—A winter-blooming species of great beauty, and therefore doubly valuable in the eyes of those who do not devote their entire space and attention to those kinds which bloom in time for summer exhibitions. The plant in question grows some 12 or 18 inches high, bearing a pair of leaves on the top of the pseudobulb, from between these the raceme rises, bearing from five to ten flowers; sepals and petals bright rose; lip rose, beautifully streaked and veined with violet and

crimson. It lasts nearly a month in beauty if care is taken to keep the flowers dry. Native of Colombia.

C. LABIATA.—Similar in habit to *C. Mossia*, but more robust, with broader and darker foliage; the flowers are very large, and produced during autumn and winter; the racemes bear three or four flowers, each from 4 to 6 inches from tip to tip of the sepals, which are broad, and rich deep rose colour; lip large, rose colour at the base, but stained in front with rich deep crimson. There are several varieties of this plant. Native of Brazil.

C. WARNERII.—This is one of the handsomest of the summer-blooming kinds; it is a plant of robust growth, with stout pseudobulbs and broad leathery leaves, evidently related to the preceding species. There are many varieties which have been imported in some quantities, but nearly all fall far short of the original form, in which the flowers are about 6 inches across; sepals and petals broad and of good substance, and deep rose in colour; lip large, beautifully fringed in front, and deep rich crimson. It lasts a long time in full beauty.

C. EXONIENSIS.—A hybrid between *C. Mossia* and *Lælia purpurata*, produced in this country by Mr. Doiny, and at once one of the most beautiful and free-flowering kinds we have. In habit the plant is intermediate, and produces a large raceme, bearing from three to five flowers; sepals and petals broad, soft rose colour; lip much enlarged in front, where the colour is an intensely rich velvety rose-purple lined with gold, the throat being soft golden yellow. It is at present rather rare, but should be added to every collection.

LÆLIA.

This genus differs but little from the preceding in general appearance, and in treatment entirely conforms to the rules laid down for its management; the great point of distinction lies in the number of pollen-masses, which, however, is not material to the amateur.

L. ELEGANS.—A plant which no collection should lack; it usually grows about 2 feet high, bearing upon its somewhat slender pseudobulbs a pair of leathery dark green leaves, from between which the racemes rise. There are an immense quantity of varieties, but the sepals and petals in the ordinary form are white tinged with rose, and the lip is a brilliant shade of purple. They are produced during the autumn months. Native of Brazil.

L. PERRINI.—This is another charming plant, producing its flowers during autumn and winter. In habit of growth it resembles a *Cattleya*, and bears a single leaf upon the top of the pseudobulbs; the racemes bear several flowers; sepals and petals light vinous purple, lip crimson in front, with a white throat. It is thoroughly distinct from any other kind in cultivation. Native of Brazil about Rio.

L. PURPURATA.—This stately plant is the most magnificent of all the tribe; the pseudobulbs are stout, and bear upon the apex a very large, oblong, thick, leathery dark green leaf; the raceme is produced from the junction of the two, and bears from four to six flowers, measuring 5 or 6 inches in diameter; in fine examples the sepals and petals are broad and pure white; lip large, dark purple in colour, tinged with rosy-purple, throat white. There are numerous slight variations from these colours, but all are beautiful. It is produced during the spring and summer months, and is 50 feet above sea level in perfection. Native of Brazil.—*EXTRAORDINARY*.

IMPROVEMENT IN ITALY.

My object in staying at Avezzano was not to look at the town, but to inspect the works by which Prince Torlonia has converted what was once a marsh, forty-two miles in circumference, called Lake Fucino or di Celano, into a fertile rural district, intended to support and accommodate two or three thousand labourers. It is an enterprise in which Imperial Rome, in the palmy days of her power, had at first failed, and at last only partially succeeded, while the neglect of after ages had almost entirely obliterated every trace of her achievements. The lake was an inconvenient neighbour to the Province, and as the ebb and flow of its level wrought either flood or fever to the surrounding villages, Cesar, we are told, and after him Claudius and Nero, bethought themselves of a remedy for the evil by an outlet which should discharge the waters of the lake into the Liris, the bed of which was about 80 feet below the bottom of the lake. The intention of the Romans was, however, not to drain the lake, but simply to reduce it to one-third of its original size. The work of the Cesars was not properly

executed, nor was it thoroughly mended by the exertions of the later Emperors who took it in hand. The Middle Ages found the channel already choked-up, and the efforts of the Emperor Frederik II., the creative spirit of this region, to re-open it, were unavailing. It was this task, to which so many great sovereigns had proved unequal, that a private man, Prince Torlonia, took upon himself. He bought-off a company which had obtained a grant of the lake in 1852, but which failed in its attempts, and, with the aid of English, French, and Swiss engineers, he went to work in good earnest in 1858. He expected at first that the work could be achieved at an outlay of 1,000,000 Roman crowns (£200,000), but he soon found out that the expense would exceed twice that sum—indeed, it is said to have risen to more than £1,000,000; and, in spite of his well-known enormous wealth, the peasants of the environs doubted "whether Torlonia would drain the lake, or the lake drain Torlonia." His success was, however, splendid. He re-opened and greatly widened the old Roman channel, and made it four miles in length and about 21 yards in width. Through this channel an extent of about 36,000 acres of the lake was drained, and the whole ground will, it is said, be laid bare and brought into cultivation before next spring.

I drove out to see this stupendous work early in the morning, as the thick autumn mist broke before the rays of a sickly sun, giving, in spite of the popular proverb, a very faint hope of a fine day. Where a huge loek moderates the outflow of the water a monumental building in white Travertine is now rising, to be dedicated, it is said, to the Immaculate Conception, but on a central monolith of which an inscription will send down to posterity the date of the achievement and the name of its princely promoter. The ground rescued from the lake has already been cut out into large squares, intersected by magnificent roads, along which are to rise four hundred peasant dwellings, with twenty-four chapels and two convents. These buildings, and the barns, sheds, and other premises necessary for cultivation on the largest scale, will be raised at a cost of £160,000. The whole estate of 15,000 hectares will be organised as a monster model farm, to be colonised by labourers from the various estates of the Prince. Large tracts of the ground reclaimed are already yielding corn crops at a profit of 30 to 36 per cent., and will continue to do so for three years without manure, while the upper slopes of the lake bed are manted over with young low vineyards, the produce of which can hardly fail to be of the best quality.—(*Correspondent of the Times*.)

PREPARING FOR WINTER—PLANT PROTECTION.

At the present price of coal, economy in its consumption becomes a very important part of garden economics; and as very probably we may have a hard winter before us through which to tide tender plants, a few hints with regard to the means of bringing them safely through the coming months with as little demand as may be on the coal vault and heating apparatus will not be unreasonable, and may be of use to some of our readers. In the first place, the too common practice of hard firing, with a view to keeping-up an unnecessarily high night temperature, is one that with advantage might be considerably modified. The apprehension of injury from the fall of the mercury at night is much greater than it need be. More especially may this be the case where plants are grown through the summer and autumn as they ought to be, in a wholesome, invigorating atmosphere, with plenty of light and air, resulting in glossy leathery foliage, and stout short-jointed growths. Plants grown in this way will come safely through with the mercury standing in the morning at a point which might not be for the advantage of kindred plants, whose puny and attenuated growths had been developed under the opposite or cooling system. The fact is, we are going against nature's way when going-in for high night temperatures at any season; but more especially is this the case at the season of rest, when the supposed desirable point is to be kept up by fire heat. If, instead of relying so much on fire heat, our people would have more faith in external coverings of some kind, it would be to the advantage of themselves and their plants. Its adoption would relieve them from anxiety during the prevalence of frost, even though the fire should go out and the pipes cool down; and the plants, not being unseasonably stimulated, would be in somewhat more natural condition when again entering on their season of growth. Protection in this way may be effected either by the protecting material being made to run up and

down on rollers, or having it strained on light, portable, wooden frames, easy to put on, and easy to remove. In small houses and amateur practice the protecting material may be made to run up and down on the inside, instead of outside the glass roof. The important point to attend to is, that the canvas or other material does not rest on the glass, but that by means of transverse slips nailed on the roof a stratum of an inch or more of air may intervene between it and the covering.

It is in this way that double glazing forms so efficient a protecting medium. A very noteworthy case of its value came under our notice, when during the course of a severe winter and frost prevailing, the boiler and heating apparatus got suddenly out of order, and some time elapsed before they could be availed of. Nevertheless, the collection of plants, a choice and varied one too, was none the worse though having nothing to protect them from the enemy without than the warm blanket of air which intervened between the double surface of glass. So, too, in covering pits and frames, where more rough and ready material is put under requisition, such as hay, straw, fern, or litter, this principle should be borne in mind and acted on, taking care that the medium which holds a large body of air and lies loosely should be placed next the glass, and the mat or other cover above it. This order is in practice very often reversed, the closely hugging mat going on first, and the straw or other loose material last. If snow come, it should be borne in mind that it is a most excellent non-conductor of heat, and an admirable protecting material, which one should be slow to remove from pits or frames over which it has thrown its sheltering mantle. If, too, frost be sharp and persistent, necessitating keeping plants closely covered and dark, the very common mistake of removing their coverings when a thaw sets in, and suddenly exposing the plants to the action of light and sunshine, should be carefully avoided. This in practice is often productive of more injury to plants than the actual touch of the frost. To give a familiar instance: Potatoes in pits may be actually frozen, and yet they will turn out quite safe, provided the pits be not opened immediately after, and the tubers exposed. If the exposure be sudden the result will be very different.

We venture these few hints in view of a contingency which the gardener and amateur plant-grower have now, owing to the dearth and scarcity of fuel, more reason than heretofore to dread—a severe winter. Their further development, as well as practical application, should such unfortunately be necessary, may be very safely left to the intelligence and skill of such of our readers as are immediately interested.—(*Irish Farmers' Gazette*.)

NOTES AND GLEANINGS.

We recently announced that a GRAND HORTICULTURAL EXHIBITION is fixed to be held at the LOWER GROUNDS, ASTON PARK, BIRMINGHAM, on the 7th, 8th, 9th, and 10th of July next, under the title of "The Midland Counties Grand Horticultural Exhibition." In addition to money prizes, amounting to £1000, five silver challenge cups, value twenty-five guineas each, will be awarded to the winners of the principal prizes; one for plants, one for fruits, one for vegetables, one for cut Roses (nurserymen), and another for cut Roses (amateurs).

On the 11th inst. Messrs. Sutton & Sons gave their annual dinner to those employed in their establishment at Reading. We agree with Messrs. Sutton in thinking that such meetings promote cordiality between the employed and the employer.

WORK FOR THE WEEK.

KITCHEN GARDEN.

We have lately experienced such a continuance of wet weather, that it has been impossible to proceed with out-door work every day, but we trust that there are few instances in which the labourers have been thrown out of employ. It is true there are some gardeners who can scarcely find sufficient for garden labourers to do for the space of one day, but we never yet knew one skilled in his profession who could not employ his men for weeks within doors in various ways to forward labour at a future time. Numberless things might be made by them which are now purchased at a distance, and consequently do not benefit the poor in the neighbourhood. If the soil in the frames in which the roots of *Asparagus* are planted should become dry, it will be necessary to water it with water of the temperature of the bed; but this is not often required if the bed heats moderately and the roots were properly watered when planted. There should be at least 5 or 6 inches of soil of a loose open

texture, such as leaf mould or old tan, above the crowns of the roots after they begin to shoot. Admit air freely every day to the productive beds. Where *Beans* have been planted in rows and have made their appearance, draw the earth in ridges on each side of them, so as to afford some little protection from cold cutting winds; Peas in rows should be similarly managed. Watch narrowly for slugs among the young *Cauliflower* plants, and keep them free from dead leaves. If any are planted in pots for the purpose of protecting during severe weather, they must be carefully attended to with water, otherwise in the spring it will be found that the time and trouble have been uselessly expended. Those *Cucumbers* in pots or tubs in forcing houses will require a little fresh soil over the roots occasionally; this will keep them in vigorous health. As *Dwarf Kidney Beans* are greatly subject to the attacks of insects in forcing houses, every known means should be used to keep them under; they should be frequently sprinkled with water, and if the red spider becomes numerous, a little sulphur should be mixed with the water. Any *Herbs* that may be wanted in a green state should be taken up with balls of earth about their roots, and immediately potted and placed in a forcing house. The young *Lettuce* plants in frames should have all the air that can be given them in mild weather. Keep them and also those in the borders free from dead leaves and litter of all sorts likely to harbour slugs. Take up and pot old roots of *Rhubarb* for forcing if a succession is required, or they may be laid in a Mushroom house that is at work, and slightly covered with soil.

FRUIT GARDEN.

Proceed with the pruning and nailing fruit trees in all favourable weather, as, if wholly deferred until spring, the proper performance of these operations will be apt to interfere with other matters demanding attention. If the trees were suitably attended to in the summer, there will not be much useless matter to be removed now. Vines and Raspberries deprived previously of all unnecessary wood had better have the shoots remaining left unshortened until the rigour of winter shall have passed. The spurs of Currant trees should be cut in pretty closely to the stems, and the leading shoots considerably shortened if quality rather than quantity is aimed at. Gooseberries may be treated in a similar manner, if the preferable method is not adopted of leaving the fruit produced chiefly on the young wood, or on small spurs on wood of two or three year's growth. Apples and Pears against walls should have their fruit-bearing spurs kept as near the wall as possible, not only to secure the benefit of the wall, and prevent the unsightliness of long, rampant, overgrown spurs, but also for obtaining good-sized well-flavoured fruit. Attention to the short spurs produced on good healthy trees when growing naturally as standards will furnish a good lesson on this subject. In the case of some of our best sorts of Pears which have a tendency to form a bold blossom-bud at the ends of short shoots of the present year's growth, care should be taken to retain a sufficiency, and, if long enough, to fasten them closely to the wall. Plums may be pruned much the same as Pears, but as the best fruit is generally produced on wood of two or three year's growth, care should be taken to lay in a little wood every season. Those not much accustomed to nailing are very apt either to use shreds too short or too many of them. Trees, especially young ones, are often irreparably ruined by the former, and made to resemble rag-shops by the latter. Comparatively few shreds will be necessary if placed alternately, with a slight strain upon the upper and lower sides of the shoots, and if the stronger ends are fastened with willows or roe barns. However pretty it may be to see trees beautifully trained, affecting that object by driving in nails close to the branch, or putting a strain upon it so as to endanger the bark, ought on no pretence to be allowed. Peaches, Nectarines, and Apricots.—Unfasten the young shoots so far from the wall that they will incur no risk of being blown about by boisterous winds, in order that the part previously reposing against the wall may be duly ripened before it is exposed to severe frost, and also that active vegetation may be retarded to a later period in the spring. Where thin tiles had been placed on part of the border next the wall for radiating heat and keeping the border moist, they may be removed to prevent them from being broken by frost or the performance of the necessary operations; or if not considered too valuable, and if the drainage was very defective, they might be bedded in clay, &c., to throw the water off the border.

FLOWER GARDEN.

Those who are fortunate enough to have the command of a gravel pit should get a good supply of gravel provided whenever the weather is suitable for that kind of work. See also to having plenty of soil prepared for putting cuttings in the spring, and have draining materials for pees prepared and sorted out in sizes. As soon as the leaves of the trees have all fallen there should be a general cleaning-up; it would be of no avail to clean-up a portion of the ground, as doing high winds the leaves would blow about in all directions. The leaves and sweepings of the walks may be laid about the shrubs in the shrubbery, and to prevent them blowing about they should be

slightly covered with soil. This mode of proceeding will be infinitely better for the shrubs than digging amongst them. Continue planting during mild weather.

STOVE.

Keep the surface of the soil in the pots free from weeds, also moss and lichen, but in doing this do not loosen the soil so as to injure the roots near the surface. Keep every plant free from dead leaves, and all climbing plants that are making growth should be neatly tied-up. Sprinkle the flues and paths frequently when strong fires are kept-up, so as to counteract the constant drain of moisture which takes place.

CONSERVATORY AND GREENHOUSE.

As the *Chrysanthemums* are removed after flowering, their places should be supplied with flowering plants from the forcing pit, or in the absence of these, the plants should be set at a greater distance apart, so that no vacancy may appear.

PITS AND FRAMES.

A free admission of air must be given to Auriculas, Carnations, &c., but they must be preserved from excessive moisture. Immediately worms are observed in any of the pots turn out the plants and remove them without breaking the ball of earth, or they may be watered with lino water. Continue to take plants into the pits for forcing if none have been previously prepared. Such plants as *Rhododendrons*, *Azaleas*, *Roses*, *Pinks*, &c., may now be taken up with good balls of earth about their roots, and potted and forced immediately.—W. KEANE.

DOINGS OF THE LAST WEEK.

FRUIT AND KITCHEN GARDEN.

In this department pruning, making alterations, digging and trenching, will occupy our time while the present fine weather lasts. In previous communications it was stated that the greater portion of the pruning was done during the summer months. The trees that were not pruned are Morello Cherries on walls, on espaliers, and trained as pyramids on the Mahdeb stock. The pruning they require now is merely to thin-out the wood where it is too much crowded, and to shorten the young wood where it has grown-out too much. Apple and Pear trees which have grown sufficiently large and bear freely are sometimes omitted. Some of the larger branches of these require to be cut out if they are too thickly placed, and all the young wood should be cut-back to the small eyes at the base of the shoot. The treatment of the roots is equally important with that required for the branches. Large trees planted between the kitchen-garden quarters have no special treatment. When the quarters are dug or trenched over, the space occupied by the trees or Gooseberry bushes is lightly forked-over at the same time, so as to make the whole assume a tidy appearance. On the borders wholly devoted to fruit trees, they can have that treatment which is deemed most suitable to them, without interfering with the requirements of any other crop. The surface of the borders should now be dressed over with decayed frame manure to be dug-in early in spring.

We have also been *relaxing Box edgings* to the kitchen garden paths; in many places the Box had died-out, leaving blanks which made the edgings unsightly. We might have filled the blanks with Box, but it would still have caused the row to look unsightly. The manner in which the work is done is this: The whole row of Box is dug-up after the gravel to the distance of 1 foot from the edging has been shovelled or drawn-off with a rake, the ground is then dug-up, mixing some fresh soil from the border during the process. Along the line where the Box is to be planted the ground must be made quite firm by repeated treading; it is then raked over and made perfectly level by beating with the back of a spade after the line has been stretched tightly in its place. When the line is quite tight it will show any inequalities in the edging.

FORCING HORSES.

We are very careful not to excite *Pines* to growth at this period of the year; even in the fruiting-houses where fruit in various stages are swelling and ripening-off, or just throwing-up, the house is seldom above 60° at night. We have usually at this season turned over the spot of tan when the heat had declined to 75° or 80°, and mixed it with fresh; but great caution is necessary where this is done, as the bottom heat rises quickly after the operation. Should a rise over 90°, it is best to lift the pots out and stand them on the surface of the bed. Extreme care is also requisite as regards watering the pots. The plants not throwing-up fruit will not require any water; those bearing fruit should not be allowed to get dust-dry, otherwise the fruit will shrivel and be quite worthless.

Late *vincetoxicum* are to be looked to twice a-week. All decaying leaves which part readily from the stalks are picked-off from the Vines and removed from the house; they would otherwise imperceptibly throw-off moisture and cause the fruit to mildew. We have much difficulty in preserving the fruit from decay while the leaves are falling; the heating apparatus is warmed nearly every day, but is allowed to cool-down before the house is shut-up in the afternoon. On very damp days, and especially when

we are enveloped in fogs, the heat is not put on, nor are the ventilators opened. It may be as well to state that Gros Guillaume, better known under the name of Barbarossa, is the best keeper we have, not excepting Lady Downe's; large compact bunches have not yet had a single decayed berry removed from them. Started the earliest viney this week. The borders outside and inside had a thorough soaking with tepid water; that on the outside is covered with fermenting material. The night temperature of the house is about 50°, as the weather is mild; during frosts the house would fall to 40°. The Vines are syringed twice daily, and the paths, walls of the house, &c., are also sprinkled over; any plants in the house being freely wetted with the syringe.

Removed a few pots of *Sea-kale* to the forcing house; the roots had been previously potted and plunged-out of doors, and successive batches are taken in as they are required. The pots are also plunged in cocoa-nut fibre refuse in the house, the material being placed over the crowns to the depth of 9 inches. It is necessary to cover the pots as deep as this, otherwise the *Sea-kale* will not be nicely blanched.

GREENHOUSE AND CONSERVATORY.

Being exhibitors of *Chrysanthemums*, much of our time was employed in getting ready the plants and blooms for the exhibition which was held on Saturday last. Visitors to the *Chrysanthemum* shows marvel at the size of the blooms which they see in the stands, and wonder how it is that their plants at home do not produce such flowers. The reason is that the plants receive special treatment; one plant is grown in a 9-inch pot, two in an 11 inch, or three in a 13-inch pot, and each plant is allowed to carry only from three to six flowers, and the buds are thinned-out in September as soon as they are formed. If the plants are potted in suitable material, which should be good turfy loam three parts, and one part of rotted manure, liberal supplies of manure water from the time the flower-buds are set until the flowers are nearly expanded, will produce the results which may be seen at our exhibitions. Another matter which may be noticed, as it will be useful to purchasers, might have been observed at the exhibitions this year: In one catalogue there is a flower named *Pink Perfection*, in another it is *Miss Mary Morgan*; they are identical, and were both sent out the same year at a long price. Again, *Lady St. Clair*, *Empress of India*, *White Queen of England*, and *Mrs. Cunningham*, all seem to be white sports of *Queen of England*. If *Empress of India* is purchased, all the others may be left out. In our collection of blooms this year a large proportion had been destroyed by mildew before the flowers were fully open. This has been attributed to two causes: First, the plants were exposed to a severe frost before they were taken into the house; and second, the bed on which the pots stand is composed of cocoa-nut fibre refuse. This material is very good for the purpose in summer, but it retains a large quantity of moisture, which is slowly given off when the house is shut-up. The way in which the frost might cause the mischief was, that wherever the flowers had shown colour the florets were damaged, and, as a consequence, decay speedily sets in.

FLOWER GARDEN.

Cut off the decayed stems of Lilies in the *Rhododendron* beds, and as the surface of the beds was comparatively dry, hoed-up the weeds and raked the ground over; this has made all right for the winter. The beds not planted with spring flowering plants have been manured and dug over; the surface will thus be exposed to the weather all through the winter, and after being lightly "pointed" over before the plants are put out, will be in good order for them.—J. DOUGLAS.

TRADE CATALOGUES RECEIVED.

Edwin Cooling, Mile-Ash Nurseries, Derby.—*Descriptive Catalogue of Roses, Fruit Trees, Ornamental Trees, Shrubs, &c.*
W. Chater, Saffron Walden.—*Catalogue of Hollyhocks and Roses.*

Ewing & Co., Royal Norfolk Nurseries, Eaton, and Cringleford, Norwich.—*Catalogue of Fruit and Ornamental Trees and Shrubs, &c.*

Kelway & Son, Royal Nurseries, Langport, Somerset.—*Catalogue of Gladioli.*

F. & A. Dickson & Sons, Upton Nurseries, Chester.—*Catalogue of Forest and Ornamental Trees, Evergreens, &c.*

TO CORRESPONDENTS.

* * We request that no one will write privately to any of the correspondents of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to *The Editors of the Journal of Horticulture, &c., 171, Fleet Street, London, E.C.*

COLOURED PLATES OF FRUITS (J. McI.).—We know of none except in high-priced books.

TRANSPLANTING CELERY (*A. Constant Reader*).—Once transplanting is sufficient before planting in the trenches.

TOMATO CULTURE (*D. P. G.*).—There is no foundation for your insinuations.

CLEANING ZINC LABELS (*L. R. L.*).—Rub them with sand paper.

PEARS (*L. M. A.*).—Large varieties for stewing—Catillac, Gilgill, and Verulam. Dessert Pears ripe at Christmas—Beurre d'Artemberg, Glou Morceau, and Monarch.

SUTTONS' FLOURBALL POTATO.—"D. Deal," asks where I got the Suttons' Red-skin Flourball Potato seed. They came from Messrs. Sutton, Reading, in January, 1871, and my unfavourable opinion was formed from the quality of the first year's crop, which was in no respect superior to what I have grown from seed raised here in subsequent years. I have tried these "Red Flourballs" in different soils under different culture, but the result has always been the same, and they remain simply uneatable. West Cornwall, however, as I have already said, is a bad late-Potato district, so the results which I have complained of may not have occurred elsewhere.—W.

NEGLECTED WALL TREES (*B. K. L.*).—We do not advise radical treatment, such as digging the trees out or cutting close-in to the bole of the tree. You may get the trees into tolerably good shape in the course of three years by judicious management, but they will not make such handsome specimens as those which have been well managed from the first. Those trees which have not produced fruit-buds may be cut well back, all projecting laterals being cut close to the wall; these, by proper summer pruning and training, may be made nice fruit-bearing specimens next summer. The others may have the projecting laterals cut back where the operation does not interfere with the succeeding crop of fruit.

LABELS (*H. H. H.*).—Try Bell & Thorpe's, of Stratford-on-Avon. Write to them, and say what you want.

NAMES OF APPLE AND CONIFER (*W. B. B.*).—The Apple was smashed, and the twig so mashed-up with it, as to be unrecognisable. Specimens should be sent in a box.

MUSCAT GRAPES SHRIVELLING (*A. F.*).—If the stalks are dead, there probably is a deficiency of moisture at the roots.

WEEDS IN COURT-YARD (*F. T. G.*).—Water it with boiling brine.

SELECT HEATHS (*Erica*)—*Amabilis*, *elegans*, *Farricena*, *ferruginea* major, *gemifera* *elegans*, *Massin* major, *obovata*, *Sprengelii*, *tortuliflora*, *tricolor* *elegans*, *Triumphans*, *ventricosa* *grandiflora*, and *Turnbullii*.

GREENHOUSE ORNAMENTAL-FOLIAGED PLANTS (*N. B.*).—*Agapanthus umbellatus* fol. variegatus, *Bambusa Fortunei* variegata, *Cyrtosma Baueriana* variegata, *Cornifolia glauca* variegata, *Dracena australis*, *Eurya latifolia* variegata, *Lomatium cleistanthum*, *Phormium tenax* *Ventchii*, *Sedum azoideum* variegatum, *Sedum japonicum* variegatum, *Reineckia carnea* fol. variegatum, *Veronica Andersoni* variegata, *Yucca aloifolia* variegata, *Y. filamentosa* variegata, *Y. filifera*, and *Y. quadricolor*. Those marked with an asterisk are, if good plants, expensive. It would be well to see about prices before ordering. The others are moderate in price. To make up a dozen without them you might have *Isolepis gracilis*, *Saxifraga sarmentosa*, and *Centaurea rugosina* or *candidissima*. The variety *compacta* is the best form. The best plan is to procure plants, or you may raise them from seeds sown in March in a gentle hotbed, but plants from cuttings are much better. They, as well as the plants above named, may be had of any nurseryman or florist advertising in THE JOURNAL OF HORTICULTURE.

GROWING WALNUTS AND ACORNS IN WATER (*W. H.*).—The nuts should be suspended clear of the water, and be kept in position by a piece of string passed through cork. The root will be emitted downwards into the water, and the plant will need to be supported until it have roots to maintain it in position. Place in a closet until the nuts or acorns have made roots to reach the water and the first leaves are developed, then expose to light. It will be necessary to change the water occasionally and to keep it replenished as required, adding a piece of charcoal about the size of a small walnut every ten days or fortnight, and removing that previously used.

DAISIES ON LAWN (*H. B. S.*).—The lawn would be best freed of the Daisies by proceeding as you propose—viz., remove the present turf and sow grass seeds; but if sown in April it will not be like a lawn laid down with good turf by June or July. It will, however, have a good appearance by that time. Use the soil as a top-dressing in moist weather after mowing. For a lawn 60 yards by 30 yards you will need 25 lbs. of the finest mixture of lawn grass seeds.

STRAWBERRIES PLANTED IN SEPTEMBER (*J. H. B.*).—The rooted runners planted in September will have made roots if they have made little or no leaf-growth, and will, no doubt, progress in spring. We do not advise your doing anything to them further than placing some rather short litter about the plants, putting it nicely around the crown under the leaves, and in March fill-up any blanks.

HYACINTH BULBS EATEN (*Idem*).—The cause of the bulbs plunged in the open border having the tops eaten off, and holes made in them, may be the snails which you found, or some kind of grub. The pots ought to have been set on ashes, and plunged in and covered with the same or spent tan to the depth of from 4 to 6 inches. The damage is not due to the border being too damp, but a wet border is not suitable for bulbs. The fronds of the Ferns you enclosed are those of *Polypodium vulgare*.

SUPPORTING PRIMULA JAPONICA LEAVES (*G. C.*).—The leaves do not require supports, but should be allowed to assume their natural habit. Afford the plants more room, and keep them near the glass. Water only to keep the soil moist. They will, no doubt, flower in spring. The large leaves ought to be now decaying, and by midwinter be all gone except a few only of the smallest, which remain, marking the heart of the plants.

VINE TREATMENT (*Idem*).—The "Vine Manual" would suit you. It contains full particulars on the treatment of Vines. It may be had by post from our office for 2s. 7½d. Read also Pearson's "Vine Culture under Glass," 1s. 1d.

REPOTTING LARGE PLANTS (*E. C.*).—When the plants become large, and it is not desired to increase the size of pot, they may, after turning out of the pots, have the sides of the ball reduced by picking away the soil from about the roots all round, so as to admit an inch of fresh soil at the sides, and in this way they may be kept in the same size of pot for a number of years. They may be turned out of the pot by holding them on the side, and tapping the edge of the pot against a piece of heavy wood. In this way they come out of the pot quite as well as inverted. The time of repotting will depend upon the subject. The best time is when they are beginning to grow, or, if cut-in, after they have made fresh shoots an inch or so long,

shading and keeping moist until re-established. Cactuses should be repotted in spring, or when they are beginning to grow.

ADDING LAUREL CUTTINGS TO MANURE (*A. Reader*).—It is not desirable to throw the cuttings of Laurel hedges on the manure heap. All such refuse is best placed in a heap apart, and after lying a time should be turned over, and any woolly matter picked out and burnt.

STANDARD FRUIT TREES UNFRUITFUL (*Idem*).—"Well pruning" these only tends to cause growth; and the keeping-down the wall pruned, unless done in summer, would only tend to its continuance instead of the production of fruit buds. You may take out a trench as you propose, which should not be nearer to the stem than 3 feet, and working under the ball towards the stem of the tree, cut any roots going down, which may be below the majority of the roots. The trench may be filled-up with a compost of equal parts of turfy loam, old lime rubbish, and well-rotted manure; put in firmly, then mulch over the surface to the bole with 2 or 3 inches of short littery manure. The Plums may be treated similarly.

TREATMENT OF YOUNG VINES (*M.*).—Whether you ought to cut off one of two rods will depend upon the space at your disposal. The rods of a variety like Alicante ought to be not less than 3 feet apart—3 feet 6 inches would be better; two rods in that space would be far too close, the side branches would not have enough space to develop themselves. Stop the side branches two leaves beyond the bunch; all after-growths should be stopped at the first leaf. Your Vines ought to be strong enough to bear full crops of Grapes.

FRUIT TREES IN DRESSED GROUNDS (*A. C. H.*).—As you take a great interest in fruit trees, and cannot have them in the kitchen garden, there is no reason, except fashion, why you should not plant them in the shrubbery, on the lawn, or have well-trained trees on the wall amongst Roses. We have seen it done in some very aristocratic places. In one, where a large staff of gardeners and labourers are kept, a flower garden is laid out in the most beautiful manner. It is bounded on one side by climbing Roses on a highly ornamental trellis, on the other by a high wall facing south, which is planted with fruit trees and Roses, and we never heard of anyone remarking on the incongruity of it. A Cherry tree covered with snow-white blossoms in spring is none the less ornamental because it will be loaded with useful fruit in summer, and there are few flowers more delicately beautiful than Apple blossoms.

ARRANGEMENT OF KITCHEN GARDEN (*J. B. W.*).—The walls will, if judiciously planted, probably grow as much choice fruit as you require; on the wall facing south plant Peaches and Nectarines. The best Peaches are Early Y. Rk., Royal George, Bellegarde, Dr. Hogg, and Barrington. Nectarines: Lord Napier, Murray, Violette d'Hyvie, and Victoria. On the wall facing east plant Pears Louise Bonne of Jersey, Beurré d'Amabilis, Van Mous Leon le Clerc, Glou Morceau, Marie Louise, Easter Beurre, Beurré Diel, and Bergamotte d'Espereu. Plums: Transparent Gage, Jefferson, and Coe's Golden Drop. On the wall facing east Cherries and Plums; of Cherries the most suitable are Archduke, Bigarreau Napoleon, Black Tartarian, Elton, Knight's Early Black, and Royal Duke; Plums—Green Gage, Guthrie's Late Green, Bino Imperatrice, and Denyer's Victoria. On the wall facing north Morello Cherries and Red Currants. If you wish to have Apricots plant Kaisha, Grosse Peche, and Moorpark on the walls facing south or east. Then as to the arrangement inside the walls. The narrow borders between the walk and walls will do for all the smaller vegetables, herbs, &c.; that against the south wall for early Potatoes, Peas, Dwarf Kidney Beans, or indeed any crop that is required early. The two internal squares should have borders 6 feet wide all round the outsides, and be planted with pyramid Apple trees, Gooseberry and Currant bushes, and a few kitchen Plums, besides which there are a few Pear trees which produce the finest-flavoured fruit on pyramids; Beurre Superfin and Doyenne du Comice are notable examples. Williams's Bon Chretien, though it does not make a handsome pyramid, must not be omitted. The best dessert Apples are Red Jonnetine, Irish Peach, Cox's Orange Pippin, Golden Pippin, Mannington's Pearmain, Kerry Pippin, Nonpareil, Scarlet Nonpareil, Sykehouse and Howland's Russet, King of the Pippins, and Ribston Pippin. Kitchen Apples, a few of which will also do for dessert: Keswick Codlin, Alexander, Cox's Pomona, Cellini, Golden Noble, New Hawthornden, Blenheim Pippin, Requette du Canada, Bymer, Wellington, or Dumelow's Seedling, Gooseberry, and Sturmer Pippin. Currants: Black Naples and Lee's Prolific, Red, and White. Gooseberries: Green Gage, Champagne (Red and Yellow), Warrington, Whitesmith, and Golden Drop are amongst the best. Raspberries may be planted under the north wall. Carter's Prolific and Pastoff are good Red sorts. Yellow Antwerp is desirable for dessert. Strawberries may either be planted on the borders or in beds; Black Prince, Keens' Seedling, President, Sir C. Napier, and British Queen.

CHLISANTHEMUMS FOR GARDEN AND GREENHOUSE (*Aurora*).—*Large-flowering varieties*: Annie Salter, Aurea multiflora, Beverley, Donald Beaton, Empress of India, Eve, Felicity, Guernsey Nugget, Her Majesty, Jardin des Plantes, Lady Harding, Lady Talford, Lord Derby, Mrs. G. Rundle, Prince of Wales, Orange Perfection, Prince Alfred, Princess Beatrice, Princess of Teck, Princess of Wales, Mrs. Heale, Rev. J. Dix, Killman, Robert James, Sir S. Carey, Venus, White Globe, White Venus, William Edward, and Yellow Perfection. *Proper*: Antonius, Aurora Borealis (golden), Cedo Nulli and its golden, lilac, and brown varieties; Miss Nightingale, Mr. Astie, Made-moiselle Marthe, Mustapha, and White Trevenna. Amongst the *Japanese* are Dr. Masters, Elaine, Fair Maid of Guernsey, Garnet, Grandiflorum, James Salter, Jane Salter, Magnus Bonum, Red Dragon, and The Daimio.

MUSCAT OF ALEXANDRIA AND BLACK HAMBURGH GRAPES IN THE SAME HOUSE (*H. D.*).—The two sorts will go together. Plant the Muscats at the warmer end of the house, and keep the house closer at that part. The Muscats require 5 more heat than the Black Hamburg, and will take six weeks longer to ripen the fruit.

PLANTS IN WINDOW-BOX (*Croch*).—Plan's in a bed-room promote health. No drainage needed if an excess of water is not applied. Eight inches in depth of soil are all that are needed for Crocuses, Violets, Primroses and Polyanthus. They will succeed if you admit an freely to them.

SALTING ASPARAGUS BED (*S. C.*).—Salt is best applied in spring and summer during the plant's growing. Little and often, is the best rule. Apply manure as usual; liquid manure is best, and very strong. If you will favour us with your direction we will return the stamps.

VINE SHOOTS MILDEWEED (*W. A. E.*).—The shoot is unripe, and will not ripen now. All such should be cut away, for they will not be fruitful. There has been too little light and air admitted to your orchard house.

NAMES OF FRUIT (*Rev. A. Blythman*).—1, not known; 2, Carlisle Codlin; 3, Golden Winter Pearmain; 4, Colman. (*D. B.*)—1, Waltham Abbey Seedling; 2, Monkton; 3, Monkland Pippin; 4, Brooks's; 5, Marmalade; 6, London Pippin. (*J. E.*)—1, Paradise Pippin; 2, Norfolk Seedling.

POULTRY, BEE, AND PIGEON CHRONICLE.

STANDARD CHARACTERISTICS.

As I find that Mr. Wright and some others have misunderstood what I have written on this subject, I would, with your permission, be more explicit. What I have said is that the "Standard" should be "recognised by the judges." I would not make a standard and force it on the judges; on the contrary, I would have the standard made and agreed to by the "competent" judges. Nor did I ever intend that they should add the values of the points; anyone who could not decide without such a process as that, might be ranked fairly amongst the "incompetents." I look on the values of the points as but relative, and consequently instructive. This leads me to remark that Mr. Wright, or the judges from whose decisions he has compiled his "Value of Defects in Judging," and also the "Eds." in note, page 321, set too high a value on "condition," and for this reason—viz., condition is no part of a bird; it is the easiest point to attain, and consequently of the least value, and so I do not think the judges should pass by birds simply because they have been "overshown," when a fortnight's care would make them all right again; but very old birds, no matter what they may have been, should not have prizes awarded to them.

Mr. Wright, again, tells us that "all the competent judges refuse to be bound by a uniform standard." I wish he would give their reasons for refusing. I can understand why they would not like to be bound by a standard agreed to by a committee or clubs, but why they should not publish a standard of their own I cannot, unless the mere fact of committing it to paper would leave them open to critical overhauling, and deprive them of the little elasticity they at present enjoy. Would not Messrs. Hewitt and Teebay read over Mr. Wright's "Schedules for Judging" and "Value of Defects," and alter any points from which they differ?—O. P. H. Z.

[We have omitted the conclusion of your letter because wholesale labelling is always unjust and never beneficial.—Eds.]

BIRMINGHAM CATTLE AND POULTRY SHOW.

The twenty-fifth annual Exhibition will open at Bingley Hall on the 29th inst., and from the highly satisfactory nature of the entries in every department there will, we doubt not, be such a display of stock and poultry as will maintain the *prestige* of these meetings. The amount of money at the disposal of the Judges (£2600) is larger than on any previous occasion, and the competition for the four £100 prizes and the 100 guineas Elkington Challenge Cup is expected to be unusually interesting. The entries of poultry and Pigeons are considerably over the average.

We sincerely trust that all classes throughout the district will cordially unite in supporting the Council in their disinterested, indefatigable, and laudable endeavours to maintain the prosperity and usefulness of one of the most popular of our local institutions.

The railway companies have acceded fully to the wishes of the Council, and have announced excursion trains from Bristol, Gloucester, Worcester, Hereford, Shrewsbury, Stafford, Uttoxeter, Derby, Burton, Banbury, Leamington, Stratford, as well as from all the large towns in Yorkshire, Lincolnshire, Notts, &c.

The judging will, as usual, be in public, when life members are admitted free, and others upon payment of 10s.

Amongst other improvements, arrangements have been made with the printers for a full supply of catalogues for sale on the day of judging.

Permanent telegraph and postal offices have been erected, and the Secretary is instructed to inform any exhibitor, who may desire it, the result of the awards, as regards his own exhibits, on the day of judging.

MALAYS.

I AM glad to find Mr. Hinton is pleading for Malays some attention by poultry committees. From my experience of committees I find that they generally consist of men of some understanding, but few of them are what you can term men of the fancy, the result is that they copy from other prize lists—so the Malays are left out. I have written to the secretaries of two shows, not a hundred miles from Darham, offering to get entries for Malays, but have not been successful. The Oxford test shows that if good prizes are offered the entries are not inferior to some of the other classes.

And now I must have a word with you. You promised last year you would do your best for the benefit of the Malay classes, but your remarks on them at the Oxford Show were so poor that one might think that they had been but poorly represented. A word from you would do much to bring them into note, and I trust your next comments will give some description of the qualities of several of the best pens, say at the Palace. Is it not

too bad of the Manchester Committee to name almost all varieties of poultry and not the Malays? Burslem has issued its first schedule, but nothing for Malays. Bristol has been more considerate, and I trust the Malays will muster strongly enough to give every satisfaction.—HAWKINS.

[We do not interfere with the notes of our reporters. We do not say to what extent we admire or consider ugly Malays.—Eds.]

CRYSTAL PALACE POULTRY SHOW.

(From our Reporter.)

The Show of 1872 was generally admitted to be the most extraordinary and successful exhibition of poultry and Pigeons ever brought together, and many thought it so near perfection that they not only pronounced it the best ever held, but prophesied that it was greater than any that "ever would be held." We have now to chronicle a still greater success. It will be remembered that five years ago the inauguration of a poultry and Pigeon exhibition took place in London, and the first Show was held in one of the Terrace drawing-rooms at the Crystal Palace, the total number of entries being under fourteen hundred. When the entries closed for the second Show the numbers had so increased that it was found necessary to provide further accommodation for them, and the Directors of the Crystal Palace kindly placed the nave of the building at the disposal of the Committee. This almost illimitable space, together with the magnificent light, enabled Sir Chanticleer and Dame Partlett to be seen and shown to an advantage which no other building in the world could do, and hence we have now a great national Show which has in the short space of five years reached 3600 entries. It appears likely to still increase, for we find on looking over the list of exhibitors this Show has had its effect upon the suburban districts of London, that the residents are gradually increasing their contribution of birds, and that many who simply associated Fowls with new-laid eggs for breakfast, Geese with Michaelmas day, and Turkeys with sausages, have been struck with the marvellous creations of beauty displayed in the different varieties of fowls in the Crystal Palace, finding that in addition to their usefulness it is gratifying and instructive to be able to take some share in the culture and development of the feathered creatures which were so much admired and rejoined so triumphant at Sydenham last week.

The arrangements were in every way satisfactory, and helped wonderfully to contribute to the success of the Show. We so frequently see in a show the pens bundled together after the fashion of old egg-boxes in a cheesemonger's warehouse, that we call particular attention to this matter, in the hope that the example set in our national Show may be followed as far as possible in shows of less magnitude. The pens were arranged in two tiers, and great care was taken to place the different varieties together, the one end of the building being devoted to the Dorkings, Brahmans, Cochins, Spanish, French, and Hamburgs, and the other to the Game, the Game Bantams being placed above them and affording an amusing contrast. The next avenue was given up to the Ducks, Rabbits, and Selling classes, the centre of the building being set apart for the Pigeons. The shrubs, &c., which are so plentifully distributed, and other accessories of the Palace, served to produce the most charming effect, and helped to cheer the spirits of the enthusiast who had determined to labour through a complete inspection of all the different varieties.

The *Dorking* classes contained a fine lot, showing a marked improvement on last year. The Rev. E. Bartrum won in the Coloured class for cocks with a grand fellow; the second prize also went to a good bird and shown in splendid condition. In the class for hens the competition was very close. A number of genuine birds were to be found. The winners we thought rightly placed. In classes for cockerels and pullets, Mrs. Arkwright took five of the ten prizes offered for competition, including the two cups. The Silver-Grey appeared in greater force than last year, and we hope to see them again popular in the south of England. The Whites were greatly admired, and the Cuckoos are gradually making their way in public favour.

The *Cochin* classes contained some grand birds, but we were surprised to see only eight entries in the class for old cocks. The cockerel class also was not so large as might have been expected considering the popularity of this variety; here we liked the second-prize bird much better than the winner. The pullets were a fine lot and properly placed. In Partridge cocks Mr. Shrimpton won easily; the hens were very deficient in pencilling, the best bird being out of condition and not noticed. The young classes were not so good as those of last year. The Whites were a charming lot; we know of no birds lately which have advanced so much in public estimation. The Blacks astonished us in numbers, but they were very poor.

The *Brahma* classes were a show in themselves. In the class for Dark cocks many of the birds were not over their moult, which doubtless influenced to some extent the Judges' awards; the class for hens was the best in the Show, a more magnificent lot could not be collected, Mr. Lingwood winning with a

splendid hen, perfectly pencilled and in superb condition. Mr. Evans, Mr. Wright, and Mr. Ansdell also showed some grand birds, but Mr. Ansdell's birds were not in condition, or they might have been winners. The class for cockerels was a large one, the first and second birds being clear away from the rest. The pullet class contained a lot of good birds, and we thought the Judge here accomplished a very difficult task in the most satisfactory manner. Eight prizes were offered for competition; in many cases the difference was of the slightest nature. The Lights, except in numbers, could not approach the Darks. In the cock class we preferred two or three pens to the winners. Mr. Haines was justly placed first in the class for cockerels, and in pullets Mrs. Cheshire had an equally easy victory.

The *Spanish* classes were the worst we have ever seen in the Crystal Palace Show. Five cocks only were to be found in the class for old birds; the first-prize bird was well shown; some good hens were exhibited, but they were not in condition; the cockerels were very inferior, and the pullets, with one or two exceptions, but little better; the best pullet was a little up in the back and consequently passed over.

The *French* fowls are rapidly increasing in popularity, and promise soon to make as great a feature in this Show as the Brahmans. We thought greater progress had been made this year with the Houdans than the Crèves.

The *Hamburghs* were a beautiful lot, and secured a large share of the attention of the visitors.

The *Game* classes were hardly up to the standard of previous shows. In the class for Black Red cocks, a great many splashed breasts were to be found. The winning cockerel was a very pretty bird; Mr. Douglas also showed a cockerel well worthy of notice.

In *Bantams* the Black Red cocks, singularly, were the same in numbers as last year—forty-four. The first-prize bird, which belonged to Mr. Eaton, was a delightful specimen; it was not only a Bantam, but in every essential a Game bird. The second-prize cock was a smart bird, very good in colour, and was claimed at £25. The third and fourth-prize birds were very inferior to the first and second. The fourth was very young, had been recently dubbed, and doubtless will improve. A neat bird shown by Mr. Entwisle in this class was highly commended. In the class for hens several very stylish-looking birds were to be found. The winners were rightly placed.

In both classes of Brown Red the birds were inferior in numbers and quality to those of last year. In the cock class the first prize went to Mr. Entwisle: we have seen him show much better birds. The second and third-prize awards we did not like, and think a better bird might have been found than either. In the next class a good hen was shown by Mr. Beighton, which took the cup.

In the Duckwing class Mr. Eaton was again first, repeating a victory which he once before achieved by winning in the classes for Black Red cocks, and again in the Duckwings. On this occasion he added another laurel still, taking the first prize in the class for Duckwing hens with a most graceful and stylish bird.

The Pile Bantams were the best collection of this variety we have ever seen, Mr. Entwisle's first-prize bird being especially noticeable, and also the hen shown by Mr. Steel. The third-prize hen we did not like so well as others in the class.

The Wheaten class was an extremely good one, and must have given the Judge some trouble to make his selection.

Bantams, Black, were not quite so numerous as last year, but some pleasing birds were shown; Mr. Taylor rightly being placed first.

White Bantams were a moderate lot.

Sebrights.—An exquisite pen of Silvers with a good ground colour were shown by Mr. Cook, and ran Mr. Leno very close for the first prize.

The Any variety class contained a lot of Japanese, the good ones being badly matched; some White, some Cuckoos of a rather washed-out colour, a good pair of Frizzled highly commended which we should like to have seen placed third; and two pens of Pekins, which were first and second, the first-prize pen being remarkably handsome.

The Nankeen Bantams had a class to themselves. They were not a grand lot, and must greatly improve if they ever be expected to make a position superior to the Any variety class.

Both classes of *Ducks* were exceedingly fine, the cup going to a grand pair of Rouens. The Black class was a large one, but the awards, again, did not seem to please all the exhibitors.

The *Turkeys* were a fine lot, and the present arrangement of dividing the classes into young and old appears to give more satisfaction than the one previously adopted, of allowing them to compete together, the result being that eighteen young birds were entered.

Before closing our remarks on this Leviathan Show we must not omit a word for the Selling classes. Some of the winners here could easily maintain their position in many of our pro-

vincial shows. The price of each pen was restricted to £2. The prizewinners were afterwards sold by auction, and a very improved price was obtained for many of them. A Duckwing cockerel entered at £2 was knocked down for £7 15s., and similar prizes were obtained for many others. We understand the sales reached £1000. We are not surprised at the amount, for on looking over the Sale classes on the last day we could scarcely find one pen in six without a "sold" label affixed to it; and throughout the Show almost all the birds with any pretensions, entered at a moderate price, appear to have found purchasers. Among the largest we noticed a Dark Brahma cock sold at £20, the first-prize Light Brahma pullet at £20, a Cochin cock at £20, and the second-prize Black Red Bantam cockerel at £25. Numerous others were to be found in poultry and Pigeons at amounts exceeding £10.

The Judges for *Poultry* were—Mr. Teebay, Dorkings and Brahmans; Capt. Heaton, Cochins; Mr. Dixon, Spanish, Hamburghs, and Ducks; Messrs. Smith and Martin, Game and Game Bantams, &c. *Pigeons*: Messrs. Smith, Montgomery and Stewart, Pouters; Mr. Cooker, Carriers; Mr. Percivall, Dragons; Messrs. Weir and Esquilant, the other varieties. The collection pens were judged by Messrs. Percivall, Weir, and Esquilant. Mr. Heath took the *Rabbits*.

BARRHEAD POULTRY SHOW.

THIS was held on the 22nd inst. The Show, in point of numbers, was not quite equal to those of former years, although the quality of the birds was as good as ever. *Scotch-Greys*, as a class, were very good, the first-prize bird running very hard against the Dorkings for the special prizes. *Spanish* were not very numerous; the first-prize pen was a very fair bird. The first pen of *Dorkings* was especially good, the second and third-prize pens were also fair. Both classes of *Game* were good. The bird which won the special prize will again be heard of. *Hamburghs* were numerous; the pen of Silver-pencils that carried off the special prize was very fine, more especially the hen. There was not much of note about any of the others, except the first-prize pen of *Game Bantams*.

OLD SCOTCH BREEDS.—1, J. Fulton, Both. 2, J. Jardine, Quarter. 3, C. McDermaid, Glasgow. *hc*, W. Thomson, Glasgow. *c*, J. Young, Neilston.

SPANISH.—1, A. Walker, Kilmarnock. 2 and 3, D. Heggie, Shotts. *hc*, A. Main, Dundee.

DORKINGS.—1 and Special, Z. H. Heys, Barrhead. 2 and 3, Mrs. Alston, Hamilton. *hc* and *c*, J. Turnbull, Larbert.

GAME.—Black-breasted and other *Reds*.—1 and Special, R. Heys, Springhill, Barrhead. 2, F. McKinlay, Glenmill, Campsee. 3, W. & J. Cockran, Barrhead. *hc*, T. Mackie, Stewarton. *Any other variety*.—1, R. Andrew, Barrhead. 2, J. Alison, Shotts. 3, A. McKay, Barrhead. *hc*, J. McIndoe, Barrhead.

HAMBURGHS.—Golden-spangled.—1, T. Mackie, Stewarton. 2, J. Crawford, Both. 3, J. McArthur, Kilmarnock. *hc*, W. Dwyer, Yorkshire. *Golden-pencils*.—1 and *hc*, D. Gilmore, Kilmarnock. 2, J. Smith, Stewarton. 3, R. D. Walker, Stewarton.

HAMBURGHS.—Silver-spangled.—1, Special, and *hc*, R. Cameron, Stewarton. 2, W. Husband, Kilmarnock. 3, J. Bruce, Barrhead. *Silver-pencilled*.—1 and Special, J. Borland, Kilmarnock. 2, J. McLaren, Kilmarnock. 3, W. Banchope, Paisley.

BRAHMA POOTRA.—1, Mrs. A. Hamilton. 2, H. Wyse, Bishopbriggs. 3, A. Brown, Neilston.

FRIZZLED.—1 and Special, J. Drennan, Holytown. 2, E. Fearon, Whitehaven. 3, H. Wyse.

POLANDS.—Topped.—1 and 3, J. Stevenson, Airdrie. 2, W. Gibb, Cambusnethan. *hc*, A. Wyse, Johnston.

ANY OTHER VARIETY.—1 and 2, J. C. Shaw, Barrhead. 3, G. Anderson, Lancashire. *c*, A. White, Paisley.

CROSS BREEDS.—1, J. Pollock, Meams. 2, A. Brown, Neilston. 3, A. Sempie, East Kirkcaldy. *hc*, G. Hamilton, Neilston.

BANTAMS.—Game.—1 and Special, W. Stewart, Springhill. 2, J. Aitken, Johnston. 3, E. Fearon, Whitehaven. *hc*, Z. H. Heys, Barrhead. *c*, J. Alison, Shotts. *Any other variety*.—2, R. H. Ashton, Manchester.

DUCKS.—*Andesborn*.—1, Special, 2 and 3, Z. H. Heys. *Any other variety*.—1, 2 and 3, J. Pollock, Walton, Meams.

SELLING CLASS.—1, K. D. Walker, Stewarton. 2, W. McMillan, Bothwell. 3, Z. H. Heys.

ANY BREED.—Hens.—1, Z. H. Heys. 2, R. Macnab, Govan. 3, G. Anderston, Lancashire.

BERWICK AND BORDER ORNITHOLOGICAL SHOW.

THIS was held on 19th and 20th inst. The following are the awards.

BERWICK.—*Clear-ticked or marked Yellow*.—2, R. Hawman, Middlesbrough. 3, Forsyth & McDougal, Edinburgh. *Clear-ticked or marked Buff*.—1, G. & J. Mackley, Norwich. 2, R. Hawman. 3 and *hc*, G. P. Norris. *hc*, P. Farrell, Berwick. *c*, J. Eagle, Edinburgh.

GLASGOW DONS.—*Clear Yellow*.—1, C. Langton, Hillbury, Ayrton. 2, Forsyth & McDougal. 3, P. Farrell. *hc*, C. Langton; Forsyth & McDougal. *Clear Buff*.—1 and 2, C. Langton. 3, W. Forsyth, Spittal. *hc*, J. Bryce, Berwick; G. Forsyth, Spittal. *hc*, E. Agry, Bowker. *c*, P. Farrell.

GLASGOW DONS.—*Patched*.—1, Forsyth & McDougal. 2, C. Langton. 3, C. D. Haliburton, Berwick. *hc* and *hc*, J. Eagle.

NOVICH.—*Clear Yellow*.—1 and 3, Bemrose & Orme, Derby. 2 and *hc*, J. Adams, Coventry. *hc*, Robson & Dawson. *c*, R. Robinson, Middlesbrough. *Clear Buff*.—1 and 3, Bemrose & Orme. 2 and *c*, J. Adams. *hc*, G. & J. Mackley. *hc*, Robson & Dawson.

NOVICH.—*Evenly-marked Yellow*.—1, *hc* and *hc*, Bemrose & Orme. 2, H. and P. Audley, Leicester. 3, J. Adams. *Evenly-marked Buff*.—1, H. & D. Audley. 2, and *hc*, Bemrose & Orme. *hc* and *c*, J. Adams.

NOVICH.—*Ticked or Unevenly-marked Yellow*.—1, *hc*, and *c*, Bemrose and Orme. 2, J. Adams. 3, G. & J. Mackley. *hc*, W. Carrick, Middlesbrough.

NOVICH.—*Ticked or Unevenly-marked Buff*.—1, *hc*, and *hc*, Bemrose & Orme. 2 and *c*, J. Adams. 3, G. & J. Mackley.

NOVICH.—*Any variety of Crested Yellow*.—1, R. E. Triffitt, York. 2 and *hc*, Bemrose & Orme. 3, W. Watson, jun., Darlington. *hc*, Cox & Hillier, North-

ampton, c, W. L. Bebe, Berwick. *Any variety of Crested Buff*.—1, J. Shield, Ravensdowne, Berwick. 2, G. & J. Mackley, 3, K. & J. Baxter, *phs*, R. Hawman; Martin & Griffin, Northampton. *hc*, G. Doman, Nottingham. c, J. Goode, Leicester.

LIZARD.—*Golden spangled*.—2 and 3, W. Watson, jun. *phc*, R. Ritchie, Darlington. *Salver spangled*.—1 and 2, W. Watson, jun. 3 and *etc*, R. Ritchie, *hc*, J. Taylor, Middlesbrough. c, L. Belk, Dewsbury.

YORKSHIRE.—1, T. Tenniswood, Middlesbrough. 2, J. Cleminson, Darlington. 3 and *hc*, L. Belk. *phc*, W. Lister, Milton.

CINNAMON.—*Double*.—1 and *phc*, Benrose & Orme. 2, J. Adams. 3, Cox and Hillier. *hc*, G. Wallace, Berwick; J. Taylor. *Buff*.—1, Benrose & Orme. 2, G. & J. Mackley. 3 and *hc*, J. Adams. *phc*, Cox & Hillier. c, Benrose & Orme; G. Wallace; J. Taylor. *Fragrant*.—1 and 2, L. Belk. 3, R. Robinson. *phc*, E. & J. Bister. *hc* and *c*, Benrose & Orme.

GOLDFINCH MULE.—*Evenly marked*.—1, R. Hawman. 2, E. & J. Baxter. 3, W. & C. Burnston, Middlesbrough. *phs*, W. Hutton, North Leeds. *hc*, J. Spence, South Shields. *Unevenly marked*.—1, J. Goode. 2, W. Hutton. 3, W. Lister, Malton. *phs*, G. & J. Mackley. *hc*, E. L. Wallace. c, R. Hawman. *Dark*.—1, Benrose & Orme. 2, Cox and Hillier. 3, C. Holt, Stockton. *phc*, W. Hutton. *hc*, J. Stevens, Middlesbrough; T. Robertson. c, J. B. Gilchrist, Tweedmouth.

ANY OTHER VARIETY OF MULE.—1, J. Spence. 2, R. Hawman. 3, W. Hutton. SELLING CLASS.—1, C. Luchon. 2, W. Watson, jun. 3, H. & D. Audley. *phc*, R. E. Triffitt. *hc*, G. Greig, Edinburgh. c, R. L. Wallace.

GOLDFINCH.—1, G. & J. Mackley. 2, J. Goode. 3, J. B. Gilchrist.

LINNET.—*Brown*.—1, W. H. Bebe. 2 and 3, W. Carriek, Middlesbrough. *phc*, R. Hawman.

BRITISH BIRD.—*Any other variety*.—1, G. Wallace. 2, Miss Wilson. 3, T. Robertson. *phc*, W. & C. Burnston; Mrs. J. B. Carter, Berwick. *hc*, Cox and Hillier.

DISTRICT PRIZES.—*To be shown solely for shape*.—1, T. Robertson. 2, W. Head Smith. 3, T. Hall. *phc*, E. Grey; W. Greive, *hc*, W. Head Smith; W. Trainer (2). *Most Evenly-marked Bird*.—1, J. Smeaton. 2, T. Robertson. 3, W. Gilchrist.

JUDGE.—Mr. G. J. Barnesby, Derby.

THE NATIONAL PERISTERONIC SOCIETY held a meeting on the 15th inst. The Crystal Palace had been during the day the London home of the fancy, and this evening its rendezvous was the Cevent Garden Hotel, where entertainment and hospitality had been provided for all comers by their brethren of the above Society. The visitors prepared to witness a varied and high-class collection of birds were not disappointed; Carriers, Almonds, Short-faced Tumblers, Baldheads, Dragons, Barbs being in great force. Col. Hassard, Capt. Heaton, Messrs. Montgomery, Ord, Graham, Betty, Tegetmeier, Vander Meersch, Heritage, Baunton, Ford, Gresham, Jones, Whitehead, Crisp, Easten, and Ford were competitors. The National Peristeronic Society will show in great force at its annual exhibition, fixed for the second Tuesday in January.

BEARD, BALDHEAD, AND MOTTLED TUMBLERS.

THE discussion opened by "TURKEY QUILL," and entered into by "WILTSHIRE RECTOR" and "A WOULD-BE EXHIBITOR," is alike interesting to breeders, exhibitors, and committees of poultry shows. "A WOULD-BE EXHIBITOR" appears to me to cast a little too much of the blame on the latter when he remarks, "I think it very discreditible for a show of any pretension not to have classes for all that are really distinct breeds, and not for those only where the committees are pretty sure of good entries. If these shows are really for the improvement of the different breeds and not for profit, then I say let every distinct variety have a separate class, and not classes for mongrel-bred birds because the classes are sure to pay well."

In reply I would remark, that if exhibitors would only take a share of the responsibility and burden off the shoulders of the committees by simply contributing to the prizes, be it ever so little individually, much more could be done to encourage the various breeds of poultry and Pigeons, including those complained of as being so neglected, and separate classes could be made. The necessary expense attending an ornithological exhibition of any pretension is indeed great—greater than is generally anticipated—and I question if the promoters of forty-eight out of fifty of such projects ever make a farthing profit out of them. The reverse is the rule. Were it not for the assistance afforded by private subscribers—oft times neither breeders nor exhibitors—many societies would have to be pretty heavily out of pocket or fall through altogether. Few, except those actually engaged in carrying out the details of a show, are aware of the great anxiety, energy, care, and perseverance required to bring such an undertaking to a successful issue. The public have to be satisfied as well as the exhibitors, which is a most difficult matter at times, for with regard to the latter all cannot take prizes. None but the most ardent "fanciers" would continue year after year to carry out such meetings, and for what?—assuredly not, in the majority of cases, for profit, but simply from a love of the work and a desire to promote improvement. The society I have the honour to represent has been in existence some half-dozen years or more, and during the whole of that time not a fraction has accrued to the members from the funds; on the contrary, more than £50 has been subscribed by them, to say nothing of time and extra monetary expenses devoted to the society.

"A WOULD-BE EXHIBITOR" suggests a remedy in his closing

remarks that would insure a place for the above or any other neglected classes in the prize schedule. If each breeder were to subscribe a small sum towards special prizes, societies are to be found who would be willing to augment the list. I can name one at least. This idea has been very successfully carried out in the Light Brahma classes by that estimable lady and patroness Mrs. D. Turner Turner, of Avon, Ringwood, and has also been advocated in these columns by H. M. Maynard, Esq., himself a large and successful breeder of poultry and Pigeons.

In conclusion, I shall be extremely pleased to correspond with "A WOULD-BE EXHIBITOR" or any other gentleman willing to assist, and enclose my card to the Editors. Encourage the committees, and in turn encouragement will be given. Did space permit, with regard to the "non-paying" classes, I could prove that such have been continued year after year, and are still in the prize list, but I fear I have already trespassed too far.—SECRETARY.

MY BEES.

I COMMENCED bee-keeping this year March 25th with one strong stock hive. The bees seemed to do very well all the spring and early summer, working most industriously, carrying in large pellets of pollen, and I hoped storing plenty of honey, being situated in a large old-fashioned garden with an abundance of spring flowers, and teeming in the months of June and July with large cabbage roses and honeysuckles. How anxiously I watched for my first swarm after the first day of the drones' appearance. On the 25th of May one of the queens of a neighbouring apiary was seen to issue from the hive well attended, but on account of a passing cloud she returned; consequently I was still more anxious for my own to come out. They were then very busy, and drones extremely numerous, and one day they hung from the alighting-board in one large cluster, like an immense bunch of grapes. Surely, I thought, now they are coming; but, no, I was again to be disappointed, and to keep my watch for three more days, until Sunday morning, June 8th, out tumbled the bees—such a glorious swarm—about 11 a.m., and alighted in a little thicket of ivy immediately behind the hive, where they rested just two hours until the gardener could be fetched, myself not daring to approach. About three minutes before he arrived they took flight, ascended into the air, and appeared to alight in a large sycamore tree; but, alas! by the time the gardener reached the garden they were far, far away. We sought for them long enough after, but all in vain; and, strange to say, the man himself kept bees, and had hived a swarm just before he came to me, and when he got back to his own home they, too, had gone; also those of a friend of his (both of which were hived in the usual common straw lives), and another man's in a neighbouring village. So that on the same day, and nearly about the same time, 2 p.m., four swarms, three of which were hived, took flight and disappeared. The day was bright and warm, but the wind rose, and it was a cold boisterous night. Such an occurrence as four swarms so mysteriously disappearing in so short a time was unknown in the experience of the aged apiarians of this neighbourhood. I should be glad if anyone would give me a reason for their doing so, and also if any other person's bees have taken flight.

Standing quietly beside the hive after sunset on the 19th, I distinctly heard the queen "tun in hir treble voic," one, two, and three, each after the other, so that I was prepared for the second swarm the next day. It came out in the morning, though it was not very favourable weather. The bees were duly hived and put in their place. We found that two queens had issued with the swarm, one of which returned to the stock hive and was killed. On the 29th, to my great delight, I found they had made a large piece of comb, a lump of which I perceived had fallen near the mouth of the hive. I fancy it had broken away from its place, as many bees were trying, and eventually succeeded in, hoisting it up again. The hive has now made good progress with the comb, having three or four large leaves, though not a very great number of bees, having lost a great many in fights with wasps and robber bees, &c. They have taken 10 lbs. of liquid sugar within the last three weeks. Do you think they will require any more, and that they will be able to stand the winter? I should be glad if anyone would kindly inform me of anything I could do to benefit them for the coming winter, as I take especial care of them, and should be grieved to lose them, being the last of my original stock.

We drove the old ones on the 14th of July together with another hive belonging to the gardener, which we thought would be better of being driven, and sent both driven hives to the moors, about two miles from here, for the benefit of the heather. After having been there a few weeks, judge of my great grief when word was brought to me to say that they were all lying dead on the floorboard. Only my bees were dead; the other hive seemed to be doing well. I took the first opportunity of driving over to find out, if I could, the cause of such a dreadful catastrophe. I searched amongst them until I found her majesty, who looked as if she had died a natural death, but I

cannot tell; the only probable thing to my mind is that they have been starved. I found nothing but brood in the comb, some of which was alive ten days after the death of the bees. The heather was in full bloom, and it was fine warm weather. The other hive has been dreadfully robbed by the wasps, and is very weak.

From my stock hive, which I drove, we took 10 lbs. of honey and half a pound of wax, together with two fine swarms, the prime one of which I lost and the stock; but this bad luck, I think, instead of disheartening me, has made me take a fresh interest in my bees, on the strength of which I have procured another stock hive, which has not swarmed this year, feels very heavy, and is full to the bottom of light yellow comb. From this I expect great things next year.

My hives stand in an open situation facing the south, with only the protection of the common milk-pancheon, in the same line, and about a yard distance from a small greenhouse. Which do you advise—my having a shed built for them, or putting them in the greenhouse for the winter? the temperature is never above 60°.

I am at present using the ordinary straw skep, but am thinking of procuring other hives for my next year's swarms. Which kind of hive would you recommend to me as easy of management, snpering, &c.? Being only a beginner in bee-keeping, I have not yet much experience, and that only obtained from books. Your Journal has afforded me much pleasure in reading, and every week I eagerly look forward to receiving it; more especially that corner which is devoted to bee-management I enjoy. My second swarm I think would be better able to stand the winter if I could unite it to some more bees, but, unfortunately, I know of none which are condemned in this neighbourhood. I should feel greatly obliged to any of the readers of the Journal if they could inform me of any likely to be so, if it is not too late in the season to purchase them.—L. A. H., *A Yorkshire Bee-keeper.*

FILLING A CRYSTAL PALACE GLASS SUPER

BEFORE proceeding to redeem my promise to describe "what I did do" in assisting the bees to fill the crystal palace, I may observe that my attention has been called to a letter which has appeared in another journal, in which the writer suggests certain methods by which it might have been effected. He hints that there might have been brood-combs from other hives added from time to time, and that some 40 lbs. of glucose might have been given without much fear of detection while the super was in course of being filled. To the first part of this theory I have no objection to offer, further than to say that in my case it would have been impracticable, the crown-board having been firmly screwed-down before the super was put on, and the latter, with its packings and outer wooden cover, being of too formidable dimensions to be removed at pleasure; but as regards the second, the writer of the letter in question does not appear to reciprocate the opinion which I hold of him (I know a little of him, by repute, through a mutual friend), when he insinuates that I might have filled my crystal palace in part with glucose and palmed it off as honey. I notice also, that I am found fault with for not having volunteered at the exhibition a description of the mode in which my crystal palace was brought to such perfection. This would be almost sufficient excuse for my withholding the information even now, after having promised to give it. The competition was for the "best glass super," but there was certainly nothing in the conditions that required an explanation of how the best had been attained to. If the faultfinders had attended at the exhibition they might have easily ascertained, that although not required to impart the information, I made no secret of it, and they might have heard Mr. Cotton describe the process over and over again to the crowds who came to admire the crystal palace during the four days it was on view. To such as were not there, however, I now proceed to give even a more detailed account than that given to Mr. Cotton.

The hive upon which the crystal palace was built is a common Woodbury hive—all wood remember, you wranglers for straw—but perhaps I should qualify "common" by stating it was uncommon to the extent of having been the winner of first prizes at all our local shows here for the last three or four years. It was not in as good breeding condition as I desired at the commencement of the past season, owing, in a measure, to its having too much old heather honey in some of the combs; and as there was a heavy job before it, I commenced by helping it; thus, I took out several of the combs, and having sliced-off the covering of the cells I hung them up in the apiary to allow the bees indiscriminately to clear them out. This I did in order to secure to the queen, a three-year-old Ligurian fertilised by a black drone, ample room in which to exert her laying powers to the utmost, to encourage which I fed regularly and liberally. I next procured a stock in a common straw hive, and having driven a small swarm from it, I placed the remainder on the top of the Woodbury, thus uniting both the bees that remained

and all the brood in course of being hatched to the latter. I may now refer to one of the causes which existed for building-up the hive in the manner just described, and which I hinted at in my former letter as an apparent misfortune, but which ultimately turned out the reverse. The form of the glass was designed by Mr. Yates, of this city, through whom I ordered it, and by myself; but, owing to its great size, it was not until after a third attempt that the manufacturer succeeded in turning it out; and as time was flying and the exhibition would not wait, it was necessary that the hive should be strengthened in every possible way if the glass was to be filled, when it did arrive, in time for the exhibition. Indeed the hive was so full of bees and brood, while waiting for the glass, that there was danger of their swarming. I therefore extemporised the foundation of the palace in the following manner, in order to allow the bees to be "going on" with their work. I procured a wooden hoop, such as hair sieves for ordinary purposes are bound with, and having adapted it to the diameter of the bottom of the glass ordered, and bound it round thickly with canvas, I placed it on the board on which the glass was to stand, covering it over with a sheet of thick plate glass, which was kept warm by wrapping all up in folds of canvas. It was at this point that the idea of getting the bees to build upwards and downwards simultaneously (which Mr. Pettigrew has spoken of as if it had been a common practice) first presented itself. Last year the hive of which I am now writing filled a common bell-glass weighing 43 lbs., and which was the finest super that ever had been seen here up till then, without a particle of extraneous aid or an ounce of feeding, and this was built entirely from the bottom upwards. But this is a digression, and I return to the palace.

There being such a number of bees in the hive ready to commence work, and the glass being of such immense size, I conceived the idea that if I could induce them to work from both top and bottom it would strengthen the chances in favour of the super being ready, short as the time was, for the exhibition. I therefore placed some bits of pure honeycomb about 1½ to 2 inches high and 3 or 4 inches long, at regular measured distances from centre to centre on the board upon which the super was to stand. The bees at once commenced to work upon these, building upwards and longitudinally in straight lines, till they had fastened the ends of the combs to the wooden hoops, and the upper edges to the sheet of glass, and this hoop they had entirely filled with solid sealed combs before the super came to hand. When it did arrive, the lid, even after a third attempt, was unshapely and a bad fit, I therefore rejected it; and this second apparent misfortune forced me to carry out my preconceived idea. Having with a thin knife cut away the sheet of glass which served as a lid to the hoop, then having passed the knife round the ends of the combs inside the hoop, I lifted the latter gently off and replaced it with the super. The bees at once fastened the ends of the combs to the glass and commenced vigorously to build upwards. I next got ready a stout piece of board to serve as a temporary lid, and having nailed a cross-bar on its upper side to prevent it from "winding" or "warping" (take your choice, it all depends on what part of the country you reside in), I fastened to its under side some strips of guide-comb at the precise distances from centre to centre, in which the combs at bottom stood. I placed this board on so that the combs at top and bottom would not only run parallel with each other, but would point centre to centre. Let it be borne in mind, however, that so far from fastening empty combs to this top cover, the slips so put on, merely to serve as guides, were not more than one cell deep, my object being that when cutting away this wooden lid I could get the knife under these bits of guide-comb, and leave nothing in the super but the pure new white comb built by the bees. The result realised all my anticipations. The bees in wandering about over the sides of the glass soon found the board at top and commenced nibbling at the bits of guide-comb, making them more secure to the boards. They soon began to rope, and in a very short time the cluster from the top was in contact with the combs at bottom, thus forming a much more graceful ladder whereby to mount than that described by Mr. Pettigrew; for, let me say here, that I do not think a piece of wood up the centre of a crystal palace to serve as a ladder, would be an improvement to it, and it certainly is not necessary, as the little gymnasts themselves in their beautiful ropes form a most perfect ladder, and a most pleasing object to behold.

From the foregoing description it will at once be apparent that after having put on the wooden cover, I could not have again removed it for the purpose of packing empty combs into the middle of the super; first, because the bees almost immediately had the upper comb carried across the point of junction between the board and the glass; and next, because if I had done so I should have defeated the object in view, which was that the combs should so meet and be joined together by the bees that the point of junction would not be perceived; and this is now actually the case. The combs, then, having been joined from top to bottom, and fastened to the glass from front to back, it was quite safe to cut off the board at top, taking care to bring

the small bit of guide-comb, and leaving pure bleeding surfaces on the edges of the combs; and the glass manufacturer, after a fourth attempt, having succeeded in turning out a lid to please me, and which, as stated in my last, was dome-shaped, I put it on, when the bees at once commenced to build further upwards, and in a very short time they reached the top, and the crystal palace was finished!—perfect throughout; not a particle of empty comb having been given, and entirely the manufacture of the bees in a Woodbury hive—all wood, remember!—and myself!

Now to the feeding; and here is a problem for our objecting friends to solve:—Given an International Exhibition, a bad season, very limited time, and a glass which the manufacturer turned out even larger than what was ordered, and which was "bound to be filled." How was it to be done? Answer,—By feeding, and feeding only, at all times unfavourable for honey-gathering. Who does not know that during unfavourable weather bees will not only cease working in supers, but will even carry down the honey from them to support the brood which is being produced at such a rapid rate at this season? In order to guard against this I fed regularly at all unfavourable seasons, but not with glucose. Mr. Pettigrew has thrown out a hint on this subject in his last letter, and I am not going to tell how many of my hives I robbed in order to help the crystal palace, but will simply assert that from the day I placed it upon the hive until I removed it from it the bees were fed on nothing but honey, pure and simple. I know that it will be said that anyone may produce such a super at the sacrifice of their apiary, &c.; to which I answer, "You have now the benefit of my experience to assist you. Try it." And then I will ask, Which of you made £10 last season out of an apiary of seven hives? My crystal palace sold for £10, and took first prizes at the International and at Middleton Agricultural Show, £3. I took first prize at the International for the best hive of honey—£3, and disposed of a considerable portion of the contents, which weighed 82 lbs., at 1s. 6d. per pound. There being no class at the International in which the hive that built the crystal palace could compete, I did not take it there, but I exhibited it subsequently at Middleton, where it as usual carried off first prize—£3. £10 for palace, £9 in prizes, about £2 for honey sold—£21, and plenty of honey for home consumption left, besides that still remaining in the prize Woodbury, which has frames in it at this moment weighing between 5 and 6 lbs., and of which a lady who has some thirteen stocks says that it is worth all she has obtained.—D. BREEN, 6, Ardwick Terrace, Manchester.

THE BAR-FRAME HIVE.

"A function to each organ, and each organ to its own function, is the law of organisation," said a great writer. Another great thinker has said that the language of the discoverer—viz., "it struck me" is not correct, for nothing struck him when he found the object of his research. The truth is "he struck it." No doubt this is philosophically true, whether the object found be an island, the law of gravitation, or improvement in machinery or horticulture.

Well, one night I was in search of a subject for a letter to this Journal, different in kind from all I had ever written. "It struck me" that one on the bar-frame hive from my pen would be a variety, and hence one was written suggesting improvements, and asking some who have the organ of mechanical ingenuity to carry all into a hive of this kind. I had then quite forgotten I had seen one some two years ago with a back door to it, though I have a distinct remembrance of hearing Mr. Breen and Mr. Wright talk of improving a hive in this way. When I wrote the letter in question I told Mr. Samuel Yates that I was partly indebted to them for the idea of improvements, and partly to observation. I never thought that my letter would offend or injure anybody; but I find that Mr. Breen is aggrieved that his name was not mentioned in it. If I have injured him in the smallest degree he has a right to be discontented, and it becomes me to offer an apology. I was under the impression that some one with more time at command must take the matter up if ever the bee-keepers of this country were to have improved bar frames. Mr. Breen has great instincts and aptitude for mechanical contrivances, and I am glad he is asking others to communicate with him about improvements; and I trust that some one especially ingenious will, with Mr. Breen, take the matter up, and speedily bring it to a successful issue. I have no organ for such function, and I am quite content to sit on the lowest form.—A. P. PHOENIX.

ALLERNEY COWS.

As two or three Allerney cows are now often kept by private families, there are many of your readers who could give a good account of their treatment as to feeding, the time of year they sleep under shelter, &c. I name how I manage mine, and hope others interested in these animals will give the manner they treat theirs.

Mine now lie in at night, and can go into a shed if wet in the daytime. I am giving them 2 lbs. of oil cake each at night, the

same in the morning mixed with sweet hay cut in a chaff. One of mine, a very small one in height, calves next week. Three months before her time being up she gave 10½ lbs. of butter, and the week before commencing drying her, 5½ lbs. She gives very little milk. I have another, a grand beast I imported direct, not through a dealer. She gives a great quantity of milk, and apparently very rich. The most butter I have had from her when at her best in one week did not quite reach 8 lbs. I had once a little heany bred between the Alderney and Short Horn, the talk of the country. She gave from calving to being dried 441 lbs. of butter. Any of your readers having this Journal bound will find her weekly produce given in your Journal, vol. iii., N.S., page 38.—H. S.

WARNING.

It is high time that all your readers should be up to the cloth and silk trick. Your correspondent's friend is well known in these parts. I was staying at Bath two years ago, when our friend called and showed patterns of carpets at marvellous prices. "He was about," said he, "to take a room at the Pump Room Hotel for the sale of these goods, and our orders would at once be executed." Having, as he thought, gained our confidence, he produced silks of that Manchester manufacture, purporting to be Japanese, and also pieces of cloth; but we were up to the dodge. He had the bad luck to call on me here in the following year, producing velvet boots, furs, and a variety of fancy goods at sixpence each and like absurd prices, our orders to be executed the following week. Then came the silks and cloth, when I reminded him of our former meeting. The same gentleman varies his trade by offering birds. I can tell your readers that the cloth is rubbish, as several unlucky purchasers have since found out; the silks are very inferior, and, being very narrow, purchasers find they have not enough for a dress.—E. HANDLEY.

OUR LETTER BOX.

CRYSTAL PALACE POULTRY SHOW (A Gloucestershire Fiar and Others).—The sole reason of our notes on the poultry being so short was that four gentlemen on whom we relied were prevented by illness or other causes from being present in time. The notes from one of them we publish to-day.

SPANISH FOWL'S FEED (A. T. W.).—We do not think it would be at all beneficial to apply milk and water. The confinement must not be in darkness, but in semi-darkness. The old tradition was that white peas made white faces; just so, when we were boys we believed blowing into the pop-gun increased the report. Keep them scrupulously clean; feed them, if you have them, on ground outs, if not, on some easily-digested food; give them gravel and clean water. A week or at most ten days will be sufficiently long to keep them in confinement.

FOWLS FOR CANADA (B. N. A.).—The fowl that unites all the properties you require is the Brahma Pouter. You prefer to keep only one breed. They are good layers, very good sitters, and very hardy chickens. The writer of this has hatched them in snow, and reared them. They are by no means contemptible fongers, and are not enormous eaters. We have always heard the Canadian climate praised for its salubrity. We know that although a long residence in snow would no doubt be fatal, yet that all animals like to have access to it. We believe we are correct in stating that formerly the lions and tigers at the Zoological were removed from their cages at the approach of winter, and placed in an artificially-heated house till the warm weather returned; but having been left out during a very early snow storm, they were found rolling in the snow, and greatly enjoying it. Since then they face the angry elements, and the mortality has greatly diminished. It is so with poultry. If you confine them to a heated house and forbid all exit from it, your fowls will pine and die. If you will, build a winter-roosting house close shut against all weather, the door put in that corner where there is the least wind in the winter. If you will feed generously, not even omitting a little animal food at times, leaving the door open in the winter, your poultry will do very well. You will have to supply them with water twice every day. That will be quite enough in the winter. The door need be open only for the four hours of mid-day, and when closed, dung or something equivalent to it should be piled up against it, just as is done at the stable doors in England. They must have food in their houses always. If it could be kept from freezing into lumps of stony hardness, ground oats mixed with milk and some grease would be the best food. They require this stimulating food only in the winter. Experience in our climate has taught us that the earliest-hatched birds are always the strongest, and reared with the least trouble. We therefore advise you to time the sitting of your hens, so that when the warm weather comes, and the vegetation bursts rapidly forth, you may be able at once to put your chickens to the sun. Such will be forward, and you will be able to view the coming winter without dread as regards your stock.

FOWLS IN CONFINED SPACES (Rouville).—In such a space you describe you must have a breed that will do well in confinement, and that will also submit to it. As we are always aware to keeping fowls with their wings cut, and many breeds, such as Game, Hamburgs, and Spanish, would certainly fly over a fence 6 feet high, we can recommend you the Cochins and Brahmas. The question of the numbers you may keep in such a place depends on the help you are disposed to afford them. They want gravel, grit, and grass; this letter should be growing, and if cut in the shape of a sod, should be heavy enough to resist the pull necessary to tear the grass to pieces, and also have enough earth to contain and hold worms and such like creatures, very beneficial to the health of fowls. You may keep a cock and two hens well in the space you name, and if you will give them lettuce and such garden refuse they will do well. We described a house in your issue in the present number. It should be of wood, lined with slate or brick, water tiles, 10 feet long, 6 or 8 feet deep, and 7 feet high in the lowest part, with perches at the bottom end, door in the corner, window to open or shut according to the season and the weather, above all, a good floor.

POULTRY HOUSE AND YARD (A. R. W.).—We will presume you have a space from 15 to 18 yards long and 6 wide, independent of the space you allot for

roosting and laying hives. This will enable you to make a very comfortable run for your fowls. However large a space may be, it is always advisable to take as little as possible from the houses. The house may be large enough; the run cannot be too large. You will do well, for this reason, to

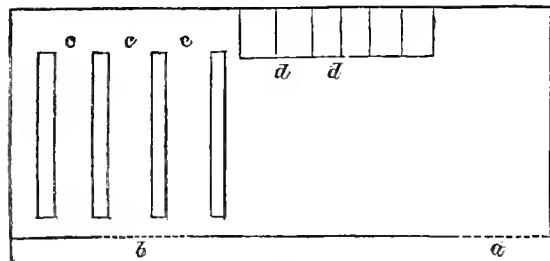


Fig. 1.

diminish your sitting house two-thirds. We advise you to put some laying boxes on the ground in your roosting house. Most hens prefer to lay there, and it is seldom you can persuade them to go to the place provided for the purpose. If you close the roosting place, they lay about and you lose the eggs. We do not by any means advise a brick building—we are always opposed to such. You have a wall; we advise you to put against it a timber house. We generally use elm boards and keep them well tarred. We have such houses now that have stood twenty years. Cover the roof with slate or Britgewater tiles. Let the door open in the corner. Have one window, and free ventilation. Cover the floor with gravel 3 inches thick. In the ground plan (fig. 1), which we have given, you will see a represents the door; this should be where we have marked it; being there, no draught can come on the fowls when at roost. b Represents a window to be placed as high up as can be in the house. The size may be as desired. It should open in the summer, but close in the winter. c, c, c, Are the perches, to be put within 2 feet of the ground. It is well to make them moveable for the sake of washing.

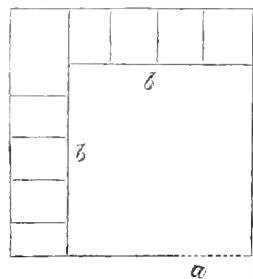


Fig. 2.

ing. d, d, Laying boxes. The sitting house (fig. 2), needs no explanation beyond that a represents the door, and b the laying boxes. This house should also have a window, as the door must be constantly shut. You will find this very inexpensive, and, we assure you, you will find it all you require. Half the people who start with poultry are discouraged and deterred by the first expenses. Two-thirds of them are waste.

BREEDING-BOX FOR CANARIES (J. P., Jun.).—Next week. **GOLDFINCH MULE WITH CANARY HEN (J. L. H.).**—It is useless to pair a Goldfinch Male cock with a hen Canary. They will pair, but the result is nil. —W. A. BLAKSTON.

TAMING A GOLDFINCH (An Old Subscriber).—Kindness will tame almost any animal; but there are animals, including specimens of the genus *homo*, which are strangely opposed to kindly influences. With such a happy little fellow as a Goldfinch the thing is very easy of accomplishment. At first he will be constantly on the move, jumping about in an agitated way, and trying every opening which seems to offer any mode of egress. But after being placed in a position where he will see many faces, all of which wish him well, and by occasionally speaking to him without coming so near the cage as to cause him any distraction, he will soon quiet down. Frequent handling has great effect, taking care to catch the bird neatly. Wild as it is, if it be laid on its back on the table with the head stretched out, it will make no effort to escape, though the hand must be ready to secure it at any moment. Any delicacy in the way of food, such as a little chopped egg and a pinch of maw (poppy) seed, will be appreciated, and the little fellow will soon reciprocate such attentions. It is only mean animals that turn and bite the hand which has fed them.—W. A. BLAKSTON.

MANAGEMENT OF CANARIES IN A ROOM (Novice).—Canaries may safely be wintered in a room without a fire. They are easily acclimatized, and will stand extremes of heat and cold, even to wintering out of doors in an open aviary, with no more protection than the covered-in roof of the building and a screen of matting to break the severity of prevailing winds and snowstorms. If Richard Avis says that to keep them in a room without a fire is to insure disease, Richard Avis talks nonsense. Ordinary white seed is the best staple food, but I have never known raps to set up any inflammatory action. Many breeders give the light brown small summer rape largely. One-fourth rape is a very fair proportion. The failures "Notice" adverts to will most probably be caused by the birds living in a vitiated atmosphere. If turned loose in a room as proposed there will not be much sickness, though from long-continued pampering the Canary has lost much of the robust constitution of a wild bird. The "Erect" Belgian is a cognomen quite unknown beyond the covers of treatises on cage birds. If "Notice" will visit any of the shows in Birmingham he will surely see good representatives of the true Belgian. The green Canary referred to is bred more in the north than by southern fanciers, and is a long slim bird of a pure green colour as opposed to the brassy green of the Norwich variety, which, if at all, is not green, but simply a deep shade of orange, bearing the same relation to yellow as mahogany coloured to the pale yellow obtained by mixing it with water.—W. A. BLAKSTON.

FEEDING BEES (A Monmouthshire Lady Bee-keeper).—Your bees have been well fed and your hives well covered and protected for the winter. Nothing more will they require till about the end of March, when the floor boards should be closed and the winter coverings removed. Bees never suffer from want of ventilation when their doors are open. After another two weeks' notice your loss of mismanaging your bees will be greatly diminished.

RE-MANAGING BEE-SHEDS (Melissa).—The hives in your hives may be put on new boards and at once without injury; and if the new board be placed where the old is standing all the hives may be put into it at the same time; but if you let the old shed stand in its present position with one hive in it, and remove two hives into the new shed in another position, there would

be great danger of the bees in the new shed going back to the old and getting bewildered and lost. The safer way will be to remove the old shed, place the new one near to where it stands, and put all the hives into it; and if you wish to place it in another part of your garden, to remove it by short stages from time to time. Let the hives be placed in the new shed as they stand to one another in the old one.

SPRING-FEEDING BEES (Kupsete).—About the middle of February is soon enough in ordinary seasons to begin feeding with a view to stimulate bees to breed, and thus become stronger in numbers. We have often very severe frosts in February, and frost often chills brood that has been produced by artificial feeding. Hives with chilled or foul brood in them never prosper.

BEES DESERTING THEIR HIVE (John Blanchet).—We can only conjecture as to the reason why your bees deserted the hive with honey in it. This is a rare event in June, but probably it was owing to the death of the queen in the previous winter or early spring, in which case the bees would die-off one by one. Their bodies, if they died at home, would be carried out by the survivors, otherwise they must have swarmed away, taking some dislike to their hive. We do not think you would get half a pound of wax out of both your hives if the comb is "very black;" but if you think it worth while to extract it, cut up the comb into small pieces, put it into a coarse bag made of stuff such as is used for kites cloths, dip it into boiling water till it melts, then take it out and rest the bag against a smooth board, the lower end of which is made to rest in a basin of water. While the mass within is still hot and melted, press upon it downwards firmly with a wooden roller or other piece of wood. Do this again and again if necessary till the waxen particles are all extracted. Then clarify the wax in the bowl by boiling the water, and skimming off impurities.

RABBITS BURROWING (C. E. A.).—We have known Rabbits make burrows through a bank at angles much nearer the perpendicular than is shown by the dotted lines in your sketch.

METEOROLOGICAL OBSERVATIONS, CAMDEN SQUARE, LONDON.

Lat. 51° 32' 40" N.; Long. 0° 8' 0" W.; Altitude 111 feet.

DATE.	9 A.M.						IN THE DAY.				Rain.
	Barome-ter at 32° and Sea level.	Hygrome-ter.		Direc-tion of Wind.	Temp. of Soil at 1 ft.	Shade Tem-perature.		Radiation Temperature			
		Dry.	Wet.			Max.	Min.	In sun.	On grass		
1875.	Inches.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	In.	
Nov.											
We. 19	30.236	43.7	43.7	E.	43.9	42.5	39.8	53.1	36.1	—	
Th. 20	31.165	40.3	38.8	N.	44.1	49.0	38.1	63.4	32.7	—	
Fri. 21	30.017	38.9	37.3	W.	44.4	46.8	35.6	63.2	29.6	0.206	
Sat. 22	29.973	53.0	48.6	N.W.	41.2	53.7	37.9	65.8	33.9	—	
Sun 23	29.586	55.0	48.2	N.	45.7	58.1	46.2	66.8	34.5	—	
Mo. 24	30.063	45.3	43.6	W.	45.3	52.0	41.0	72.2	37.3	0.010	
Tu. 25	30.113	37.1	37.0	W.	44.9	49.7	35.6	59.8	32.0	—	
Means	29.915	44.8	42.5		44.6	50.2	39.4	65.1	34.5	0.216	

REMARKS.

- 19th.—A dark dull day, but not any rain that could be measured.
 - 20th.—Fine morning and noon; rather less bright in the after part of the day.
 - 21st.—Foggy early, but soon cleared off; fine till noon, then clouded over; rain at 5 P.M.; windy and wet at night.
 - 22nd.—Boisterous in the night; rain in the forenoon; fine afternoon and evening.
 - 23rd.—Rather windy early; fine all day, but less bright in the afternoon than in the morning.
 - 24th.—Rain about 11 A.M.; fine at noon, cloudy over soon after, but a starlit night.
 - 25th.—Very foggy all day, clearing off before 10 P.M.
- About 4° warmer than last week, and less fog until 25th, on which day a dense one prevailed until night. The morning temperature of the 13rd was unusually high for the time of year, and above that of any day for the last four weeks.—G. J. SYMONS.

COVENT GARDEN MARKET.—NOVEMBER 26.

NOTWITHSTANDING the fine weather of the past week we have had but little addition to the supply, and the general trade has been limited, so that prices have scarcely varied either in fruit or vegetables. The Potato trade is heavy, there being at the several depots large quantities. Many samples are blighted more or less.

FRUIT.

	s. d.	s. d.		s. d.	s. d.
Apples.....	1	0 to 1 6	Oranges.....	100	6 to 12 6
Chestnuts.....	10	0 2 1/2	Quinces.....	doz.	1 0 3 0
Grapes, hothouse.....	2	0 7 6	Pears, kitchen.....	doz.	1 0 2 0
Figs.....	1	0 1 6	dessert.....	doz.	2 0 0 0
Gobs.....	1	6 0 0	Pine Apples.....	lb.	3 0 0 0
Lemons.....	100	8 12 0	Walnuts.....	bushel	10 0 16 0
Melons.....	each	1 0 5 0	ditto.....	100	2 0 2 0

VEGETABLES.

	s. d.	s. d.		s. d.	s. d.
Artichokes.....	doz.	3 0 to 6 0	Mushrooms.....	pottle	1 0 to 2 0
Asparagus.....	100	0 0 0	Mushrds & Creas.....	punnet	0 2 0 0
French.....	25	0 0 0	Onions.....	bushel	2 0 4 6
Cauls, Kidney.....	10	2 0 0	pickling.....	quart	0 6 0 0
Beet, Red.....	doz	1 0 2 0	Parsley per doz. bunches	0 4 0 0	
Brocoli.....	bunch	0 9 1 6	Parsnips.....	doz.	0 9 1 0
Cabbage.....	doz.	1 0 1 6	Peas.....	quart	0 0 0 0
Cape-stems.....	100	1 6 0 0	Potatoes.....	bushel	3 0 4 6
Cauliflowers.....	bunch	0 6 0 0	Kidney.....	do.	0 0 0 0
Carrot.....	doz.	3 0 6 0	Romain.....	do.	0 0 0 0
Celery.....	bunch	1 6 2 0	White-head.....	doz. bunches	1 0 1 6
Cucumber.....	doz. bunches	2 6 4 0	Winter.....	doz.	0 0 0 0
Green Beans.....	each	0 6 1 0	Spinnery.....	bunch	0 0 0 0
.....	doz.	0 0 0 0	.....	doz.	1 0 2 0
.....	doz.	2 0 0 0	.....	bunch	1 0 0 0
.....	bunch	0 8 0 0	.....	basket	2 6 3 6
.....	lb.	0 6 0 0	.....	lb.	3 0 0 0
.....	bunch	3 0 0 0	.....	bushel	2 0 3 0
.....	bunch	0 3 0 0	.....	doz.	2 0 4 0
.....	doz.	1 0 1 6	.....	lb.	2 0 4 0
.....	doz.	1 0 1 6	.....	doz.	0 0 0 0

WEEKLY CALENDAR.

Day of Month		Day of Week		DECEMBER 4-10, 1873.			Average Temperature near London.			Rain in 43 years.	Sun Rises		Sun Sets.		Moon Rises.		Moon Sets.		Moon's Age.	Clock after Sun.	Day of Year.	
					Day.	Night.	Mean.	Days.	m.	h.	m.	h.	m.	h.	m.	h.	Days.	m.	a.			
4	Th	Linnean Society's Meeting, 8 p.m.			48.1	36.1	42.2	20	50	af	7	51	af	3	49	3	19	8	○	9	29	338
5	F	Entomological Society's Meeting, 7 p.m.			49.0	35.2	42.1	25	52	7	50	3	36	4	33	9	15			9	4	339
6	S				48.2	36.7	42.4	23	53	7	50	3	36	5	33	10	16			8	38	340
7	SUN	2 SUNDAY IN ADVENT.			48.4	38.5	43.5	21	54	7	49	3	46	6	17	11	17			8	13	341
8	M	Length of Day 7h. 54m.			46.9	33.6	40.3	19	55	7	49	3	50	7	48	11	18			7	46	342
9	Tu	Royal Horticultural Society's Examination of Gardeners.			46.7	34.9	40.8	17	56	7	49	3	13	9	after.		19			7	19	343
10	W	Grouse shooting ends.			47.0	32.8	39.9	26	58	7	49	3	25	10	26	0	20			6	52	344

From observations taken near London during forty-three years, the average day temperature of the week is 47.8°; and its night temperature 35.4°. The greatest heat was 62°, on the 1st, 1857; and the lowest cold 13°, on the 8th and 9th, 1867. The greatest fall of rain was 1.02 inch.

PANSIES FOR BEDDING.



UCH has been written about spring bedding, and particularly on Pansies and Violas; as I am a lover of these, and have made them my study for upwards of twenty years, perhaps to those interested in these beautiful flowers a few practical hints may be acceptable. I have grown for years a bed of nearly all the sorts worth growing—something over fifty beds, six dozen in a bed—and after careful note I will give you a list of what I consider the best varieties for bedding purposes.

BLUE PANSIES.

Cliveden XXX. (Ware).—This is an improvement on all the Cliveden Pansies: it is brighter in colour, better in substance, quite as free in growth and bloom. It is the showiest of all, and throws its flowers well above a fine foliage. It is a very early bloomer, and will flower in April.

Blue King.—A fine showy variety, but of rather straggling habit. It will bloom well in May, but will not stand the sun so well as many others.

Old Cliveden Blue.—This is one of the earliest, but, as everyone knows, it loses its colour as the hot weather comes. It will flower nearly the whole year, and keeps its colour well in spring, autumn, and winter.

Imperial Blue Perfection (Henderson).—A violet blue, a profuse bloomer, and very distinct from all the rest. It will flower well early in May, and lasts well, especially in heavy loam. It is one of the most useful varieties, and is very dwarf and of strong growth.

Cliveden Blue Improved (Bragg).—This is very fine, throwing its flowers well-up, and growing freely. It flowers well in May, and is of far thicker substance than any other Cliveden variety.

WHITE PANSIES.

White Bedder (William Deans).—This is a very useful variety; it is a very showy grower, thriving where others would die: it is a free early bloomer, and is in good bloom in April when planted in autumn. It is profuse-flowering, the flowers rather small, but it makes a fine display in a mass.

Mrs. Felton (Hooper).—The largest and finest white in existence, having a very large quite peculiar bluish-violet blotch. It is unequalled as a show variety of this class, and as a bedder produces an effect which at once places it at the head of the bedding whites, while its blotch renders it quite original and distinct. It is of very vigorous habit.

Foam (Ware).—This is one of the very best whites. I have compared it for three years with all the rest, and believe this statement correct. It is of compact habit, has large, pale, showy, green foliage, and is a profuse bloomer. The flowers are of good shape, pure white, and of fine substance. It blooms well in May. This flower I have lately seen snubbed, but anyone who likes to view it here in May may judge for himself. It has a blotch of violet blue free from stars.

Great Eastern.—This is one of the largest and best whites, a free-bloomer, of great size, but rather flimsy, and not a particularly strong grower; its effect, however, is very fine. It flowers well in May, and is quite distinct.

Cliveden White.—This being a dwarf grower and very early, is very useful for edging purposes.

PURPLE.

Theodore (Ware).—A very dark rich velvety purple, of fine substance, and the plant a strong grower. It blooms in May. The flowers are of large size.

Queen of Sheba (Ware).—Dark velvety bluish purple, perfect form, very dwarf, a late bloomer. A grand bedder for late purposes, lasting into October.

YELLOW.

Cloth of Gold (William Deans).—This is the most useful Pansy of any I have yet seen: it is in full flower in April, and I have now a splendid bed in full bloom (November 25th). It is a pale clear yellow, with a star for an eye; small, but it is the showiest grower, the earliest and latest of all Pansies of any colour I know, and in a mass is very fine.

Cloth of Gold (Ware).—This is a perfect show flower. It is to be seen at every show; it blooms from April till autumn. It is a splendid gold, with a dark blotch; strong grower; beautifully scented. One of the most useful.

Cliveden Yellow.—This is a useful variety, being a strong grower, with large foliage. The colour is not first-rate, being blotched on the back of the petals with a bluish colour.

Golden Prince is a pure bright gold, bluish blotch, not unlike Hooper's Sunset, not a good grower, but an early bloomer. It will not stand the sun.

Rufford Yellow.—In this I cannot see any improvement upon Cliveden Yellow, it seems to me to be the same. Plants from three growers have all proved alike.

BLACK.

Pluto (Ware).—This took a first class certificate at the Royal Horticultural and Royal Botanic Society's shows. It is a strong grower and good bloomer, perfectly black, with a small golden eye; the flowers are of good size and shape, and are well thrown above the dark-green foliage. It has a fine effect bedded with white and yellow. When planted in autumn it will flower in April.

Black Prince.—This is a smaller flower than Pluto, not so strong a grower, but it is useful, and grows well with Cliveden White, being somewhat of the same height.

Black Diamond is like rich black silk velvet, perfectly round, and of fine substance; the eye a small round gold spot. This is a distinct flower. The habit is dwarf and neat. It is a fine Pansy for bedding or exhibition flowers in May, and stands the weather well.

Cliveden Black.—Very similar to Black Prince, rather stronger in its growth.

PRIMROSE.

Lucidum Cream.—A large flower very similar to Great Eastern, colour clear primrose self, violet eye; strong grower. Flowers in April.

Celestial (William Deans).—Pale primrose, small flower, abundant bloomer, and strong grower.

MISCELLANEOUS.

Modesty (Ware).—This is one of the prettiest novelties; it has moderate-sized flowers, and is almost always in bloom. It is in perfection in April when planted in autumn. It is a white ground, with a light-shaded violet belt and dark eye. A free grower and profuse bloomer. Quite distinct from any other bedding sort.

Maagic.—This is an old favourite, but is one of the prettiest in early spring; colour deep purple, tipped with white. It is useless when the sun becomes powerful, as it loses the white on the petals.

Marquis (Hooper) is a very uncommon variety; it has a bright bronze ground, striped with purplish brown. It has a large flower, and is a strong grower. Flowers well throughout the season.

Sunshine (Hooper).—A fine yellowish-bronze flower, of good shape. The plant is a strong grower, and will bloom in April if planted in autumn.

Stephen Nairn (Downie, Laird, & Laing).—This is the most novel of all the Pansies; it is a large flower, and a strong grower; the ground fine orange-veined, blotched and striped with crimson and rich brown; the blooms are well thrown-up on high stalks. It will flower well throughout the summer; it loses its crimson colour in hot weather, but regains it as autumn comes.

Buttercup (Downie, Laird, & Laing).—This is splendid, a strong grower, bright clear primrose, with large blue blotch; the flowers are very large. It blooms in April.

A few remarks with regard to planting, soil, and propagation may be useful to people unacquainted with the treatment of Pansies. Many of the public are disappointed every season by not knowing very simple things with regard to these flowers. In the first place, they seldom plant till spring, when Pansies should be in bloom, thus throwing them back with regard to early blooming, and when they do flower they have not the substance or colour which they would have had a month earlier. The best time to plant is in September or October; but at any rate, all should be in by Christmas, or they will disappoint in early bloom and richness of quality.

The flowers of many of the varieties shrivel up and lose their colour in hot weather. When this is the case the plants should be taken up, and the roots cut off, leaving only the very small ones, commonly called the toes; then pull them to pieces, and plant them in a shady place, and plant out again in beds in August, when they will be well rooted. The cuttings should be planted in sandy loam and fine well-decomposed leaf mould; they should be planted rather deeply, and well watered. For the Pansy beds the best soil is a rather close loam not very light (yellow being the best); it should be rich and manured well the previous year, or at least have a dressing of very rotten dung and leaf mould where such can be easily obtained. As a rule, all Pansies flower better when young, and it should be the aim of all growers to keep continually making cuttings. Pansies never answer when old plants.—EDWARD B. SRENTON, *Hale Farm Nurseries, Tottenham.*

RASPBERRY CULTIVATION.

The present being a favourable time for making a new plantation, I submit my practice to the readers of THE JOURNAL OF HORTICULTURE. I gather from my plantation from three to four hundred quarts annually, besides supplying six or seven hundred surplus canes to various persons in and out of the trade.

The variety Northumberland Fillbasket succeeds the best with me; besides, I keep the Fastolf or Filby, and for dessert the luscious Dulcis, raised by a friend at Mansfield, and named by the late John F. Wood; and lastly a seedling of my own, being a cross between the Fastolf and an American Blackberry, the fruit of which I submitted to the Committee of the Royal Horticultural Society. Other sorts which may answer in the southern counties, do not appear to do well farther north, consequently I have discarded them, and confine myself to the above.

A great mistake is made by the inexperienced, and frequently by practical gardeners, in the choice of plants, selecting strong canes which very often have two or three roots only, whilst those at a distance from the stool possess a mass of fine fibres, the former seldom producing any fruit the following

season, neither yielding any sufficient quantity of young canes to form a good row, whilst the latter possess all the requisites for fruiting and propagation. Another mistake is frequently made in planting—that is, putting manure under the plants, which prevents them from taking freely to the soil, which should be as solid and firm as possible; plant in good soil, and top-dress as much as you like.

I do not approve of the old-fashioned plan of lurching together five or six canes from one stool, which is still recommended by some, but make a trench, if possible, due north and south, which will give the fruit a chance to obtain an equalised portion of the influence of the sun. Avoid crowding, let the rows be at least 4 feet asunder; the crop will be heavier and better flavoured. In planting I make it a rule to put alternately a larger and a smaller cane; the former is trained to a trellis, the latter is headed-down to about 10 or 12 inches, and throws out laterals, from which I obtain fruit in long bunches till the frost takes all the flavour out of it.

Another error is frequently committed by digging between the rows or near the stools, by which act the supply of nourishment is to a great extent cut-off; this is very injurious to the plants, as the roots lie very near the surface. Nothing more than hand-weeding or the scuffle should be used to clean the plantation. My experience teaches me that in retaining the quantity of new canes, one every 10 inches is sufficient to be tied to the trellis, and not to exceed 5 feet in height. Thinning old plantations and tying should not be delayed beyond November, when a mulching of manure may be given.—JOSEPH BURGESS, *Knutsford.*

THE MANETTI STOCK.

AN old woman once remarked to the clergyman of her parish, when, during a very dry season, prayers were offered for rain, and in the course of the week a heavy thunderstorm came and nearly washed all the plants out of the old woman's garden. "Ah! sir," she said, "you be always overdoing it;" and I think the same remark may be applicable to Mr. Camm with respect to his Roses on the Manetti stock. I saw them myself in the summer, and certainly they were as bad as could be. This was, I understand, partly to be attributed to the plants not being very strong when put in, and I expect that too much stable dung, not properly turned over and matured, finished them. I perfectly agree with Mr. Peach in his advice to Mr. Camm not to give up his Manettis, but I would advise him to manure them once only in the year and that in the spring, and on no account to cover the beds with dressing during the winter months. Of course, if the weather be severe the plants may be covered with litter, but I firmly believe that a thick top-dressing of dung tends to make the ground sour.

That the Manetti is a far superior stock to the Briar I am perfectly convinced. Witness the marvellous Roses shown by Mr. Cranston this year at Hereford, which were certainly the finest I ever saw staged, and they were all from the Manetti; and then, again, how Roses last on this stock! I have plants which are six or seven years old, and this season they have made shoots from the collar over 6 feet in height: where can you see that on the Briar? My own experience, therefore, leads me to say to all Rose-growers, Do not give up the Manetti; see that your manure is sweet and good, apply plenty of it but not too often, and with the addition of an occasional watering with liquid manure while the buds are forming, I am sure that you will be rewarded with an abundant harvest of glorious blooms.

Among the *non placets* in Mr. Farren's letter I was pleased to see that he mentioned the difficulty, or I should rather say the impossibility, of getting any breakfast either at the Crystal Palace or South Kensington. After travelling all night and sitting on one's Rose-boxes outside Victoria Station from 5 A.M. to 7 A.M. waiting for a train to take one to the Palace, a cup of coffee on one's arrival there would be quite as acceptable to the exhibitor as a little fresh water is to his blooms.—R. N. G. BAKER, *Heavitree.*

GIVING WATER TO FERNS.

I wish to repeat in regard to growing all, or nearly all, Ferns, the great advantage of allowing them to take up the water for themselves by putting the pot on an inverted saucer, and that saucer in a larger one, filling the larger one with water up to the level, or hardly so, of the bottom of the inverted one. This plan never allows the plant to be without water, as it only requires

that attention should be given, and in two days, on an average, the Fern takes-up just as much as it likes, and keeps moist without being soaked. I never could grow in my little amateur way *Pteris tricolor* until I managed it in this way; and all my *Adiantums*, of which my little collection is principally composed, are flourishing, including *farleyense*, on this system.—W. T. F. M. INGALL, *Greenhithe, Kent*.

POTATO DISEASE AVOIDED.

THE addition of a single fact bearing upon an important, but obscure subject may tend to let in a ray of light. That problem which far wiser heads than mine have endeavoured to solve is the Potato disease. Now, I claim to have made no leap, but certainly have been groping in the dark, seeking a remedy for a widely different complaint to which the plant is liable—"supertuberating" is, I see, the correct term; we here call it "second growth."

I planted about twenty perches of Potatoes, consisting of Rocks, Jersey Blues, and a late sort of kidney. Favourable weather through the spring and first half of the summer brought the plants rapidly forward; then followed an interval of dry weather of sufficient duration to parch the ground; a short time suffices for that. Chalk being but 2 feet beneath the surface, the warmth and drought, of course, checked growth, the tubers ripening fast; when, towards the latter part of summer, a succession of showers altered this state of things, the plants assumed so much renewed vigour that I became alarmed, knowing what it is to dig up a crop of Potatoes the starch of which has travelled from the root end into the crown, or perhaps out of the tuber altogether, leaving merely water and cellular tissue. So, with no other idea than that of preventing such a disaster, I with a stout broad-pronged fork took-up and replanted the whole of my crop, beginning at one end of the furrow and moving each root in succession, not injuring the haulm, and detaching but few of the tubers, covering them again to prevent greening, my aim being to check growth and aid ripening. That I succeeded in the first may be easily conceived; as to ripening, on taking-up the tubers in the last week in September, although the skin at the crown end was a little tender, still they are now keeping sound and good. I simply notify this fact, because, while I enjoy an immunity, the Potatoes of my neighbours are all more or less affected by the disease.—A COTTAGE GARDENER, *Broadstairs*.

A SEEDLING APPLE—RELATIVE HARDINESS OF BLOSSOM—GRAPES.

I SEND herewith samples of a seedling Apple for examination and comparison, with a view to determining its distinctness or otherwise. Certainly it is a variety of great value as a culinary Apple, being an excellent keeper, great bearer, and hardy—in the matter of blossom perhaps exceptionally so. There are unquestionably varying degrees of hardness in the blossoms of fruit trees, and in this matter alone there is room for much useful investigation. A variety of fruit may be excellent in itself, and it may be withal a free-spurring and blossoming kind, but if the blossom is exceptionally tender this circumstance detracts from all other good qualities on a vital point. Nothing in fruit culture can be more disappointing than to see trees, brought with much care into a fruit-bearing state, clothed with blossom rich in promise, and then all to drop under the spring frosts common to every year. It can hardly be denied that by this more than all other obstacles put together are the fruit crops ruined. It is impossible to prevent this injury in dealing with large trees which in the future, as in the past, must be relied on to produce the supplies to meet rational and market demands. We can neither stay the frosts nor protect the blossoms, but is there not a possibility that the dire effects of frost may be in a useful degree evaded by special attention to kinds of inherent hardihood of blossom or naturally late in opening?

Few can have failed to notice in a mixed orchard of fruits, where all the trees may be covered with blossom alike, the great difference in bulk of fruit perfected. There may be other causes affecting this, but the primary one is the relative degree of hardness of blossom of one kind compared to another. I feel quite certain that on this point much valuable information may be given by those who pay special attention to fruit culture, who have in hand a hundred or more varieties, and who are careful to note peculiarities in in-

dividual sorts. I remember, in looking over a great plantation of cultivated fruit trees in the summer of last year, being struck with the very few varieties that had battled successfully against the severe frosts of the preceding spring. There were at least ten blanks to one prize, ten barren trees to one fruitful. This, it must be confessed, was a very unsatisfactory state of things, and the disappointment was the greater knowing that the great proportion of the barren trees were in all respects as healthy, and were at the same time equally furnished with blossom with the very few fruitful ones. The greater number exhibited a calamity by frost acting on tender blossom, the lesser number an escape by hardy blossom. At any rate, if this was not the reason of escape, what was? At that time, as far as I remember, whenever we came to *Beurré d'Amanlis* Pear it was loaded with fruit; so also was the early *Citron des Carmes*. *Louise Bonne* of Jersey was another which escaped fairly, as it frequently does. *Bergamotte Esperen* is a valuable late Pear, and reliable from its hardy blossom. How seldom is the old *Moorfowl's Egg* made barren by frost. A Pear seldom seen, yet useful in autumn—the *Green Pear* of Yair, is under my care unfailing as a cropper, frost or no frost. By its side *Marie Louise* is ruined four years out of five. In the same garden Autumn *Beurré* and *Hæcon's* incomparable are commonly made barren by spring frosts; so also is *Beurré d'Aremberg*, a Pear, however, of no great value. My facilities of comparison are limited, but I am satisfied by what I have seen that there is much valuable information on this point stored up somewhere.

In the garden above referred to, the Apples which were conspicuous as having escaped frost were *Beauty of Kent*, *Domino*, *Duchess of Oldenburg*, *Cox's Orange Pippin*, and, I think, *Stirling Castle*; but I am open to correction by the owner. This year in walking through a good garden, almost the only variety carrying a good crop were young trees of *Small's Admirable*, a really admirable sort. Every tree was loaded, the blossom of all the rest, as the gardener said, being "killed by frost." Two half-standard trees of "*Woolaton Pippin*" (*Court-Pendu-Plat*) always escape frost by their lateness in unfolding their blossom. My employer calls them his "wise" Apple trees, because of their escaping the cold by their lateness. They invariably crop, but I am sorry to say invariably grub, yet I think the grub grows less by having followed out Mr. Douglas's plan of picking up and off, and burning the small, affected fruit. If anyone knows of a better plan it would be a great benefit to communicate it.

But what has this to do with the seedling Apple? Simply this, that it arrested my attention by the quality, which I submit is a valuable one—viz., its bearing heavily when other trees around were fruitless owing to spring frosts. On paying a visit to the town where it originated, I was struck with the heavy crops of fruit hanging on certain trees in different gardens of the town; and on applying for information from the resident nurseryman, whose splendid *Roses* I had gone to admire, "Oh," he said, "that's our seedling; it's always so, and it is without exception the very best and most useful Apple in cultivation." He did not say this because it was his own seedling, as it was not, but raised by a lady some years ago by sowing pips; nor because he was sending it out at half a guinea a-plant. He certainly had it in a goodly number, but hitherto has sold it at the same price as all the other varieties. He has, in fact, made nothing out of it. Perhaps, however, he may do so, having purchased land and planted it largely to form an orchard, and this is about the best testimony the Apple can receive. If a fruit of any kind is proved for twenty years and mere under the eye of an observant nurseryman, and instead of sending it all over the country he buys land and plants it for fruit-bearing, it is a reasonable proof that there is something good about the fruit thus honoured.

The tree of the variety in question is a strong and rather spreading grower, unsuited for bush culture, but excellent for orchard trees. The habit and outline are not unlike a tree of *Blenheim Orange*, but covered with spurs common to *Dumelow's Seedling*. The fruit is like neither, as you will see, but is yet fine. Its period of use is November to June, but the specimens sent have been on a warm mantlepiece a month and more for ornament, and have to some extent lost their firmness. A full history of this Apple is promised, and when my friend has done digging-up and packing off *Roses* it will, perhaps, come. But it is beyond a shadow of doubt a seedling, and a valuable one. Whether it is distinct from all existing varieties is left to editorial judgment.

P.S.—With a former communication I sent *Grapes* grown

by a working carpenter under a glass structure covering the back door of his house. They were smashed in transit. I now enclose a few mere crumbs of his crop, which is sold and gone, just to prove that really useful produce can be grown in a simple manner without fire, or any great amount of skill. On another occasion I will tell you of a similar house, but heated from the kitchen boiler, now carrying upwards of two hundred bunches of Mrs. Pince's Museat, Lady Downe's, &c., of from 1 to 3 lbs. weight, well ripened, and in fine condition.—J. WRIGHT.

[The Apple is large, round, and flat, and a very handsome fruit. The Grape is Black Hamburg, and deliciously flavoured.—Eds.]

THE BEST FIFTY GLADIOLI.

IN your reply to correspondents as to the best fifty Gladioli for exhibition, I would venture to ask in what way your correspondent is guided in arriving at the conclusion that the fifty you name are the best for the purpose? I made some notes at the two great Gladioli exhibitions of this year—viz., the Crystal Palace and the Royal Horticultural at Kensington, and on comparing I find many of the sorts you name as the best were not exhibited at all; and not more than eight of the fifty which you have put down have made an appearance in the stands which took the first prizes in the great open classes—viz., the twenty-four at the Royal Horticultural, and the twenty-four and thirty-six at the Crystal Palace. Not being a large grower, I did not take down the names of more than twenty-four, all of which had a distinctness of character and markings, and carried from ten to sixteen blooms each—viz., Aeme, Attractive, Beauty of England, Charming, Damia, Eugène Scribe, Hesperia, Horace Vernet, Julien, Lacépède, Lady Bridport, Madame Desportes, Martia, Mytilene, Oreleus, Orphée, Parsonii, Pheneus, Phytatus, Pictum, Pollis, Rosini, Sanguineus, and Victory. These are decidedly the twenty-four that I purpose growing next season. Many of the varieties in your list I have discarded as being quite worthless for exhibiting, although beautiful in colour, and which, moreover, are seldom seen with more than four or six blooms open at once. I also notice that the whole of those you recommend as the best are of foreign production. I do think this most unfair to the high character now attained by our English growers; for surely the present season has most forcibly shown that we quite equal—I should unhesitatingly say excel—our continental neighbours. In proof of this, I have only to quote from your own Journal. In your impression of September 11th, you say the greater part which took the first open prizes were English-raised seedlings. Again, in your report of the International Show at Manchester you say that the whole, except three, in the class for twenty-four, and also for twelve, were of English production: and this is pretty well the truthful position of our country in raising this beautiful flower. We are no longer dependant upon foreigners for the greater part of our finest Gladioli.—F. W.

WINTER FLOWER GARDENING.—No. 5.

Of flowering plants and bulbs the first to bloom is *Helleborus niger* (the Christmas Rose). It often commences to do so in November, and continues in bloom up to February or March. The flowers are, as everybody knows, white and salver-shaped. The foliage is dark green; the leaf-stem brown-speckled; the leaflets broad-obovate, toothed, having a pedately lobed outline. *H. niger maximus* is by far the finest and largest form of Christmas Rose. *H. niger minor* is a dwarf variety, and flowers earlier than the species.

H. colchicus, with digitately-lobed vigorous foliage, and fine crimson flowers, is one of the finest of the genus, but does not flower until February or March.

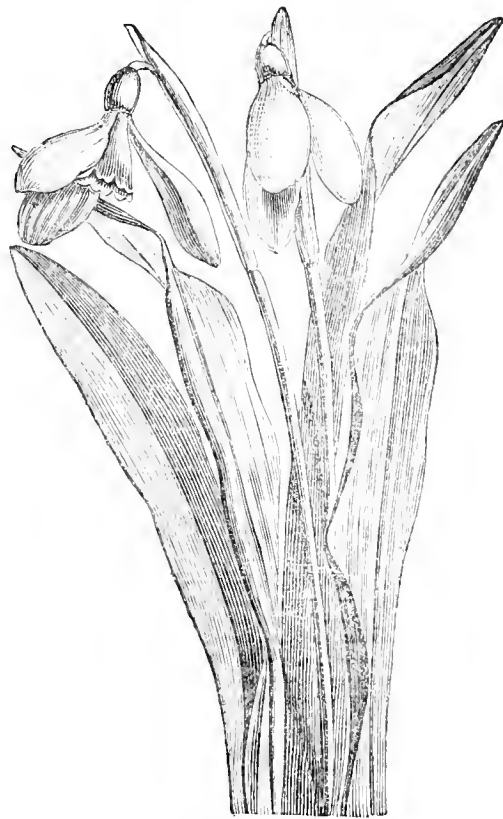
H. atrorubens is also a fine red-flowering kind, in beauty in February and March.

There are many other kinds all pretty, but the above will answer our purpose, which is to employ them for a second line to shrubs with Hepaticas on the margin, or they may be planted as centres to beds of flowering plants. They delight in a light soil enriched with leaf soil, and move with excellent balls to their winter quarters in November, and to their summer position in spring.

The *Winter Aconite* (*Eranthis hyemalis*) is one of the earliest of flowering plants, producing in January and February its bright yellow flowers; the whole not above 3 or 4 inches high. It forms a fine margin to a bed, and lines 2 inches apart every

way and 6 inches wide are very effective, the inner line being blue Hepatica with a centre of *Helleborus colchicus*. The roots should be planted 3 or 4 inches deep and remain permanently.

Snowdrops are more effective in a bed than in irregular patches, as we generally see them; the bed may be edged with *Scilla sibirica*. For permanent edgings they are superb. The single Snowdrop is the first to flower, followed by the double-flowered and the Crimean, or *Galanthus plicatus*, which is of more robust and larger growth. (See accompanying figure.) The elegant drooping snow-white flowers of the Snowdrop are universally admired. The bulbs should be planted 3 inches deep and an inch apart, and remain permanently, or they may be taken up with balls and placed in the reserve ground. For beds I like clumps of 3 or 4 inches in diameter, and the same distance apart, planting them when the beds are cleared, and lifting in spring.



Galanthus plicatus.

Bulbocodium vernum.—The flowers are rosy purple, and appear in February or March before the leaves. It is very effective as an edging, and ought to remain permanently. A band of this 1 foot wide, with the centre of the bed the Spring Snowflake, is superb.

Leucojum vernum (Vernal or Spring Snowflake).—It is saying much to assert that the flowers of this are more effective and graceful than those of the Snowdrop, which it succeeds. Its fragrant pendant flower-cups, or snow-white bell-shaped flowers tipped with green, are extremely beautiful either for cutting for bouquets or vases, or for flower-garden decoration. It grows about 9 inches high, and is fine as an edging to beds of shrubs or for a bed on a ground of Crocuses. A sheltered position is necessary for it to succeed the Snowdrop. It should likewise have a light loam enriched with leaf soil.

Triteleia uniflora.—The white-shaded, porcelain-blue, fragrant flowers in a small bed or edging are very effective. On a groundwork of Crocuses it is likewise effective. The bulbs ought to remain permanently, or be grown in pots.

Scilla sibirica.—The bright blue of this contrasts admirably with the snow-white flowers of the Snowdrop, and the plant is especially fine as an edging, where it should be permanent.

S. bifolia, blue, and its white variety *alba*, are earlier-flower-

ing than *S. sibirica*, but the flowers are not so lasting. Both are good for edgings.

Hepaticas.—*Angulosa* is the cream of the *Hepaticas*, pale blue. Of *H. triloba* there are single blue, double blue, single and double red, and single white varieties.

The *Hepaticas* have no equal in lines or other devices, and in my opinion are the most effective of all early-flowering plants. They should be moved in autumn to their flowering quarters with all the soil that clings to the roots; and the same remark applies to their removal from the beds or borders in spring after flowering. It is of no use cutting away the roots if the object be to secure strong growth, good large clumps, and a full display of bloom. Light rich soil enriched with leaf soil or thoroughly rotted manure is most suitable. In summer they are the better of a slightly shaded position, and should be well watered on removal from their flowering quarters.

Violets.—The only other plant that I shall name is the *Violet*, and of it only one kind, *The Czar*. Runners put-in in April or May on an east border in rich soil at a foot apart every way, kept clean, and well watered in dry weather, will form fine plants by October, and will then produce some flowers. Lifted with balls they will continue to bloom up to March, and though the flowers are not so numerous as to afford a blaze of bloom, they are nevertheless effective as a second line to *Snowdrops*.

Crocuses are the intermediate link that join the very early spring to the spring-flowering plants. They are out of bloom before the spring flowers proper appear, and on this account I claim them as edgings to beds of shrubs and coloured-leaved plants; and like the *Snowdrop*, *Squills*, *Winter Aconite*, *Bulbocodium vernum*, and *Spring Snowflake*, also *Triteleia*, they should remain as permanent margins, planting them so near the edge of the borders or beds as not to be in danger of being disturbed when the beds are trimmed for the summer plants. Too many of these early flowers cannot be had, and once planted they take care of themselves, requiring only to be taken up every third year and divided, enriching the soil, and replanting the same day.—G. ABBEY.

LEAF SOIL.

THERE seems to be great difficulty as to the many uses which leaf soil may be put to; but I have never seen pot plants satisfactory in a compost containing one-third or one-fourth part of it. There is leaf soil well made, and leaf soil badly made. In my experience good soil that will suit pot plants is made of leaves from the Oak. Rake them up when dry if you can, and then store them in a large heap or open shed, if any room can be spared for them, till wanted for fermenting in a pit or such-like place where early Potatoes are grown; then take them from your store-heap, and well shake them up in the bed, so that it may not settle in lumps or prevent their heating regularly over the bed, and the next autumn there will be a lot of half-decomposed leaf soil. I may add, Grow some Cucumbers on the same bed after the Potatoes are off, and by the treatment the Cucumbers should have, the leaf soil will turn-out all the better. Then, after the first year's proceedings, I dust a little quicklime on it as it is taken from the pit, at the same time put it into a heap to lay another summer, or to be used as a top-dressing to the beds made-up for Cucumbers or Melons to check the strongest of the heat before the soil is put on for the plants. When the harvest is over, and summer is ended, it is ready to form a part of composts, without being doubtful of the hurtful substances which come from soil made of what leaves come to hand first, through not waiting for the Oak.

I find the above answer very well, as I cannot find the soil made in that way does injury to plants of any kind—at least, I have not found anything in it to bring ill-health to plants. How can we expect the herbaceous *Calceolaria* to grow in a compost chiefly of leaf soil? It wants a more substantial soil, and not so much draining; but I need not say any more about that.

Then why should gardeners be led to think that manure which has been employed for Mushroom beds is of little value? I think it of great value for Zonal *Pelargoniums* and several stove plants. The *Alocasias* will take it, and will make fine strong foliage; and for *Pelargoniums* it cannot be surpassed, if used with equal parts of loam from a good feeding pasture, and one part of leaf soil and river sand; do not be at the expense of silver sand. Anyone wishing to have good success attending

the application of leaf soil must depend on and wait for the Oak leaves; I have always found them true.—C. MEACOCK *The Gardens, Morville House, Sherbourne, Warwick.*

MACHINE-MADE NETTING.

A CORRESPONDENT has asked whether there is any machine for making netting. I can strongly recommend wire netting for garden purposes as much more efficacious, and in the end probably cheaper than string netting. For Strawberries especially, string netting is most objectionable: it is troublesome to move, and is always apt to cut off some blossoms or unripe berries. I now surround nearly all my beds with wire netting 1 foot high, and on this I rest frames covered with wire netting of $1\frac{1}{2}$ -inch or $1\frac{1}{4}$ -inch mesh. The frames are $7\frac{1}{2}$ feet long, which is the width of my beds, and 3 feet 3 inches broad, which admits of wire 3 feet wide being strained. The wood of the frames is $1\frac{1}{2}$ inch by 1 inch, mortised at the four corners, with one piece through the middle. It is important that the wire should be procured before the frames are made, as their strength and durability depend on the wire being properly strained. These frames so covered are easily moved when gathering the fruit, and are most convenient for a variety of other purposes. In the spring we tie on a mat and use them to protect the cuttings when first put out, and thus save much time and trouble. Covered with a bit of muslin they make most useful shades for the glass frames on a seed bed, or, with merely four flower pots to rest on, for young Lettuces when put out in a searling sun.

If a Gooseberry bed were surrounded with wire netting 2 or 3 feet high, and string netting used to throw over the top, a great saving of time and fruit would be effected. It is where the string netting meets the ground that the blackbird finds an easy access. The wire lies close to the ground and offers a firm resistance. If fruit is worth growing it is worth protecting at any cost.—F. M. K.

FIFTEEN ACRES OF GLADIOLUS, TEN OF TUBEROSES, AND FIVE OF JAPAN LILIES.

TWENTY years ago there were only six or seven varieties of the *Gladiolus* known. Now there are over one thousand distinct varieties, and all have been raised from the six or seven original flowers, and the number is increased every season. The pure white *Gladiolus* originally came from the Cape of Good Hope; but it was a small flower, and, at its introduction ten years ago, was not much thought of. By careful cultivation, however, it has become one of the choicest flowers of the field and garden. One of the rarest sights of the summer season in a floral way is C. L. Allen's *Gladiolus* preserves. These are on the line of the Central Railroad of Long Island, about fourteen miles from Hunter's Point, and the route of the road is through the centre of a fifteen-acre field devoted to the culture of this beautiful flowering bulb.

One hundred thousand *Gladiolus* bulbs are planted to the acre, and but little knowledge of arithmetic is required to figure-out the number of plants growing in this fifteen-acre plantation. It may well be imagined that the sight of this field of flowers in the late season of bloom was grand. In passing through it by rail the sensation was that of entering a fiery lake (for the red and crimson flowers predominate), and the illusion was enhanced as the breeze swayed the spikes of flowers to and fro in the form of mimic waves. These brilliant flowers are sent to the New York market daily, ten thousand, perhaps, at a time, and are to be seen on every street-stand, as well as in the more pretentious flower-stores. *Gladiolus* bulbs of the best mixed varieties are worth \$25 a thousand. As soon as the flowering season is over with the *Gladiolus* the bulbs are taken-up and dried, and the largest are laid away for autumn and spring sales, while the smaller sorts are replanted for the next season's flowers.

Mr. Allen's plantation of flowering bulbs also comprises ten acres of Tuberoses, which embrace over 500,000 plants. This section is just coming into flower; but as it will only show a mass of pure white, it will lack the beauty of the *Gladiolus* display.

Of the Lily tribe there are thousands of varieties of the double Tiger, Japan, and other sorts. Indeed, the Japan Lily forms one of the leading sorts in Mr. Allen's collection, as five acres are devoted to its cultivation. There are one hundred distinct varieties of Lilies in these grounds. It may be asked here, Where do these bulbs go? for the production is immense.

Mr. Allen says he ships them all over the world; and in confirmation, in part, of this fact, he has just filled an order from London amounting to \$100 in gold.—(*New York Evening Post*.)

DRYING FLOWERS IN THEIR NATURAL COLOURS.

I beg to submit a process of my own for effecting the object. This is simply the drying of flowers in fine, well-washed white or silver sand, at a comparatively low temperature. With this view, the sand must be rendered perfectly dry by previous heating, and transferred to any suitable receptacle, such as an earthenware basin or a large deep jar, so that this may be about half full. The flowers are then introduced, and very carefully enclosed in the sand, so as to firmly support the petals in their natural position, and the vessel is afterwards filled up with additional sand. As thus prepared, it is at once to be placed in an ordinary kitchen-oven, and kept at a moderate temperature for about four hours, a shorter or a longer time being necessary according to the amount of moisture naturally present in the flowers. This important point—the proper time required for the drying—can, of course, only be ascertained by experiment and observation.

By this very simple process I have lately dried some of the ordinary garden flowers, such as different varieties of the Pelargonium, the Geranium sanguineum, the Tradescantia virginica, Antirrhinums, &c., and with hardly any loss of colour or change of form. I have, too, no doubt that anyone who could devote more time and care to the process than I can myself, would easily obtain still better results than those to which I have referred.

Considering the importance of botany as a branch of general education, and the difficulty often experienced by students in procuring flowers for examination, it is certainly a desideratum to be able, by a simple and inexpensive mode of drying, to preserve them without alteration either of form or colour.—W. H. OLEY.—(*English Mechanic*.)

ROYAL HORTICULTURAL SOCIETY'S SHOW AND COMMITTEE MEETINGS.

DECEMBER 3RD.

THIS Show, the last for the season, was held in the Council-room, where, for the time of year, there was a fair display, while in the entrance-hall were ranged a number of excellent specimens of Hollies and other evergreens.

Two classes, respectively for twelve and six Tree Carnations in 8-inch pots, came first in the schedule, but there was no exhibitor in either. Next was a class for twenty-four cut blooms of Japanese Chrysanthemums, and these were remarkably fine for this late period of the season. Mr. J. H. Hinnell, gardener to F. A. Davis, Esq., Anglesea House, Surbiton, was first, and Mr. J. Douglas, gardener to Francis Whitbourn, Esq., Loxford Hall, Hford, second. The best blooms were Bronze and Red Dragon, Grandiflorum, Magnum Bonum, Oracle, The Daimio, Meg Merrilees, Chang, and Fair Maid of Guernsey.

Collections of Cyclamens were exhibited by Mr. Clarke, of Twickenham, and Mr. H. B. Smith, Ealing, who were awarded prizes in the order named. Mr. Clarke's flowers were of a more distinctive character than those sent by the other exhibitor; they comprised some handsome purplish crimson flowers of large size, with massive foliage. For twelve Cyclamens, open class, Mr. C. Turner, of Slough, had the first prize for well-flowered healthy specimens. Mr. Goddard, gardener to H. Little, Esq., Cambridge Park, Twickenham, was second with very handsome specimens, the flowers of good quality. Mr. R. Clarke was third. A very good collection was sent by Mr. Turner, of Slough; it contained some brilliant-coloured flowers and well-grown specimens. It had an extra prize. These fine winter flowers are becoming quite common, and are very well adapted for cutting or for the decoration of apartments. They made the Council-room look quite gay at this dull season of the year.

In collections of hardy evergreens bearing berries or ornamental fruit (Hollies excepted), the best group came from Mr. George, gardener, Putney Heath. It consisted of *Pernettyas*, *Skimmia obtata* and *japonica*, several *Aucubas*, *Cotoneaster Summonsii*, *Gaultheria procumbens*, &c., but several of the plants were very small. Second came Mr. E. Smith, gardener to T. D. Galpin, Esq., Putney Heath; and third, Mr. Aldous, florist, Gloucester Road, South Kensington.

Of nine Hollies, the only exhibitors were Messrs. Veitch, who exhibited specimens ranging from 7 to 9 feet high, remarkably fine not only in growth but in leaf-markings. These consisted of Waterer's Gold-edged, very dense and handsome; *Ilex Aquifolium pendula*, a weeping dark-green-leaved variety, in this case beautifully berried; Silver Queen; Small Silver Queen;

fructu-luteo, yellow-berried; Gold Queen, beautifully coloured; Donningtoniensis, a dark, narrow-leaved, very distinct variety; and aureo-marginata, with many of the leaves entirely yellow, others margined with that colour, the whole forming a very effective object.

Prizes were offered for six Box, distinct, but failed to bring any response; and of nine hardy Evergreens of the Yew or Cypress type in 12-inch pots, Messrs. Standish & Co., of Ascot, were the sole exhibitors. A first prize was awarded them for a group in which were nice specimens of *Thujopsis dolabrata* and its variegated form; the beautiful, dense, green *Cupressus Lawsoniana erecta viridis*; *Retinosporas*, as filifera and plumosa, charming plants, not yet sufficiently grown; and *Taxus adpressa stricta*.

Of Roman Hyacinths the best three 12-inch pans came from Mr. F. Farrow, gardener to G. Batters, Esq., Brigadier Hill, Enfield; the second best from Messrs. Standish; both were of great excellence; and Mr. Aldous, Gloucester Road, was third. Messrs. Cutbush and Mr. Chambers had also good pans. Last in the schedule came a class for the best collection of Endive and other Salading. Mr. W. G. Pragnell, gardener to G. D. W. Digby, Esq., Sherborne Castle, Dorset, was first with a very fine collection indeed, it contained twelve sorts of Endive—Fraser's Late Improved, Digswell Prize, and White Curled were representative types—Carter's Perfection of Beets and Carter's Dwarf Crimson Celery; large specimens of the New Californian Radish, and nice Brown Cos Lettuce. Mr. J. Hepper, gardener to C. O. Ledward, Esq., Acton, also had a very good collection, and was awarded the second prize. Mr. J. W. Moorman, gardener to the Misses Christy, Kingston-on-Thames, was third.

Foremost among the miscellaneous subjects of exhibition was a collection of Conifers from Messrs. Veitch, of Chelsea, for which a first prize was awarded. These comprised large and extremely handsome examples of *Juniperus drupacea*; *Thuja Vervaeckiana*, cinnamon-coloured; *Retinospora plumosa*, extremely handsome; *Cryptomeria elegans*; *Retinospora obtusa nana aurea*, a fine golden variety; *Sciadopitys verticillata*; the rush-like, pendulous *Retinospora filifera*; *R. lycopodioides*, of a fine shade of dark green; *R. Elioides*; and *Thujopsis dolabrata*. There is one purpose for which the *Retinosporas*, beautiful as they are elsewhere, and there not suggestive of mournful thoughts, are peculiarly appropriate—namely, for planting in cemeteries. We recommend them for this purpose as brighter, more hope-inspiring, than the Cypress and Yew. Mr. William Paul, of Waltham Cross, sent a group of different varieties of *Aucuba*. An extra prize was awarded to Messrs. Standish for a collection of *Bouvardias* and *Lily of the Valley*.

FRUIT COMMITTEE.—Alfred Smee, Esq., F.R.S., in the chair. Mr. J. Chambers, Spring Grove, Isleworth, sent fruit of Blenheim Pippin Apples. Mr. Wright, gardener to G. Hunt, Esq., Enfield, sent a conical red-striped Apple, said to be a seedling; and Mr. J. Clark, gardener to Rev. A. D. Stackpool, Writtle, near Chelmsford, also sent a seedling, which was so similar to the former that the Committee could not observe any difference. Neither of them was considered an improvement on others already in cultivation. Mr. Gilbert, the Gardens, Burghley, sent some good specimens of l'asse Colmar Pear and Wyken Pippin. Mr. Ross, the Gardens, Welford Park, near Newbury, sent specimens of Welford Park Nonesuch, which were not so good in flavour as they were last year. Mr. Taylor, Berners Street, Ipswich, sent specimens of a seedling Apple, evidently raised from King of the Pippins, but much inferior to that variety. A seedling Pear from the Royal Gardens, Frogmore, of good flavour, was objected to as not keeping well. Mr. Hepper, The Elms, Acton, sent a basket of very fine specimens of Chaumontel of a fine bright russet colour, but none of them were ripe. Mr. F. Dancer, Little Sutton, sent a dish of Beurré d'Aremberg, well coloured and well grown. He also brought a dish of Dutch Medlars. Mr. Watlam, gardener to A. H. Longman, Esq., Shendish, Hemel Hempstead, sent three bunches of Black Alicante Grapes, which received a cultural commendation. Mr. James Harris, the Garden, Singleton, Swansea, sent three handsome Smooth Cayenne Pines, the aggregate weight of which was 21 lbs. They received a cultural commendation. Mr. Jones, of the Royal Gardens, Frogmore, sent three fruits of Smooth Cayenne Pines, remarkable in every respect, and weighing 25 lbs. in the aggregate. They also were awarded a cultural commendation.

Mr. Parr, East End House, Fulham, sent a basket of Mushrooms, the bed being spawned on November 28th. Messrs. Veitch & Sons sent heads of Snow's Superb Winter White Broccoli. Mr. Gilbert, of the Gardens, Burghley, Stamford, sent a collection of forced vegetables. Messrs. Veitch & Sons exhibited fine fruit of Cobbett's Fall Pippin, which, being cooked, was recommended by the Committee as a superior kitchen Apple.

This being the last meeting of the year, the Committee was dissolved, and before separating unanimously passed a vote of thanks to the Chairman, Mr. Alfred Smee.

FLORAL COMMITTEE.—W. B. Kellock, Esq., in the chair. The subjects for examination on this occasion were few. A first-class certificate was awarded to Messrs. Veitch for *Retinospora obtusa aurea gracilis*, of a golden hue, like the variety from which it has sprung, but with the ends of the shoots somewhat pendulous. This was a very ornamental specimen. A similar award was made to the same for *Abies polita*, also for *Barkeria elegans Lindleyana centera*, lilac, with the base of the lip cream-white. Messrs. Veitch had likewise a cultural certificate for a fine specimen of *Azara microphylla*, with small very shining leaves. Messrs. Veitch also showed a new hybrid, which promises to be a great acquisition, raised by Mr. Bause, and called *Poinsettia Bausei*. The pollen parent was *Poinsettia pulcherrima*, the seed parent *P. alba*, and the result is a plant likely to be of stronger constitution than the latter, and of drooping very dwarf habit, while producing splendid rosy carmine bracts. On the plant shown these were not so brilliant in colour, nor so large, as in the species *pulcherrima*, but there is every probability that in both respects it will improve. A cultural certificate was awarded to Mr. C. May, gardener to J. S. Bockett, Esq., Maswell Hill, for a specimen of the milk-white *Masdevallia tovarensis*, with sixteen spikes and thirty-six flowers, and a certificate of the first class to Messrs. W. & A. Brown for a fine variety of *Primula sinensis fimbriata*. Mr. Chambers, Spring Grove, sent a pan of *Lachenalia pendula*, an old species. Mr. Keen, gardener to J. G. Sheppard, Esq., Campsey Ash, Wickham Market, sent a basket of *Clove Carnation* Miss Joliffe, which was certificated two years ago, to show how freely it blooms in small 60-pots. Mr. E. Smith, nurseryman, Farnborough, sent, too late for the Committee, a singular example of Scotch Fir, forming a dense brush-like plant 4 feet high. Some *Natal Begonias* and Chinese *Primulas* from Chiswick Garden were exhibited; also some natural flowers and foliage electrotyped with silver, and which appeared to have come from Mr. J. C. Fox's department.

The Davis Memorial Prizes are now offered for the Show to be held on the 3rd of June, 1874; and this has been acceded to by Mr. Baines, Mr. Kemp, and by Mr. Cutbush, of Barnet. The reason for the change is that the first Show in May will be too early, and the last being only an ordinary meeting of Committees, the advantage of having the plants exhibited on such an occasion would be lost.

HOW TO GROW EUCALYPTUS GLOBULUS IN ENGLAND.

My attention has been drawn to an article of yours which was copied into the *Daily News* of November 8th, in reference to the health-giving properties of the *Eucalyptus globulus*, or Blue Gum tree. As I have successfully reared from seed two dozen of these trees, and as they are now growing well out of doors, I think some of your readers would like to know how I succeeded. I obtained the seed five years ago from South Australia, and forced it in a hothouse; in one year it was 1 feet high, and now, in its fifth year, it is growing rapidly in a sheltered position in the park, having attained a height of 30 feet. The first three years the tree must be taken under cover every winter, and the fourth and fifth years should be protected for several feet up with wisps of hay or straw. When the trees are kept in-doors in winter, it should be in an orangery or very high greenhouse, with plenty of light and little water. I have sent specimens of my five-year-old Gum trees to Milton Abbey, in Dorsetshire, and to Donhead Rectory, in Wilts, where I believe they also flourish.—V. F. BENETT STANFORD, *Pytch House, Tisbury.*—(*Medical Times.*)

ROYAL HORTICULTURAL SOCIETY.

21st November, 1873.

MEMORANDUM from the Council upon a circular sent round by Sir DANIEL COOPER, Bart., and others, to the Fellows of the Royal Horticultural Society.

1. The circular in question states that "the present Council was elected by a very small number of the Fellows."

As a matter of fact, a larger number of Fellows took part in the election of the present Council than have ever taken part in any previous election.

2. The circular further states that the legality by which the present Council was elected is disputed. The late Attorney-General, Sir John Coleridge, and Mr. Lindley, Q.C., have given an opinion that the present members of the Council were legally and validly elected, as follows:—

"We are of opinion that the new bye-laws are valid and legal, and that the new Council is duly and properly appointed. The case really turns on the effect of the 19th clause of the Charter, and we are of opinion that the new

bye-laws are consistent with, and not repugnant to, that clause; and the opinion of the Solicitor-General, as set out in the case, appears to us to be the same as our own on the question submitted to us.

(Signed) JOHN DUKE COLERIDGE.
NATH. LINDLEY.

"4th August, 1873."

3. No Chancery suit is imminent or probable, so far as the Council is aware.

4. The Society has paid regularly all rent due to the Commissioners, and there are no arrears whatever due to them; on the contrary, the Commissioners owe the Society £103 for rent overpaid by the Society in 1872.

5. It is not correct to say that the Society has a liability of many thousands which it cannot meet. It has met all its liabilities of the present year, and has discharged a large portion of the heavy arrears left by previous Councils.

6. The Society has regularly fulfilled all its obligations towards the debenture-holders, according to the terms under which the loan was contracted, which are printed on each bond; and it would be illegal for the Council in any way to modify those terms.

7. Horticultural science, so far as this Society is concerned, is in as good a position as it ever has been, and is daily improving.

By order of the Council,
W. A. LINDSAY, *Secretary.*

[An impression generally prevails that because a few members of the Horticultural Defence Committee, in their capacity as Fellows, signed the memorial prepared by Sir Daniel Cooper to the Royal Commissioners, that this was the act of the Defence Committee. We have received the following, which will state what the opinion of the Defence Committee really is:—

"The Horticultural Defence Committee, as a Committee, ignore the circular issued on November 17th by Sir Daniel Cooper and others; but, approving of the sixth clause of the memorial, they think it best before taking further action to await the result of the meeting of Her Majesty's Commissioners, which is to be held on the 5th inst."—EDS.]

SHOULD the reconstitution of the Society be carried out we may expect to get back an important class of Fellows—those who during a long course of years, owing to some actual or believed cause of offence, or neglect, have left the Society. When asking some of the most influential horticulturists to join us in the appeal, "Not a Fellow," was the answer, and this from two of the body much looked up to and respected; and among our greatest exhibitors one of them gave the reason, "We were badly treated and left the Society." I think with a reconstituted Society we may count on old scores being considered as wiped off. The country has expressed its approval of the guinea plan as thoroughly as and almost more promptly than I expected. I asked permission for me to print the enclosed thoroughly representative letter from Mr. Alderman Brehan. Having been Mayor of Southampton from 1871 till 1872, and having a very large collection of Orchids, his name carries weight in his district. One of our most distinguished horticulturists, Mr. Ellacombe, of Bitton, has also spoken out in one of your contemporaries. I have only to add that it is to be hoped that all the country Fellows of the Society will sign the paper which has been circulated, in order to gain the power of voting by proxy.—GEORGE F. WILSON, *Heatherbank, Weybridge Heath.*

The following is the letter referred to:—

"8, Cranbury Place, Southampton.

"I have read with much interest your letter in THE JOURNAL OF HORTICULTURE, which I have taken in for some years; and as I agree with your facts, you may consider I will be a guinea subscriber if it should be so decided. Living as I do so distant from London, it would be simply a waste of money to subscribe (according to the present rule) five [four] guineas a-year, particularly as the advantages to be obtained are not commensurate. I feel quite sure if a guinea subscription were adopted it would greatly popularise the Society and considerably enhance its funds. As far as I am concerned I may not possibly attend one show, but still I approve the principle; and being a great lover of horticulture, particularly of Orchids, of which I have a large number, I wish to do all I can to induce the public at large to imbibe the same taste.

"Excuse my addressing you, but as you have made yourself public property by advocating so good an alteration to benefit the Horticultural Society, by the publication of your excellent letter, I could not refrain from troubling you. I am, &c.—H. J. BUCHAN."

I HAVE read with much interest the letters of Mr. G. F. Wilson, published in this Journal, referring to the present state and position of the Royal Horticultural Society, also the

circular sent round to the Fellows by Sir Daniel Cooper, Bart., and that issued by the Council showing the other side of the question. It seems that all the trouble and difficulty is with these terrible Commissioners. It seems that they are masters of the situation; but are they as a body opposed to horticulture in any of its branches? Whether they are or not, it is evident that as far as the South Kensington property is concerned some definite arrangement between them and the Society ought to be made. At the same time the fact ought not to be lost sight of, that the present Council cannot be blamed in the least for any of the complications in which the Society is involved. If some arrangement can be made to hold the Committee meetings and a certain number of shows at South Kensington every year, and Chiswick to be relieved of the oppressive burden of rearing thousands of bedding plants for the flower garden, and flowering plants for the conservatory, at South Kensington, I for one will gladly subscribe a guinea annually, and lose no opportunity in trying to get others to do the same. It will require a long pull, a strong pull, and a pull all together. Voting by proxy will be necessary if gardeners from a distance become subscribers. They are not their own masters, and a large number of them could not make it convenient to attend at South Kensington to vote.—JAMES DOUGLAS, *Loxford Hall Gardens, Ifjord.*

ROYAL BERKSHIRE ROOT SHOW.

MESSRS. SUTTON & SONS, READING.

VISITORS to London or residents who have been accustomed to admire and, it may be, to wonder at the exhibition of roots at the Smithfield Club Show, would be considerably surprised were they told that in comparison with the Show which I now notice it is hardly worth mentioning; for while all that can be seen there are a few stands of the best roots of each kind, there is to be seen in this magnificent collection floor after floor filled with roots in the various classes of Mangold Wurzel, Swedes, Turnips, Carrots, &c., and these exhibit the very highest proofs of skill in cultivation.

Spacious as was the place provided for the exhibition last year, and commodious as were the arrangements, everything is this year far beyond it. The alterations made in this the largest seed establishment in the world, and which have been noticed in the Journal, have given such facilities for the display that no public building that I know of could provide such opportunities; while the neatness with which all is managed, the room given to each root to be shown in its fullness, the care with which everything is labelled, make it really a place of great profit and interest to all who desire to see what good seed and good cultivation can do. There is no opportunity of hiding the defects of one root by the excellence of another, but all must stand out on their own merits to be seen and handled by critical connoisseurs.

The very general character of the exhibition may be gathered from the fact that amongst the exhibitors we have royalty represented by Her Gracious Majesty and H.R.H. the Prince of Wales, the aristocracy by the Duke of Marlborough, the Marquis of Bristol, the Marquis of Aylesbury, Lord Bridport, the Earl of Durham, Lord Cannoys, Lord Calthorpe, Sir G. B. Middleton, Bart., Sir Charles Russell, Bart., Sir Paul Hunter, Bart., the Hon. Mrs. Hay, R. Benyon, Esq., M.P., J. Walter, Esq., M.P., H. Allsopp, Esq., M.P.; the farmers and agriculturists by Messrs. G. & J. Perry, Messrs. Tagg, Pullen, Cave, Balford, &c.; while from the Central London District Schools, the Easthamstead Union, and the Metropolitan Schools at Sutton most creditable collections are sent in. The prizes are awarded to competitors from Worcester, Wantage, Lyndhurst, Burton-on-Trent, Bedford, Canterbury, Chipping Norton, Waterford, Llanfair, &c.

In looking round the exhibition one is struck with the marvellous size of some of the specimens, and no less with their symmetrical beauty, and each of these points has been taken into consideration by the Judges. Great size may be attained at the expense of quality; and for a Swede to be ever so large, if it have at the same time a flat crown on which the water can lodge, or large rootlets which take away from the useable part of the root, it is sufficient to stamp it as only second-rate; but when we see a conical top, as in the case of the Champion Swedes, one tap root, and no side rootlets, we have then the greatest amount of food with the least waste possible, and the Swedes do form, I think, the most striking feature of the Show. Not that there is any inferiority in other classes; here, for instance, is the competition for Sutton's Mammoth Red Wurzel, and amongst the Marquis of Aylesbury's lot is a root which now weighs 48 lbs., although it has been for some time cut and every leaf is trimmed-off, while the total weight of twelve roots exhibited by Mr. Cave is 399 lbs.; for Sutton's Champion Swede, twenty-four roots, there are one hundred entries, and some of the lots weigh 3 cwt. 2 qrs. 11 lbs. and 3 cwt. 1 qr. 7 lbs. Perhaps the most taking root in the Show is the Golden Tankard,

Mangold, for which the Messrs. Sutton obtained the Royal Highland Society's gold medal last year; it is so beautifully formed so regular, and the flesh so golden and containing so much saccharine matter, that it must, without doubt, be largely grown by agriculturists for its many excellent qualities.

The collection of Potatoes, Onions, and other vegetables is very large and of first rate quality. This may be gathered from the single fact that those collections which obtained the prizes at the Royal Horticultural Society, South Kensington, three weeks ago come in only as third here, while a large number of splendid tubers are entered for the prizes for those fine Potatoes, Sutton's Red-skinned Flourball and Hundredfold Fluke Potatoes, which certainly have more resisted disease than any other, and which are, when properly used, of first-rate quality. As to Onions, we think it is altogether impossible to surpass the specimens of Improved Reading Onion exhibited by Mr. Cave and Colonel Goodlake, large in size, well shouldered, and conical so as to throw-off the wet.—LE ROI CAROTTE.

NOTES ON LILIES.—No. 7.

LILIUM LEICHTLINII.

THIS was, I believe, first imported by Messrs. Veitch among some other Lily bulbs from Japan. Its habit is very graceful, and the yellow flowers with dark spots very beautiful. This season several of our pots in the orchard house had defective blooms. Whether this was owing to the plants having had a check from the May frost, or from a sort of blight-like spot which attacked some of the leaves, we have not yet been able to prove. One of the most beautiful heads of flower we had this season was from a plant on a rockwork border facing east, on soil principally composed of loam. I exhibited *L. Leichtlinii* first at South Kensington in September, 1870, when it received a first-class certificate.—GEORGE F. WILSON.

CARPET BEDS AT STOKE ROCHFORD.

THE advocates of the carpet system of bedding have good reason to be pleased with the position it has already attained. In places where there were formerly only one or two beds, you may now see them by the dozen, and the system is fast extending. It is not my intention in this paper to enter into the merits or demerits of this or any other system of bedding. We must adopt the plan which finds most favour with our employers, be it carpet, ribbon, or any other system of bedding.

The three large beds in the plan are in the gardens at Stoke Rochford, the beautiful seat of Christopher Turner, Esq., and were planned and arranged by Mr. Dell, the intelligent garden manager. It will be seen that the beds are of considerable size, and being placed longitudinally on the grass they occupy a considerable space of ground. As a proof of how the beds were admired, ladies and gentlemen in walking over the grounds would pass by beds filled with flowering plants; but mark! when they came to these beds they would stop to admire, and examine them again and again.

The three beds were composed of very simple materials, blended together in a most effective manner, and they did Mr. Dell very great credit. The beds are raised 6 inches above the level of the grass. From their large size one might readily imagine it would be somewhat difficult to get at the plants in the middle to pinch, peg, or weed, as might be necessary; but by having a strong plank, of sufficient length to reach across the bed, placed on two low trestles, there is then no difficulty in reaching any part without injuring the plants. The following numbers refer to all three beds: for instance, No. 1 is in every bed Golden Feather, and the same with all the numbers; they apply to every bed:—

1, *Pyrethrum Golden Feather*. This is without doubt the best and most effective of all golden-coloured plants, either for edgings or the centre of beds. It can be cut to any height required, and it will grow in almost any soil or situation, and will always look bright.

2, *Mesembryanthemum cordifolium variegatum*, a good grower which soon covers the beds; it delights in a light sandy soil.

3, *Coleus Verschaffeltii*, a well-known kind, and very telling when it grows well.

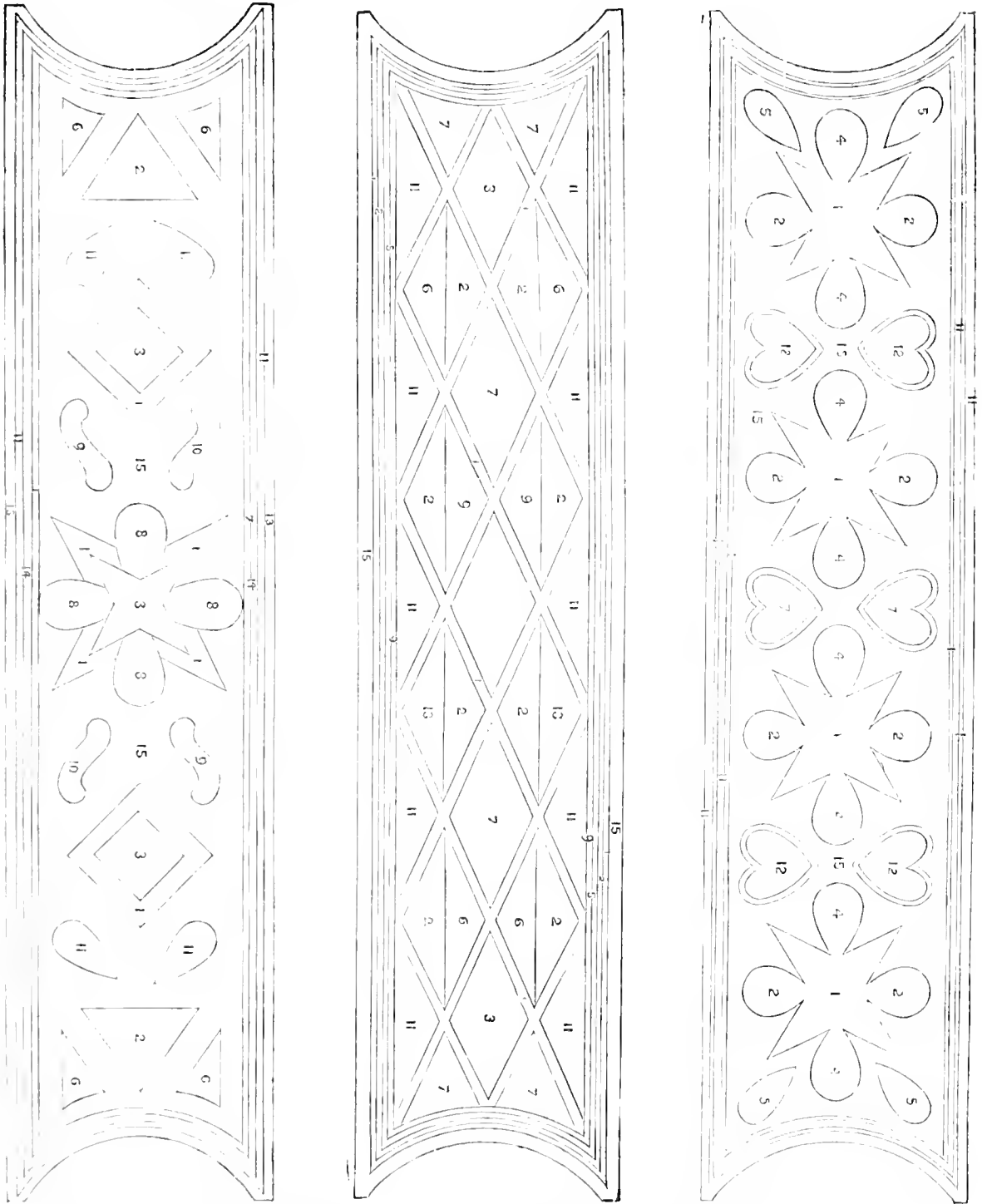
4, *Amaranthus melancholicus ruber*, fine dark foliage; requires pinching to keep it dwarf.

5, *Alternanthera paronychioides*. It has fine, bright, small leaves. Very pretty when planted in sufficient numbers as here; a compact grower and requires little pinching.

6, *Alternanthera amena*, one of the best and brightest when it grows well.

7, *Alternanthera amabilis latifolia*, in the way of *amena*, but much larger leaves, rose-coloured blended with orange.
 8, *Cerastium Biebersteinii*, a broad-leaved species, perfectly

hardy, with fine silvery foliage. Soon forms a compact mass, and can be cut to any form.
 9, *Alternanthera paronychioides major*.



10, *Alternanthera versicolor*, very pretty leaves.
 11, *Echeveria secunda glauca*, a very popular edging plant with deep glaucous green leaves. Very effective when seen in a mass.
 12, *Alternanthera magnifica*, a large-growing sort with orange-red leaves.
 13, Dwarf *Ericas*, very pretty.

11, *Alternanthera* and *Mesembryanthemum* alternately in the line.
 15, *Sedum glaucum*. This forms a mass of elastic foliage, so that one can walk on it and not leave any footmarks. The *Sedums* are most accommodating plants, and will grow on rocks, walls, &c. The groundwork in this bed is extremely pretty.

Small beds planted with the subjects named have a tendency to look "dumpy," but if of large size, like these beds, they are indeed "sensational," when seen with the sun shining upon them. They have also this advantage, that no rain seems to mar their beauty; in fact, the more it rains the brighter they look.—JAMES SMITH, *Gardener to the Earl of Gainsborough, Exton Park, Rutland.*

MESSRS. BUNYARD & SONS' NURSERIES, MAIDSTONE.

Looking over a nurseryman's establishment where there are enormous quantities of almost every garden plant grown to meet an extensive demand, is not only interesting to anyone who has a taste for horticulture, but is instructive as well; and even a gardener who may be credited with having some idea of nursery work and the trade going on in most kinds of nursery stock, would, I presume, be likely to be very wide of the mark if he attempted to estimate, before seeing for himself, the thousands upon thousands of plants growing in a nursery establishment with a first-class connection; but so great is the demand for fruit and flowers both for private use and commercial purposes, that there appears to be a market for all that is reared.

I took the opportunity recently to go over the extensive nurseries of Messrs. Bunyard & Sons, of Maidstone, and I came away gratified and surprised at the large acreage they have under cultivation. This was accounted for when I recollected that the name of Bunyard has been associated with these nurseries for a great many years, if not at the time of their establishment in 1796, and, of course, any additions that an increase of trade rendered necessary have been made till the nursery is now of large proportions. The aim of Mr. Bunyard has been to establish a first-rate country business, with no particular speciality, but to grow something of everything, and in this he has succeeded; but for some years he was ably assisted in his endeavours by his two sons, and three years ago he retired from business in their favour.

Maidstone is a station on the North Kent line of the South Eastern Railway, and is easy of access from all parts of Kent and the adjoining counties. Directly opposite to the station are the seed warehouse, offices, and a portion of the florist's department of the nursery. In this enclosure of about an acre are several glass structures devoted to the growth of a large miscellaneous collection of plants, of which great numbers are sent out for table decoration, and others grown to supply cut blooms. For this purpose there were quantities of *Bouvardia Hogarth* and *elegans*, and the white one called *longiflora*; *Libonia floribunda* in good bloom, and a hybrid *Libonia* named *penrhosiensis*, dwarfed, earlier in bloom, also freer, and much brighter in colour. There was a small stove with choice Ferns and Orchids, and attached to this are a range of pits with quantities of *Mignonette* in different stages, also early bulbs, and cold pits filled with herbaceous plants. Behind the glass houses is a space for the growth of a great variety of border plants.

I next proceeded to the old garden nursery, situated on the opposite side of the railway, within two minutes' walk, and here have recently been erected some half a dozen houses and pits as an addition to the floricultural department, but also for rearing Vines in large quantities, and well grown and ripened they are; among the many plants there were some of the handsome *Aralia leptophylla*, a model of gracefulness, also small Palms, *Prænas*, &c. There were lots of *Aucuba longifolia*, a narrow-leaved sort, loaded with berries just colouring. One of the large houses was devoted entirely to *Camellias*, *Azaleas*, *Heaths*, and *Epacris*, which gave signs of being admirably managed. In another unheated span-roofed house were specimen plants in pots of *Tea Roses* of the most approved sorts, and conspicuous were some fine examples of *Maréchal Niel*, double-budded; as I understood, first *Gloire de Dijon* on the *Manetti*, and then the *Maréchal* on *Gloire de Dijon*, and it is surprising in what a short time they make fine plants. In the spacious cold pits are found large quantities of *Magnolias*, *Ceanothus* in variety, *Myrtles*, *Rhododendrons*, and a fine stock of the lovely, scented *Daphne indica rubra*; I should say there are a thousand unusually healthy blooming plants in pots, and others of smaller growth coming on to take their places, all well-grown compact plants. There were also *Rhododendrons* in fine named sorts, and *Camellias* grafted or inarched. The piece of ground being surrounded by a wall, Mr. Bunyard takes the opportunity of

growing a collection of wall plants. There are the different sorts of *Ivies*, *Bignonias*, *Ceanothus*, *Magnolias*, and the pretty *Ampelopsis hederacea* and *Veitchii*, the latter a great improvement on the former; its leaves are magnificent towards autumn, and it is curious to observe the neat way in which it clings to the wall.

The space not occupied by glass houses is divided into convenient compartments by Yew hedges for the purposes of shelter and securing different aspects. Here all available space is devoted to the propagation and rearing of the choicer kinds of *Coniferæ*, all arranged according to their different habits in beds of thousands. Among these there are many noticeable or handsome kinds, such as *Cupressus Lawsoniana alba pendula* (Paul), of a beautiful silvery glaucous colour, with somewhat drooping branches, and a new dwarf white sort called *alba mana*, also *Waterer's* new one, called *C. Lawsoniana erecta viridis*, similar to *C. macrocarpa* in habit, and of a lovely grass green. I likewise noticed *Juniperus excelsa stricta*, an erect glaucous variety of a neat pyramidal habit of growth; I saw a bed of this, which was very striking. Among *Thuja*s I saw a new variety, just arrived, called *Intea*; it is very pretty, and appears to be of the *T. Lobbia* habit. Then there was *T. aurea*, of which I will speak again; also *Thuja elegantissima*, very attractive in spring, as well as one called *Thuja semper-aurea*, remarkable for keeping its colour all the year; the habit is stouter than that of *T. aurea*. Then there is *T. Vervæneana*, a very fine golden-leaved variety of American origin, and the variegated Chinese variety with blotches of gold. *Retinospora pisifera aurea* was in large quantities; I considered it would be a desirable plant for winter and spring bedding.

Many other subjects I was compelled to leave in order to make my way to another piece of ground about one mile and a half on the London road, called the Allington Nursery, in the parish of Allington. It is a large space of ground, devoted principally to the growth of fruit and forest trees. This was originally a piece of woodland, of which about three or four years ago a small portion was let on lease to the Messrs. Bunyard, but a rapidly-increasing business has caused them to make considerable additions, till they have under cultivation over twenty-one acres. It is wonderful what well-directed energy has done in transforming this piece of ground into what turns out to be a first-rate nursery. The soil is a good workable loam, not less than 2 feet in depth, and in some parts extending to 4 feet. It has all been well trenched up to a good depth, and in such a soil everything makes abundance of roots, and fibrous roots too, in plenty, as I witnessed when trees were being taken up for orders; as a natural consequence, everything possesses a vigorous and healthy appearance.

The quantities of standard Apples, Pears, Plums, and Cherries are very large; then there are thousands of pyramids, and dwarf-trained as well as maiden trees of every sort in demand, all arranged in convenient quarters according to their sort and their different stages of growth. To observe the uniform growth of all, especially that exhibited by the maiden trees, and the perfect union of the bud with the stock in the short space of one season, is interesting, because it shows that the roots must be plentiful and in a good soil—a thing to be secured before budding or grafting, because it must have a corresponding influence on the future success of the tree.

In this department Mr. Bunyard takes considerable pains to ascertain the merits of each sort of stock upon which to work his trees, and the following is his classification. He considers *Rivers's* Broad-leaved *Paradise* stock to be the best for the coarser-growing Apples, as *Northern Spy*, *Blenheim Orange*, &c.; and the *Nonesuch* (*Rivers's*) for the medium growers and fine-wooded sorts like *Golden Harvey*. The *English Paradise* is also very good for all but the coarse-wooded Apples; this latter stock is greatly used for the pyramidal, espalier, and cordon Apples. For standards the *Crab* stock is a well-known good and suitable one for Apples. I learn that the six favourite kitchen Apples for market are *Lord Suffield*, *Dumelow's Seedling*, *Northern Greening*, *Keswick Codlin*, *Blenheim Orange*, and *New Hawthornden*; and among dessert kinds, *Red Quarrenden*, *Golden Knob*, *Summer Golden Pippin*, *Cox's Orange Pippin*, *King of the Pippins*, and *Sturmer Pippin*. The latter, I think, is generally a heavy cropper and a regular bearer, has a Ribston flavour, and keeps till May and sometimes June.

For orchards, the principal market Pears are the *Chalk* or *Sweetwater Pear*, *Williams's Bon Chrétien*, *Hessle*, *Bishop's Thumb*, *Marie Louise*, and *Louise Bonne* of Jersey.

The stock of Apples is, at a rough calculation, nearly 11,000, and of Pears about 6000.

We now come to Plums for market purposes, of which there are about 8000 trees. Those most in demand are Kentish, Diamond, Royal Dauphine, Rivers's Prolific, Pond's Seedling, Early Orleans, Mitchelson's, Prince Englebert, Prince of Wales, and the Bush Plum, an East Kent variety, and one of the best of croppers. Kent being noted for its Cherry orchards, I will give a few of the best sorts for market. The old Bigarrean, Napoléon, and Black Bigarrean, Black Heart, and Black Tartarian, and some of the red sorts, of which the Flemish is considered first-rate, and the Kentish, also a standard sort. Cherries for orchards Mr. Bunyard grows on very tall stems of the Cherry stock, to allow of cattle grazing beneath them. Before leaving the fruit portion of this nursery I wish to mention that I saw lots of the Cellini Pippin worked on the Crab stock, and in a contemporary a short time ago it was remarked that this Apple would not thrive on this kind of stock, but here was reason to think otherwise, for certainly nothing could have done better than these; they were perfectly symmetrical in growth, vigorous and healthy, and have fruited this year for the first time, with not a sign of causer. The same remark applies to all the trees in the nursery, which is sufficient proof that the soil is one of the best that could be selected for fruit trees.

Going on towards the extreme end of the ground we pass large quarters of Chestnuts, Larch, Ash, Quick by the million, and Maples, Birch, &c., till we come to evergreens, such as the common and Portugal Laurels. Among the former was the Caucasian Laurel, with deep glossy green foliage, and I am told it is much called for. Then there is the new oval-leaved variety, rotundifolia, a striking kind, and the miniature one, a narrow-leaved common Laurel, very curious and distinct. Of Hollies there are many thousands, which embrace all the leading kinds of both gold and silver-edged. A prominent one is the Silver Handsworth, with elegantly-margined foliage, but I think it is at present rather scarce; it possesses vigour and colour enough to become one of these days a more popular variety. Rhododendrons, too, of the named sorts are growing healthily in the common soil of the nursery, and lots of the common *R. ponticum*. Besides these there are lots of deciduous plants remarkable for their foliage, the best of which are *Rhus glabra laciniata*, a sort with finely-divided leaves, and has a Fern-like appearance. The Golden-leaved Oak, *Quercus Concordia*, Variegated Dogwood, *Cornus mas variegata*, and variegated Elms. The most striking are *Ulmus viminalis variegata*, very fine, also the larger-leaved kind, called *Ulmus medio-picta*, having finely-margined leaves. In another part of the nursery, which has only recently been added, are growing quantities of Sea-kale and Asparagus. Conover's Colossal variety is beginning to be much sought after; it possesses greater vigour than the old sort—so much so that when the two are planted together the giant variety is fit to cut one season before the other.

I wish to call attention to the plain tallies which Mr. Bunyard has in use all over the grounds. They are strong stout pieces of oak planed smooth and painted white, upon which the name and number is inscribed with black paint. They have a surface sufficiently broad to be seen at a distance, and the figures and names being large, they can be readily seen, which must lessen the work of looking for any particular variety, and is an important help in keeping things true to name. In these grounds, too, Mr. Bunyard has got some select stocks of vegetables, such as Brussels Sprouts, Cabbage, Broccoli, Potatoes, and Peas, and which were selected by his own hand, so that there should be no mistake in the purity of the stock.

Returning to near the town we enter what is called the orchard nursery, about 3 or 4 acres in extent. Here is where the present proprietor, Mr. G. Bunyard, first practised nursery work in the way of budding and grafting, as well as other operations in the trade. It is a nursery of standard fruit trees, planted like an orchard. These are of large dimensions, and are mostly Pears. They have at convenient times been cut off and grafted with better sorts, some trees having as many as five and seven on a tree, till there are over a hundred sorts of Pears in the ground, which enables Mr. Bunyard to give advice to those who wish to know the best sort of Pear to grow as a standard, and in the fruit season people have the opportunity to see for themselves. There is here one of the largest trees of Marie Louise Pear that it has been my lot to see, and in perfect health. I forgot the number of

bushels the tree produced this season, but it was a large quantity.

There are other things grown here besides fruit, for there is a breadth of the common *Ancuba* which would delight anyone who is partial to this plant: and who is not? There are specimens 5 or 6 feet high and as much through, of a most beautiful colour, and handsome in proportion. There are duplicates of these by the thousand, besides named *Rhododendrons*, *Berberis* of sorts, Mulberries, Bay trees, Filberts, and Cob Nuts, for which these nurseries are famous; besides there is a large space devoted to herbaceous plants, and another for herbs of all kinds properly named. There is a framing ground for the cultivation of Cucumbers for seed, and near this is a lot of the common *Ancuba*, bearing berries from natural fertilisation. I ought to say that the greater part of this nursery is walled-in with walls from 10 to 12 feet high, some of which Mr. Bunyard has recently built, and the idea is a very good one; for besides the culture of out-door Vines, Mr. Bunyard intends to make a trial of Pears, in order to prove the most desirable sorts for wall culture. Passing along we find a space devoted to the culture of ridge Cucumbers for seed, and plots allotted to *Laurustinus* and any other plant likely to be required. There is in one corner of the ground a fruit-room, with specimens for inspection of the sorts grown in this nursery. There are also quantities of spring flowers grown. Mr. Bunyard finds there is an inclination among customers to return to the planting of these old favourites.

Proceeding towards the home premises, in doing so we pass by another plot of ground on the right, near the main line of the South-Eastern Railway. In it there are about seven thousand fruit trees, principally Peaches, Apricots, and Plums, in all stages of growth, and trained for various purposes, as well as quantities of Roses. On the left of this is another nursery of about three acres, called the New Nursery. It is situated in a conspicuous as well as a very convenient part of the town, and is laid out tastefully by being divided at prominent positions with spacious straight walks running at right angles to each other. On each side of these is planted a specimen of every kind of ornamental tree or shrub growing in any of the other nurseries, and being judiciously arranged as to height and colour, there is produced an ornamental effect such as anyone would enjoy. I believe the townspeople are permitted to walk in these grounds by first obtaining permission of Mr. Bunyard; at any rate, customers wishing to purchase any plant, tree, or shrub, can see a specimen or more growing here without loss of time from resorting to a long run over the ground where they are grown in quantities. This is where every plant is shown-off to its greatest advantage, so that there can be no deception, for, among other things, there are various sorts of Vines either trained as pyramids or in clumps, and in various ways most suited to their habit; but if one thing more than another predominates here, it is the quantities of *Thuja aurea*; very handsome specimens in the most robust health, some very large; indeed, of these lovely Conifers the Messrs. Bunyard hold a large stock. In another part of the ground is a quarter devoted to dwarf Roses on the Manetti stock, and in the most vigorous health.

In looking over these notes the reader may feel surprised that I have hitherto said little or nothing about everyone's flower, the Rose; but I intended, before closing this paper, to say that the great depot for this flower is at the branch nursery at Ashford, where many acres are devoted to Rose-cultivation, the tenacious nature of the soil being particularly suited for it. They also grow the *Gladioli* very largely there, and besides these is a general nursery stock.—T. RECOR.

MORE ABOUT PRIMROSES, COWSLIPS, POLYANTHUSES, AND OXSLIPS.

I HAVE read with much interest the remarks of your correspondent "PHILANTHOS" on the Primrose family, and almost envy him the great variety he possesses. I have also read the complaint another writer makes about the difficulty of obtaining Polyanthuses from seed, owing to the destructive attacks of birds and slugs while the plants are in the seed bed; and in replying to the latter correspondent I may say there is something erratic in Primrose and Polyanthus seed, for an eminent nurseryman whose writings and opinion stand very high in the horticultural world, once told me that seed from the common wild Primrose was longer in germinating than that of most plants he knew; and we have of late heard enough of the uncertain character of the seed of the Japanese

Primrose to make us pause ere we pronounce either for or against its germinating power. Seedlings of this have evidently come up well at one place and not at all in another; and, I may remark, I have been one of the unsuccessful.

Passing on, however, to better-known kinds, a somewhat similar result is sometimes observed. In 1871 I sowed a packet of Polyanthus seed at the base of a north wall in April, and the seedlings came up in great abundance; these were pricked out a small distance apart in September, and all flowered in the following spring, many of them becoming strong plants; and, as "PHILANTHOS" observes, comprising among them a number of Cowslips and of hybrids between the Cowslip and Polyanthus, with now and then a Primrose. Most of the Cowslips were coloured, differing only from the Polyanthus by the flowers being pendant instead of erect; but some of these were erect and others horizontal or partially upright on fine days, and drooping when bad weather set in. I made another sowing in 1872 with seed that I knew to be good, being home-saved, and from a place adjoining that from which I had previously secured it; and, instead of some thousands of plants, I had not more than half a dozen. This year I also sowed a batch in the same place, and I have abundance of plants again. Now, the attention was the same on all three occasions, but the sowing of 1872 was a failure.

I fear I have not been attentive in the matter of Primroses, as I let them ripen and shed their seeds where they grow. I have one or two beds of low shrubs where some of the best kinds are, and a number of seedlings there come up every year. The large weeds and other rank rubbish are cleared off by hand, but a little shelter or shade by smaller herbage I consider of service to the seedling Primroses. All of indifferent character are removed as they flower, and a large proportion run into the wild form, with however, a fair proportion of good flowers, which of course are duly cared for. I think that in many instances the seed must have remained in the ground a whole year or more before it has vegetated. From observation made—not on the beds alluded to, but where an edging of some extent has been planted on ground fresh to the Primrose, yet well adapted to its growth—I have noticed it is a long time ere these self-sown plants make their appearance, although there are often a great many of them when they do come, thus proving that the seed takes a considerable time to germinate even when sown by Nature herself. The Polyanthus certainly is not longer in germinating than many other plants, and does so sooner than Celery and Parsley, but the seeds of the Primrose, or at least a number of them, do not germinate so soon.

As the interest now taken in the Primrose will doubtless

lead to many experiments, I am in hopes of something being done with the Japanese species in the way of hybridising; and as it is certainly one of the most robust of the whole family, it is likely its progeny will not lack vigour. I have small hopes of seeing it with three or four tiers of flowers all out at a time, never having seen any plant yet resembling the plates given of it; but its colour is good, and it is unquestionably the latest of ordinary hardy kinds. As it is said to sometimes have lavender-coloured flowers it may be the forerunner of a blue, which has been aimed at by hybridisers of

the common Primrose. Certain it is that all the colours between mauve, magenta, and crimson are tolerably well represented, while a bright yellow equalling that of the *Calceolaria* is not, as far as I am aware, yet to be found either in single or double varieties. I do not think the ordinary double form of the wild Primrose hue is as plentiful as it was forty or fifty years ago, for at that time I have seen edgings of it in cottage gardens in the north, while now it appears to be scarce. But good kinds of Primroses are sometimes met with in the least promising places. A friend of mine was directed by one of the officers connected with the Ordnance Survey to a double yellow growing in an out-of-the-way place in a wood amongst a number of single ones of the ordinary stamp, and doubtless this will prove more robust in constitution than other kinds that have been a long time in cultivation. Dull-coloured browns are not uncommon, and perhaps better colours might be obtained by planting a few of the mauve, crimson, and magenta varieties amongst those of the ordinary colours, and leaving the rest to nature. I have occasionally put in some in plantations and other places, which I trust will at some time give good results, but I have not been successful by sowing in rough places, though I do not despair of getting



Jacknapes-on-Horseback.

some of the Polyanthuses to succeed in such situations. Those approaching the Cowslip type are evidently the most hardy on rather thin but moist ground. My greatest favourite, however, is the single white Primrose, which is the earliest bloomer of the whole family, edgings of it sometimes being in bloom in November, but singular to say not so this year, although that month was the finest I think I ever remember. Yet as the Laurustinus is also more backward than usual, we may assume that the late cold spring did not allow the Primrose to go to rest, nor the Laurustinus to perfect its buds so soon as usual; hence the backward condition of both compared with what they are in ordinary years. Amongst seedlings from the white I find many of the colour of the ordinary wild Primrose, and some intermediate ones, and now and then dark-coloured varieties appear amongst them, but the latter class are not numerous. There is great variety when kinds with

crimson, mauve, and white flowers are all growing together, and some of the best kinds which I have came up when self-sown in such a situation.

Speaking of the Oxlip, "PHILANTHOS" is uncertain where it took its origin, and I can fully bear him out as to its being less plentiful in a wild form than the Cowslip and Primrose, but I have now and then met with it in Kent, and believe it is more plentiful in many other places. I remember once, when travelling by rail, a young lady entered the carriage I was in from a station on the confines of Buckingham and Oxfordshire, and she had a neatly arranged bouquet in her hand that would have looked well even in Covent Garden, although it was composed entirely of wild flowers, the common Primrose, Oxlip, Violets, wild Hyacinth, Quaking Grass, and a few Cowslips. The Oxlips seemed to attract most attention, and I ascertained they were common enough there, although not so plentiful as the Primrose and Cowslip. I think there were in the bouquet a few flowers of *Cardamine pratensis* as well, but I was rather surprised to see the Quaking Grass so early, as it and the common Primrose are seldom associated together, yet such was the case about the middle of May at the time alluded to.

The Oxlip is an interesting member of the Primrose family, as it presents us with one of the best examples of the Hose-in-Hose form of garden hybrids that I know, the individual flowers of this monstrosity being much larger than in the ordinary form; it also blooms profusely, looks remarkably well, and is one of the greatest favourites when it is in beauty, which is about the same time as the Polyanthus. I have, however, only one variety of this, and am not acquainted with any other Hose-in-Hose in the Primrose family that is of any consequence in a decorative point of view, although now and then I have seen a wild plant make an indifferent attempt in that direction; but the Oxlip certainly links itself to the Primrose in a crimson variety that we have here. This is one of the most attractive kinds we possess, the head being large and the colour bright, while its flowers are sometimes borne on single stalks, and sometimes the latter are branched like the Oxlip or Polyanthus, ten or a dozen flowers being not unusual on a single stalk, while the adjoining one, perhaps on the same plant, has a single flower only. I believe there are some other varieties that present the same feature, but none that I have forms such a good example. I find some recent seedlings of a similar colour have shown a tendency to flower in the same way.

Cannot something be done in the way of hybridising these hardy denizens of our flower borders with the half-exotics not yet so plentiful as *Primula denticulata*, which is, perhaps, not

so hardy as could be wished, yet with us it has survived several winters out of doors, and *P. cortusoides* *arvensis*, which is unquestionably hardy? but I have never been able to manage it so well as I have known it done elsewhere. If to these be added *Primula japonica*, assuredly something as interesting as any variety we now possess may result. Other kinds might perhaps be added. Those interested in the winter decoration of their flower beds will, however, most likely be anxious to improve the early-flowering kinds, and as your able correspondent "PHILANTHOS" says he has noticed an early and a late variety



Mr. I. Anderson-Henry's Pantaloon

amongst the wild Primroses, there seems to be no reason why we should not have the same amongst our garden varieties. As I have before remarked, I have none so early as the single white; I by no means affirm that to be perfect, for the experience of the present season has proved the contrary, and I am yet in hopes of seeing an earlier one than it. Varieties of other colours equally forward, and other improvements, may also be effected, perhaps, without satisfying all the requirements and niceties which are sought for in the exhibition flower, which, as is well known, are only too often attained at the expense of constitution of the plant. On this head, however, I need not further enlarge, but I will express my hope that the cultivation of the Primrose will be undertaken by many of your north-country readers as well as by those in the south. Notwithstanding some advantages which the south may possess in the matter of climate, &c., as regards plants of a half-hardy kind, the Daisy and Primrose thrive infinitely better in the cool and moist climate of the north, so that there we may look for most success in the cultivation of this welcome harbinger of spring; for an unusually hot summer destroys them by wholesale in the south, where artificial means are not adopted for their preservation. More I need not say, be-

yond thanking "PHILANTHOS" for his interesting communications.—J. ROBSON.

Two of the most curious forms of the Polyanthus are those to which "PHILANTHOS" referred in his recent papers on Primroses, and we take this opportunity of introducing them along with the excellent paper of our practised correspondent Mr. Robson. That which we have called Mr. I. Anderson-Henry's Pantaloon was raised by that gentleman at his villa at Trinity, near Edinburgh. The flowers are those of the Pantaloon, and the bracts are large and leafy, of the same kind as those in Parkinson's *Jackanapes-on-Horseback*. This latter is a very remarkable-looking plant, and, as will be observed in the woodcut, has the calyx developed as in the Galligaskins, while the bracts are large and leafy.

DESTROYING WASPS.—Nothing is easier than the method

which I learnt from your Journal some years ago—viz., a small wine-glassful of turpentine in a wine bottle, and the neck of the bottle thrust into the hole of the nest at night. I never found it fail, and the advantage of it is that turpentine is always at hand, whereas tar is not, and cyanide of potassium is a deadly poison. The cyanide is chiefly useful for hornets when they make their nest in a roof or building, as a little on a sponge can be fixed in the hole in the wall or roof.—H. C., Ripley.

NOTES AND GLEANINGS.

The application of creosote to seed POTATOES has been found to act as a preventive of the disease. The Rev. J. Crawford gives an account of his experiments with this substance and their results in a recent number of the *Ayr Observer*. The eyes of the Potatoes are very slightly touched with the creosote, a small painting-brush being the best tool for applying it. Mr. Crawford says that those Potatoes in which every eye was anointed were perfectly free from disease, while from one-third to a half of those not so dressed were lost. Some of the tubers planted by him had all the eyes but two or three dressed with creosote, and in this case a few of the tubers were found diseased. On the other hand, some few had too much creosote, and were consequently found completely killed. This is certainly a simple method of preventing the disease; but great care must be taken in performing the operation, the least touch being sufficient to preserve the Potatoes from an attack, while one touch more will effectually prevent vegetation. Mr. Crawford expresses himself as highly confident as to the success of this simple remedy when properly applied, and until the award of the Judges who have to wade through some hundred essays sent in for Earl Cathcart's prize is made known, it will be worth while trying it.—(*English Mechanic*).

WORK FOR THE WEEK.

KITCHEN GARDEN.

THE rigours of winter may be soon expected, when it behoves everyone possessing a garden to cast their eyes once more round in order to see whether its severity can be further softened with regard to anything tender. If the heat of the *Asparagus bed* should decline a slight lining may be added, but care must be taken that it does not heat violently. An opportunity will now occur of covering the out-door beds with a good coating of rotten dung. Hard frosts frequently do serious injury to the roots for want of such a covering. Take advantage of every favourable opportunity till frost occurs, of earthing-up the late crops of *Celery*, both for the purpose of blanching and protection. During the present dull dark weather water should be given to the *Cucumbers* sparingly; less fruit should also be allowed to swell off them in clear weather. *Lettuce* in frames for present use must be kept dry and free from dead leaves. Where hot dung supplies the heat in the *Mushroom house*, a little air should occasionally be given if the beds are found to be getting too moist, but when fire heat is used pans of water should stand on the flues to create a moist atmosphere. Where *Parsnips* have not yet been taken up, they should not be left in the ground any longer, as they are not in the slightest degree benefited by remaining in it, and should severe frost set in there will be a difficulty in taking them up. On the first indications of severe frost it is advisable to get some *Turnips* under cover. They may be laid in sand after the tops are cut off. Keep the *Broccoli* free from dead leaves, as after frost they materially injure the plants by causing them to rot. Keep the *Celery* ground dug-up, so that it may be ready for Onions in the spring. At this period those who are desirous of laying the foundation of a good garden in the ensuing year should closely review the routine of cropping for the past summer, and even cast their eye back on the preceding year. Various are the schemes or rotations practised by different gardeners, many of them being based on no better foundation than the convenience of the present hour. Where, however, the kitchen garden is sufficiently extensive and where much produce is required, the rotation of crops should be carefully studied. The great difficulty is to procure fresh ground for the Cabbage tribe, so numerous are the kinds as well as successions in cultivation. Broken-up plantations of Strawberries, Raspberries, and bush fruit should at all times as a leading principle be set apart for some of the Cabbage family. Potatoes prepare well for almost any crop. Deep or tap-rooted crops should be succeeded by shallow or fibrous-rooted ones. When the course of cropping has been decided on for the year, and entered with numbers in the garden book, the usual practice is to set-up laths opposite to the space appropriated to each crop with a number corresponding with the book, and the name of the crop on one side, and on the other the manure (if any), of what kind, where from, and the

quantity, with the mode of cultivation, digging, or trenching. This done, a labourer who can read the label can set out or proceed with the work at any spare time. This, therefore, is a matter that should receive attention.

FRUIT GARDEN.

Those who find that the leaves of their Peach trees are still green and do not fall, had better protect the trees slightly by straw ropes or by sticking fern, &c., among the branches, as a sudden check to the growing system after such mild weather would be more prejudicial now than after the trees had got accustomed to variation of temperature.

FLOWER GARDEN.

As the leaves are now in a great measure off the trees, the pruning of common shrubs may be proceeded with, and the borders put in order for the season. I have previously spoken against digging, and as the ground must be cleared of leaves it is best where they are not wanted for other purposes to draw them into ridges in the back part of the shrubbery, and there to let them lay and rot, to be distributed over the ground about this time twelve months. It is not a bad plan to fill pots intended for American and other choice plants with wet leaves, and to place the ball level with the surface of the ground; as the leaves decay the plant will sink to its proper level and grow admirably. Once more look over tender stock and add any protection necessary according to the principles heretofore laid down. Remember that fresh sawdust, ashes, or cocoa-nut fibre refuse are excellent protectors to the crown and collar of tender plants. It will be advisable to keep all Carnations and Pinks which may have been potted during the past month from the action of frost, as they are unable to withstand it so well as those which have established themselves from being potted earlier in the season. They should not, however, be shut down when damp, for though extremely hardy, no flower suffers so much from want of a free circulation of air as the Carnation. Examine the plants after the frost goes, and fasten the soil round the stems. They want very little water at this season. Tulip-beds as a matter of course have been covered. It is a good plan to lay young shoots of Gorse between the rows of Pinks where rabbits are apt to come, and it will prevent cats from taking liberties with the beds, independently of protecting the plants from the cutting winds of the winter months.

GREENHOUSE AND CONSERVATORY.

The earliest of the *Chrysanthemums* will now be nearly over, and when they are turned out the best way is not to cut them down as is generally done, but to store them in light dry soil under a west wall, turned out of their pots. The tops being left on will keep the suckers more backward, and also shelter them in some degree. The less the suckers grow before March the better plants they will make next year. Spring-forced *Camellias* now in bloom should be guarded against currents of cold air and damp. *Cinerarias* which are great ornaments for this house in winter, are thirsty plants and good subjects on which to try experiments with some of the new fertilisers mixed with the water given them; they are also liable to the attacks of insects. In pruning and training climbers in this and other houses, some regard must be paid to the time when it is desirable the plants should bloom. Where stove climbers are not required to flower before autumn, pruning may be deferred for some time; but for earlier display it should be done at once. *Passifloras*, *Begonias*, and similar plants which make long annual shoots should only have their branches thinned and slightly shortened, while others, *Combretums* for instance, may be spurred-in. *Kennedys* will soon be showing bloom, and what training they require should be done at once, but the pruning of these should not take place till after they have done flowering. Where Orange trees are grown to decorate the flower garden, care should be taken to prevent their pushing in winter, and this more especially if the trees are in a dark-roofed house; when such happens the young leaves have a thin flabby appearance, and soon turn brown when the plants have been set out of doors; whereas, if growth is prevented till the trees are in the open air the foliage will bear any amount of sunshine.

PITS AND FRAMES.

Half-hardy plants stored away in pits and temporary structures, are likely to have a severe trial before the winter is over. Prepare against severe weather with additional coverings. Keep such plants as dry as they can bear, and expose them on every favourable day. If any plants of Chinese Primrose still remain in the frames they must be watered very sparingly at the roots, and never over the leaves. As soon as the *Chrysanthemums* are out of bloom they should be removed to the greenhouse. *Cyclamens* should also be removed to the greenhouse.—W. KEANE.

DOINGS OF THE LAST WEEK.

FRUIT AND KITCHEN GARDEN.

Trenching Ground for Peas.—The market gardeners in this district do not approve of manuring for Peas previous to sow-

ing, but trass to the manure that may be left in the ground from the previous crop; but they seldom pick the pods more than twice, there not being a sufficient quantity after this to pay for the labour of gathering. In our garden, unless the ground is specially prepared in the autumn, we are left in the same predicament; the soil is light, shallow, and resting on a dry gravel subsoil, so that during the time the pods are filling they are very apt to suffer from drought. By trenching now and placing some good manure in the bottom trench we look for and obtain good and continuous gatherings. The difference between a market gardener and a private grower is this: The first aims at making as much money as possible out of a given piece of ground, the other to prolong the supply for as long a period as possible.

Cutting Turf for Potting.—This is a difficult matter in many places; few gentlemen like to have their parks or old pastures cut up for the use of the garden, and in the neighbourhood of London, since the new regulations came in force with regard to the forest and open places, amateurs and others are driven to their wits' ends to obtain a supply of good potting material. Soil dug out of the garden, mix it with what you will, is no substitute for turfy loam from an old pasture. For ordinary potting we stack the turf in a square heap, a layer of turf and a layer of manure alternately; after this has been laid up for three months or more it may be broken-up and mixed with a little leaf mould and sand, when it will be adapted for all classes of softwooded plants. We also put up a heap without manure for plants not requiring stimulants.

FORCING HOUSES.

Dwarf Kidney Beans.—We do not require a supply of these until late in spring, but noticing them in a neighbouring garden reminds us that they may now be put in. Probably the best way to treat them is to sow thickly in boxes, and when the first rough leaf is formed pot them—five plants round the sides of a 7-inch pot. They require a substantial compost; good turfy loam three parts, and one part rotted manure, will be found well adapted for growing them. They will do in any house artificially heated, and will bear more freely if they are placed near the glass. By supplying them with manure water and surface-dressing the pots, we have continued to pick from the same plants for two months. The variety best adapted for small houses is Newington Wonder; the pods are not large, but the plants are dwarf and free-bearing. We give plenty of water to the roots, and syringe with tepid water twice a-day, which keeps red spider in check.

Strawberries in pots are slow to move, but we do not care to give a temperature above 55° until the flower trusses appear; a high temperature before that will cause many of the plants to become blind. Five-inch pots are quite large enough for all plants intended to be placed in heat before the first week in January. A moderately moist atmosphere and syringing the plants once or twice a-day, according to the state of the weather, is the treatment they receive, and as the pots are packed almost to bursting with roots, a good supply of water is required.

Cucumbers as yet are growing freely and producing abundantly; they are also free from insect pests. The weather being mild, it has not been necessary to overheat the pipes to keep up the temperature to 65° or 70° at night. When hot-water pipes have to be overheated to maintain a sufficiently high temperature no plant will do well, and Cucumbers show the result of it almost sooner than any other.

In the early vinery we are also very careful to maintain a low temperature until the Vines break; 50° is a good minimum until the buds are well started. A high night temperature previous to this invariably causes weak and irregular growth. Instead of wetting the wood with the syringe, which washes off all the dressing that has been applied to destroy red spider, mildew, &c., some fresh stable manure is placed on the border inside the house; the steam from this, and the moisture from evaporating-troughs fixed on the hot-water pipes, with attention to night temperature, will cause the buds to break in a regular manner.

STOVE AND GREENHOUSE.

We have previously alluded to cleanliness in the stove department at the present season, and this will bear repetition. Plants that were known to be infested with mealy bug in summer are looked over once a-week with a quick eye; it is to be found at this season closely concealed in crevices of the bark and axils of the leaves. Of course, it is necessary to sprinkle the paths and stages of the house with water, but Orchids and tender plants should not have the foliage wetted now. Spot on Orchids is caused by wetting the leaves at this season, and when they become affected it is some years before they recover. Extreme caution is necessary as regards watering all hard-wooded plants, such as Ixoras, Francisceas, &c. The same remark applies to hard-wooded greenhouse plants. Give enough water to keep the plants from flagging.

Reported the *Roses* for early forcing. This is generally done in September, so that the plants may be well established before placing them in heat, but they were overlooked this year.

Many of the plants are ten years old, and are shifted year after year into the same-sized pots; these are from 13 to 15 inches in diameter. The yearly renewal of mould about the active rootlets serves to maintain the plants in robust health, and they annually produce a large number of good flowers. The way they are treated is this: The ball of roots is turned out of the pot, all the material which had been used for drainage, with an inch or 1½ inch of the compost, is removed from the outside of the ball by means of a piece of pointed stick or iron. The plant is then transferred to a clean pot, and the compost for such old plants requires to be rich; three parts of turfy loam to one of rotted manure, with some crushed bones added, will suit them well. This is rammed in rather firmly round the ball with a piece of wool, which can be pushed down between the ball and sides of the pot without injuring the roots. As soon as the leaves fall the plants are pruned. It must have been apparent to all who have grown *Roses* in pots, that if the plants are kept in a house from which frost is excluded by artificial heat, the buds continue to swell all through the winter months, and, if the plants are not pruned, those buds nearest the ends of the shoots will swell the most, and this has been proved to a certain extent to be detrimental to the buds nearer the base; so that if *Roses* are intended for early forcing, the sooner they are pruned after the leaves fall the better. *Rose* trees in pots are never dormant, unless they are exposed to a temperature at or below the freezing-point. Some growers do not take account of this, and keep the pots so dry that the wood almost shrivels; this is barbarous treatment, and cannot be too strongly denounced. Under such treatment many of the small fibrous roots, which are the life of the plants, are killed; and the plants, when placed in the forcing house, do not start readily, unless the surrounding circumstances are more than ordinary congenial.

As this is a good time to purchase *Roses*, a short list of the best sorts for forcing may be useful to some. Anna Alexieff, Beauty of Waltham, Duke of Edinburgh, Général Jacqueminot, John Hopper, La France, Lyonnais, Madame Charles Verdier, Madame Noman, weak growth, but very beautiful when half expanded; Madame Victor Verdier, Sénateur Vaisse, and Victor Verdier (the above are Hybrid Perpetuals); Charles Lawson Hybrid China, is a grand pot *Rose*. Nearly all the Tea *Roses* are adapted for pot culture. Niphotos, Safrano, and Madame Falcot are beautiful in bud, and Maréchal Niel the finest of all the yellow *Roses*.

Chrysanthemums are now going off; we remove all decayed leaves and flowers as soon as possible after they show signs of decay. The Japanese sorts, with their quaint and brilliant-coloured flowers, are yet making a good display. Many of these are late-flowering, and such sorts as Dr. Masters, Comet, Grandiflorum, with its full deep golden flowers, and the pure white Fair Maid of Guernsey, are at their best when the in-curved section are over.

The Tree *Carnations* did not open their flowers well in a greenhouse, but on being introduced to a warmer temperature the flowers opened perfectly. *Cyclamens* were also much improved by being placed in a house with a comparatively dry night temperature of from 50° to 55°.—J. DOUGLAS.

MUSSEL SCALE ON APPLES.—The most successful remedy I have tried is paraffin applied in winter.—G. S.

TRADE CATALOGUES RECEIVED.

Little & Ballantyne, Carlisle, and 36, Mark Lane, London.—*Descriptive List of Roses, Rhododendrons, &c.*

Robertson & Galloway, 157, Ingram Street, Glasgow, and Helensburgh.—*Catalogue of Roses, Gladioli, and General Nursery Stock.*

TO CORRESPONDENTS.

N.B.—Many questions must remain unanswered until next week.

PEAT (*G. H. M.*).—The example is of a peat quite unfit for potting purposes.

FLOWER-GARDEN PLANNING (*H. C.*).—In No. 1 border continue the *Cerastium* inside the scrolls at 2, in place of *Bijou*, in order to impart a crisp, well-defined outline to the scrolls and circles, in which last *Coleus Verschaffelti* would be preferable to the *Perilla*; and we would repeat the *Iresine* at 7. Scarlet *Geraniums* may be used in the scrolls as you propose, but the effect will be somewhat harsh. Try and procure sufficient stock to plant the scroll in alternate colours of blue and pink, which with the deep crimson of the *Coleus* upon the soft grey carpeting of *Cerastium* would be very chaste. Do not alter No. 2 border. The varieties of bedding plants which you name form much too limited a list to do full justice to the famous old *Draporum* plan which you in common with so many others have adopted. The following is about the best that can be done with such poor materials:—1, *Bijou*, edged with *Blue Lobelia*; 2, *Christine Geranium*; 3, 3, and 4, 4, *Blue Lobelia*, edged with *Mosebryanthemum coriifolium variegatum*. Of the eight beds numbered 5, there might be at each end two of *Iresine* edged with yellow *Pansy*, and two of *Viola* edged with *Cerastium*, arranged on the method of cross-

planting. 6, Mrs. Pollock, edged with a broad band of Viola; 7, 7, Scarlet Geranium, edged with Mesembryanthemum; 8, Mixed or pin-cushion-beds of Blue Lobelia and Variegated Mint; 9, 9, Blue Lobelia. In view of future improvement procure a few plants each of Geraniums Rev. T. F. Penn, Ananrath, Maid of Kent, Vesta, Rose Bradwardine, Mrs. Loring, and Bonfire for the beauty of their flowers. For fine foliage, choose Miss Kingsbury and Duke of Edinburgh, white; Crystal Palace Gem, yellow; and Lady Cullum, golden tricolor. Of other choice bedders take *Alicemantnera amona*, *Santolina incana*, Golden Feather (*Pyrethrum partookifolium aureum*), Centaurea Clementi, *Polemonium corolium variegatum*, *Echoveta secunda glauca*, *Sempervivum californicum*, and *Colens Verschaffelti splendens*. These are kinds of sterling merit, and afford ample materials to plant your design well and in good taste.

VINERY ON A STEEP INCLINE (Market Gardener).—As you say the ground inclines about 1 foot in 10 towards the east, we would build the house on two or more levels, as where a glass roof leans so much one way the water runs along one side of each square and invariably finds its way inside. At the same time we like to have a little incline in all our glass houses, say about 1 inch in 10 feet. This insures good action in the gutters, and the fall is not apparent to the eye. We would have the back wall 11 or 12 feet high, as a house for late-keeping Grapes ought not to have too flat a roof, and the front wall 2 feet high with trap-door openings for ventilation. As you prefer a fixed roof have a number of flaps along the top movable on hinges, so as to give air when wanted there. The latter may be moved by means of a lever-crank or some other simple contrivance, moving about three (not more) at a place, as having too many connected together rarely effects any saving of time, but often the contrary. The width of the house may be about 14 feet in the clear. This would give you a rafter of about 17 feet, which is ample; but as 2 feet of that length will be wanted for the ventilation at top, the glazing-bars will be only 15 feet, and to support them we would advise a post underneath about 8 feet from the front wall-plate, with timber pillars 8 feet or so apart to support it. We advise your building the front wall on arches, and we would plant all the permanent Vines inside, but there might be a few planted in the outside border: these might be cut away as the others advanced, or if they promised to do well they might be left. We would select for the outside plants some long canes having two or three good terminal buds, and if 8 or 9 feet long all the better, as we would cut out all the buds but the two or three end ones, and plant the Vine as far from the front wall as the cane will allow, merely so as to have its head inside and above the soil, the stem being buried some 6 inches or so the whole way. If the border is good it is not unlikely but these outside Vines may prove some of the best. Those planted inside may be treated in the usual way. For a year or two you might have a few against the back wall. For the 70 feet of main row we would plant about twenty Vines inside, and say about ten outside, afterwards cutting away or taking up any that did not promise to do well. As you want only such kinds as keep well till after Christmas, we conceive you contemplate heating the house in some way, as it is seldom that such kinds as Lady Downe's, Madresfield Court, and others do well without fire heat at some time. We would, nevertheless, not omit Black Hamburg, as it might be cut first if it showed signs of decaying. Our selection for a late house would be Alicante, Lady Downe's, West's St. Peter's, Madresfield Court, and Black Hamburg as black, to which may also be added Gros Colman and Mrs. Pince. The white Grapes may consist of Muscat of Alexandria, Trebbiano, and Calabrian Raisin: the first named on account of its excellence at table. There are other varieties that occasionally do well, as Black Prince and Syrian, but the above are sufficient for your purpose, and as you do not mention anything about the Vine border, we presume it is already formed by nature for you. If suited to the wants of the Grape Vine, such a border is better than any mixture, however valuable its ingredients may be.

PRUNING VINES (W. Ridgell).—The best time to prune Vines is as soon as the leaves have fallen. If pruning is delayed the Vines will bleed, which retards them to a certain extent, although we do not think bleeding is otherwise injurious.

TREATMENT OF ORCHARD-HOUSE TREES (Idem).—Our orchard-house trees in the neighbourhood of London are always kept out of doors until about Christmas. We think the trees are benefited thereby. On the other hand Mr. Pearson, of Chilwell, Nottingham, holds that his trees are much injured if they are placed out of doors in that district. It certainly retards the trees, which will cause them to blossom later, and they would be more likely to escape the frosts in an unheated structure.

TREATMENT OF VINES (An Amateur).—It is too late to ripen the wood of Vines now. Fire heat ought to have been applied to them when the wood was changing to a light brown colour, and the leaves were fresh. Prune the Vines at once. When you prune leave two or three good eyes at the base of the side branches, as the wood is badly ripened. Cutting the side branches close back would entirely frustrate your hopes of a crop next year.

MILL HILL HAMBURGH-VINE BORDER (A. Z.).—The Mill Hill is the best type of the large-berried Hamburgs. The bunches are large and shouldered, berries large and of excellent quality. Plant it by all means. Drain your border as you propose; it may do good, and cannot possibly do harm. As the subsoil is dry it will not be necessary to concrete the bottom of the border, but as you intend to add to the border at some future period, it would be well to build a wall in front; $\frac{1}{2}$ -inch-work set in cement is the best. Brick-on-edge in mortar would not keep the roots inside. The compost you mention will suit very well, and the turf may be used freshly cut.

BRIAR CUTTINGS (Idem).—It is better not to stop the growths.

COLETS LOSING LEAVES (W. H. L.).—It is probably occasioned by the plants having at some time suffered from cold. In a greenhouse at this time of year they can hardly be kept too dry, so long as the leaves do not flag nor the wood shrivel. To winter well, the plants require a light airy position in a cool stove or warm greenhouse. They should be young, and well-established in pots in September, and be very carefully watered. Give the plants more air and the warmest situation you can. A close atmosphere and too low a temperature will only cause them to die off more quickly.

GRAFTING VINE (R. S.).—The black Muscat of Alexandria, or Muscat Hamburg, will succeed on the Royal Ascot. It is desirable to have scion and stock of the last year's wood. The scion need not be more than 6 inches long, and should not have more than two eyes. The best time to operate is when the eyes of the stock are swelled—almost bursting, and at that time the scions should be dormant, keeping them with the ends in moist clay or stuck in a potato. All the eyes of the stock should be removed except one above the place of grafting, and this should not be allowed to make more than one leaf. The scion is best put on by side-grafting. Grafting is not the easiest plan for a tyro; marching is better. It should be practised when both stock and

scion are in leaf, encouraging the growth of the scion, but checking that of the stock above the place of union.

CHEERY BLIGHT (E. M. K.).—The "black blight" you mention is the Aphis Cerasi. Steep 4 ozs. of tobacco in a gallon of water for a few days, stirring and squeezing the tobacco. Dip the shoots into the infusion when that can be done, otherwise syringe thoroughly with the infusion. Next day syringe with plain water, and repeat the application if some aphides still remain.

FUNGUS IN MUSHROOM BED (J. E.).—The curious bodies which have appeared in your Mushroom bed are an imperfect state of *Xylaria vaporaria*, of which a notice will be found in *Linnean Transactions*, xiv. Mr. Curry says, "In December, 1862, I planted it in damp sand covered it with a bell-glass, and kept it moist in a warm room, in a window facing the south. The fertile branches or receptacles soon made their appearance above the surface of the sand, and by the end of March ripe fruit was produced." The fungus has occurred once only before, in Cornwall, under exactly the same conditions. More specimens would be much valued. Was any pig dung by any chance mixed with the horse manure? We should be obliged by an answer to this question.—M. J. B.

SEEDLING APPLE (R. W.).—The Apple you have sent is not an improvement on others already in cultivation; and although it is, no doubt, useful to the owner, would not be worth cultivating for the general benefit of the community.

SELECT ROSES (Old Subscriber).—*Crimson and Scarlet*: Charles Lefebvre, Alfred Colomb, Marie Baumann, Sénateur Vaisse, Duke of Edinburgh, Louis Van Houtte, Mlle. Marie Raby, Dr. Andry, Victor Verdier, Dupuy-Jamain, Jules Margottin, Maurice Bernardin, Red Rover, and Prince Leopold (for pillars), Comtesse d'Oxford, and Madame Victor Verdier. *Pink and Rose*: Princess Christian, Madame Rothschild, John Hopper, La France, Marquise de Castellane, Mlle. Eugénie Verdier, Érolie Hansburg, Monsieur Norman, Anna Alexiev, Baronne Prevost, Baronne Louise Uxkull, Elizabeth Vigeneron. *White*: Boule de Neige, Madame Vidot, Madame Rivers, Madame Alfred de Rougemont, Coquette des Blancches, and Emotion. The above are all Hybrid Perpetuals, and are such as seem to us suitable to your wants, but the data are insufficient. We cannot name half a dozen yellow Roses deeper in colour than *Maréchal Niel*. There are plenty of salmon and copery tints.

ENTOMOLOGY (E. C.).—The "Entomologist," published by Lewman, Devonshire Street, Bishopsgate, and the "Entomologist's Monthly Magazine," published by Van Voerst, Paternoster Row, both at 6d. monthly, are the only entomological journals now extant. Apparatus may be obtained of Mr. Gardner, High Holborn; Mr. Meek, 56, Brompton Road; Mr. Eadie, 49, Goldsmith Row, Hackney Road; and of Mr. Downing, Whip's Cross, East Wallhamston, Essex. Most of the dealers in insects and apparatus have the pupæ of *Papilio Machaon* from December to May, price 4d. or 5d. each. Those of *Vanessa Antiope* are not to be had for love or money.

PEACH TREES OVER-LUXURIANT (C. S.).—The very vigorous shoots we should shorten about one-third their length, as you are in want of leading shoots; and to induce fruitfulness we would take out a trench about 2 feet from the stem, and cut off any strong roots, then work under the ball and cut off any roots that have struck down, or lift the trees entirely with good balls and replant. They will never do any good as long as they make such gross and unripe growths. The distance we give from the stem is calculated upon the trees not having been planted more than five years. The lifting should be so practised that the fibres may be preserved, and only the thick roots cut or shortened. Cucumbers would succeed in the vinery pit if the Vines did not deprive them of too much light; but if the Vines are close-planted, and cover the roof with foliage, Cucumbers would not succeed. Mushrooms would do, but the bed ought now to be made, so that the crop will come in before the vinery has a high temperature, as in that the Mushrooms are often anything but fleshy, and mostly ragged.

CLIMBERS FOR UMBRELLA TRELLISES (The Shah).—The best subjects are the Clematises and Roses; but as you ask when to sow the seed, we presume you want plants for summer. The tall *Tropæolums* would answer; the seed may be sown in April where they are to flower, or, if of the Lobbianum kinds, sow in a gentle hotbed early in that month, and plant out in May. Other plants suitable as summer climbers are *Cobæa scandens*, *Eccremocarpus scaber*, *Geranium Ball of Fire*, *Lophospermum Hendersoni*, *L. scandens*, *Maurandia Barclayana* and its white variety, Ivy-leaved Pelargonium, and *Tropæolum canariense*. Seeds of the last may be sown in gentle heat in April, and the seedlings planted out in May. Some of the others may be raised from seed sown in March in a hotbed and grown on, planting out at the end of May. We advise *Roses* and Clematises as most suitable.

HYDRANGEA CULTURE (T. M. A.).—The young *Hydrangeas* close to the glass in the greenhouse should have no more water than will keep the wood plump. It is usual for the leaves to fall—all will or ought to fall; and the plants should be kept dry until the buds begin to swell in spring, and then cut away the blackened points of the shoots (caused, we consider, by the wood not being ripe), leaving any that have prominent buds at the points. Place in pots a size larger, using a compost of fibrous loam, with a little leaf soil and well-rotted manure, and keep duly watered and in a light airy part of the greenhouse, training out the shoots so as to form a nice plant.

FERNS UNTHRIVING (J. S. W.).—The Ferns you sent are—No. 2, *Polystichum aculeatum*; No. 3, *Polypodium vulgare*. No. 1 was not enclosed. They are both British, and the most enduring of all in rooms, especially the *Polypody*, but neither will stand the drying influence of gas. They ought to succeed in the unheated landing conservatory, but it is probably too dry and draughty. Keep the soil and the atmosphere moist, but not so as to cause the fronds to be constantly covered with moisture, and they will grow well. At this season their growth is mature. They will not succeed in rooms where gas is used, unless they are covered with a glass shade.

HERBACEOUS PLANTS FOR CUT FLOWERS IN SEPTEMBER (A. MacN.).—There are so few we know suitable for exhibition in September, that we should be obliged by the names of any that are useful for cutting from.

CLIMBERS FOR GREENHOUSE WALLS (A Constant Subscriber).—We presume that neither of the walls is shaded by plants or climbers on the roof. If they are, we can only advise *Camellias*, which are better of slight shade. If not shaded, plant *Habrothamnus fasciculatus* for the longest wall, but it is not nearly so quick a grower as *Tæsonia Van-Volkemi*, and for the end have *Lapageria rosea* or *Mandevilla suaveolens*. They would succeed much better in borders than in pots, the soil being taken out 2 feet deep and 6 inches of drainage put in. There should be a drain to carry off superfluous water. Fill up with a compost of two parts fibrous loam, one part leaf soil, and one part sandy peat, with a half part of rotten manure and sand. This

compost will grow all but the *Lagereria*, which requires fibrous peat and very liberal waterings. Select from those named the two you need.

CINERARIAS DYING-OFF (*D. G.*).—It is occasioned by the plants being potted with the neck or collar low instead of being slightly raised in the centre of the pot, and, as a consequence, the water runs to instead of from the stem. Another cause is allowing the plants to become pot-bound, then shifting them into large pots, and placing soil close to the stem. The plants require to be kept cool and moist, dusting a little charcoal round the neck of each; in fact, a little charcoal dust or small charcoal on the surface of the pots is advantageous. It keeps all sweet about the neck or collar. We should have liked your compost better had it been three parts fibrous loam, one part each leaf soil and old dry manure, with a sixth of silver sand.

DESTROYING WOOLLY (*A. Luly*).—It is the common woodlice which is eating the Ferns away, and as the boiled potato wrapped in a little hay placed at the bottom of a flower-pot will not be quick enough, toads may be placed in the house, but they will not do much during the winter. Examine the plants at night with a lantern. It is astonishing how many woodlice may be killed in a night. They will be found about the crowns. They are careful about taking poison, but we once knew them overcome in a Mushroom house by mixing equal proportions of arsenic with oatmeal finely ground, made into a sort of very fine crumbs by melted lard. If you use this, be very careful where and how it is placed.

PROPAGATING AUCUBAS, ARBOR-VITÆS, AND LAURELS (*Sunnyhill*).—They are all increased by cuttings, the Aucubas and Laurels at the end of September or early in October. The Aucuba cuttings should be of the current year's growth, and 8 or 9 inches long; insert them half to two-thirds their length in a cold frame, and keep them close, moist, and shaded for six weeks; then admit air in mild weather, but protect from frost. Laurel cuttings should be of the current year's growth, with an inch or two of the two-year-old wood; insert them two-thirds their length in the soil in an open situation, about 3 inches apart, in rows 9 inches asunder. Arbor-Vitæ are propagated by cuttings 3 or 4 inches long, inserted in August or the end of July in sandy loam and leaf soil, surface with an inch of silver sand, and placed in a cold frame, kept close, moist, and shaded, admitting a little air if damp.

RHOODODENDRON NUTTALLI NOT FLOWERING (*T. H.*).—It is not flowering may probably be owing to the plants not having sufficient light; it should be very liberally supplied with moisture when forming the fresh growth, and then be kept just moist, admitting air freely. Discontinue the stopping. To this, as it tends to induce fresh growth, may to a great extent be due the delay in flowering. Rinsing we do not advise. It might induce flowering, and quite as likely might cause the death of the plant. Allow it to grow, with light and abundance of air, in good fibrous peat, and we think you will ultimately be well rewarded by a splendid bloom.

RED DORSENE PEAR FOR A SOUTH WALL (*Centurion*).—If the locality is cold and exposed, the fruit would be improved, but not otherwise, unless under exceptional circumstances.

NEMOPHILA INSIGNIS FOR SPRING BLOOM (*Idem*).—The seed should have been sown in September or early in October, but you may now sow in pots, and winter the plants in a cold frame.

ROSES AND ANEMONES REPLANTING (*Idem*).—We are not surprised that the Roses do so badly, deprived, as their roots must be, of moisture and nutriment by those of the Anemones. We should at once take up the Anemones in clumps, preserving about them all the soil possible, and replant immediately in an open situation, but not again in the Rose bed. The Roses we should take up carefully, lay them in, and thoroughly trench, manure, and add fresh soil to the bed if required, then replant. The sooner this is done the better. The Anemones would not suffer much, if at all, and the Roses would be materially benefited.

CAMELLIAS NOT FLOWERING (*M. E.*).—We can only account for the plants not flowering from their being very vigorous, probably from having too much pot room. Placing them out of doors will hinder the formation of bloom-buds. If plants are put outside, which we do not advise, they ought previously to be set with bloom-buds. We cannot account for the non-formation of buds except by the treatment being too liberal. Ours are never removed from the house, and they flower beautifully every season. Supply them liberally with moisture until the growth is complete, and then lessen the amount, but keep the soil thoroughly moist. Do not repeat oftener than every second or third year, or even every fourth year, if the growths are good. Top-dress annually when the buds are swelling for flowering with equal parts of fibrous loam and sheep's droppings laid in a shed for three months, and trodden firm or beaten into a mass. Chop up small before placing it on the soil, just loosening the surface, and removing any moss, but without disturbing the roots. They ought to succeed grown in vinery and Peach houses.

GREENHOUSE VINE BORDER (*J. H.*).—We should have liked your arrangement better if you could have had a 3-foot border inside the house in which to plant the Vines, and the wall arched so as to let the roots go outside. This you may yet be able to do by taking down the side wall of the greenhouse in parts, and leaving pillars 14 inches by 9 inches, with a clear opening of 2 feet, and from these you may carry a head of stone from pillar to pillar for the support of the wall-plate of the front lights. The border should be 3 feet deep, and we would have it 9 feet wide—3 feet wide inside, and 6 feet wide outside the house. It should have a drain at the bottom of the border about 2 feet from the greenhouse wall, and to this drain the bottom ought to incline each way. At the bottom of the border place 6 inches deep of rubble, from the size of a walnut to that of a man's clenched fist, placing the roughest at the bottom, and the finest on the top, and in the rubble put a layer of sods, grass side downwards. The border may be composed of the top 3 inches of a pasture taken off with its turf, where the soil is a light rather than heavy loam, and chopped into pieces about 3 inches square. Of this six parts: two parts old mortar rubbish from an old building, one part fresh horse droppings free of straw, and half a part of half-inch bones, well mixed and put in 9 inches higher than the intended level to allow for settling. Plant in spring when the Vines are beginning to grow, at about 1 foot from the front wall of the house, the Vines being procured now, and cut so that when planted they will reach at least through the stage or to the bottom of the rafters. It would not do to take the border under the asphalted walk, as it would sink, besides shutting out rain from the roots of the Vines. To avoid making the outside a soapy mess by persons treading upon it, have a path way 4 feet 1 foot for them to walk upon, and movable so as to be dressed when needed.

WIRING THE ICE WALL (*R. L.*).—It is very desirable to wire the wall you are about to construct for fruit trees. The wire used should be galvanised, No. 13, and for Peaches and Apricots should be 1½ inches apart, and for Pears,

Plums, and Apples may be 9 inches or 10 inches. The wires should be taken horizontally along the wall, guided by eyed wall nails or hooks, and secured at both ends with spikes or eyed nails, and tightened by raisseurs. The wires should be fixed as close to the wall as possible to allow for tying, not more than three-quarters of an inch from it; ours are about half an inch. For price write to some of those advertising in this Journal.

GAS-HEATING PROPAGATING-TANK (*E. L.*).—A small gas-boiler holding about half a gallon of water will heat the pit. You will need to have a flow and return pipe connected with your boiler, and the water in the tank must be divided by a partition up the middle, so that it may flow up one side and down the other. If the water do not circulate, it will be boiling near the boiler and cold at the other end of your tank. The depth of water in the tank need not be more than three-quarters of an inch, and the space between the water and slates about an inch. It is likely, by turning on the gas morning and evening for a short time, you will have all the heat you require, but you will need to ascertain that by a thermometer, which should be kept steady at a given temperature.

CABBAGES EATEN BY SLUGS (*Slugs*).—Sprinkle slaked quicklime over the surface of the beds and plants. Do it early in the evening two or three times, after intervals of a day.

AMERICAN ELIGHT (*S. H. W.*).—Erushing the trees in winter with paraffin oil is a complete cure. Let the bristles of the brush reach well into the crevices of the bark. As the insect descends to the roots in winter, the thick parts of these should be laid bare and dressed with the oil, covering-up again after the operation.

NAMES OF FRUITS (*S.*).—1, Wyken Pippin; 2, Not known; 3, Carraway Russet; 4, King of the Pippins; 5, Scotch Bridget; 6, Not known. (*Centurion*).—1, Worsley Pippin; 2, Pomme Royale, not Reinette Royale; 3, Duteh Mignonne; 4, Stanford Pippin; 5, Leurre d'Arenberg; 6 is Dr. Capron, and is quite worthless.

NAMES OF PLANTS (*R. J. P.*).—The only specimen with a flower, is *Gentiana aculis*. The other miserable scraps of leaves we cannot attempt to identify.

POULTRY, BEE, AND PIGEON CHRONICLE.

BIRMINGHAM POULTRY SHOW.

THE immense entries at the Crystal Palace Show have at length decisively wrested the lead from the venerable parent so long looked up to, and caused the numbers to be looked for with considerable interest, the more so as the sadly unequal light at the Palace had caused many awards, which it was fully expected would be reversed under more favourable conditions. Many birds far overhead at the Palace were here fairly seen for the first time; and the appearance of the hens in pairs, and in pens properly backed, caused a great contrast with many excellent specimens which at the Palace could by no means be induced to face the spectator. Opinions will always differ as to the single-hen system; but our own opinion is more and more confirmed that, whatever reasons may be adduced for showing single hens at certain seasons, as a spectacle and as a fair test of the quality of various yards such a plan is infinitely inferior to showing them in pairs. Without further preface, however, we will now proceed to give our impressions of the various classes.

DORINGS.—Old Grey cocks were a small class of eleven entries, the cup bird had very bad feet and was very hard pressed by pen 6, which should have been in the prize list. The cup bird was undoubtedly best in breast, but the other superior in most other points, both dark birds. The second was small and had little of any sort to recommend him; third-prize a large bird, but almost white-breasted and useless for pullet-breeding; fourth-prize one of the best in the class but for a diseased toes which threw him out, and in the opinion of many should have disqualified him. Among the fifty cockerels we much preferred the unnoticed pen 31, which was in every respect superior to same exhibitor's first-prize bird. Pen 32 was also of excellent size and quality, but also overlooked. First-prize very good, but ought to have been second to the other. The second-prize was good, but third had nothing particular about him; fourth and fifth fairly good. Mr. White's pen 39, and Mr. Kell's, pen 51, were also excellent birds, and the latter should at least have been highly commended; but we never remember seeing these cheap marks of approval so very sparingly distributed as in some classes at this Show. The Selling class for Grey cocks was pretty much what might have been expected. Among the eleven pens of hens we looked in vain for a single first-class pair. First-prize would have been very good but for the very worst cases of bumble-foot we have seen for years; second-prize were moderately good. Pen 81 and the fourth-prize contained each one fine hen very inferiorly mated. Pullets (thirty-one entries), were also disappointing, but on the whole tolerably fairly judged, good mating being again the exception. First were a fair pair; second prize would have been good but for the extremely uncertain age of one of the occupants, which appeared to have somehow mistaken her proper basket. Third-prize contained the very best single bird in the class "by long chalks," but again with only a middling companion; and fifth-prize, too, was virtually scored by one of the occupants only.

The hen Selling-class prizes were mostly awarded to birds which had been very good at one time, but now almost past duty and with formidable spurs. On the whole we must confess to a great disappointment and sense of general falling-off in all the coloured Dorking classes. Silver-Greys too, though select, were not on that account very good. The eight cocks were well judged, the two prizes being good, but no others call for remark. The cup for cockerels (twenty-one entries), was given to a bird of exceedingly doubtful character; in head and plumage he appeared youthful, but possessed old-looking spurs, seven-eighths of an inch long—we measured them—and with evident signs of a surgical operation on at least one foot besides. The second-prize was very good, and Mr. Raines' pen, 156, also contained a bird which deserved far more than he got. The highly commended birds were also pretty fair. One of the first-prize hens was much better than the other, but we confess to liking Mr. Raines' pen again the best of any in the class. In pullets a palpable error was made, the second-prize being, though entered at £3, better than the first. Silver-Greys, too, were, as a whole, very poor, and the season does not seem to have suited the entire Dorking family. White old cocks, eight pens, were perhaps the worst class of all. First-prize was good, but second was a very deep brownish yellow, most unsightly, though large. The first-prize cockerel very yellow again, second-prize being much neater and better in colour, but decidedly small. Hens and pullets were small classes and well judged; but it deserves remark that pen 207 had the plainest signs of a White Cochins cross, and the first-prize pullets were of a yellow colour which, as occurring in the female sex, hitherto free, needs much care to prevent becoming general. Reviewing the whole, the Dorkings were certainly the weakest classes in the whole Show. Several coloured cocks and cockerels, even among the prize-winners, presented also the plainest traces of a "new move" in the shape of a Brahma cross. We must say, judging solely from results, we much prefer the old Dorking pure. Black feet arising from overmuch breeding for very dark plumage, were far too common.

COCHINS.—Feeling very dull after the Dorkings we came to the Buffs, and immediately felt better. If Buffs are not good at Birmingham, what is likely to be?—but courage, the old B. B.'s revived us. The very first pen we found third-prize, and immediately thought, Here is either a mistake, or what must the rest be?—massive, heavily feathered, and deep in colour on wing. But passing on to the other twenty-five old cocks we did come to a better—immensely large, deep gold in colour, well feathered, splendid saddle, and, though by no means up in condition after moult, not unworthy his position. Second was good all round but small. Fourth we thought a mistake; colour and head were very good, but saddle was very narrow, and there was a want of leg feather under the hock. Fifth-prize had many good points, but was much too deep in colour on the wing: the same exhibitor's pen, 232, should have displaced either him or fourth-prize in our opinion. Of the thirty-nine cockerels many—very many—were exceedingly good. First-prize was a now well-known winner, in colour as good as ever, but fast failing in condition, and beginning to show a serious twist in the comb from over-showing. Second really grand in quality. Fourth likely to make one of the best, but as yet though large, raw and unformed. Third we did not like, being almost white on the back though fine in shape, and pen 277 might have displaced him; this last bird only wanted tail to be an almost perfect Cochins. Fifth but middling, legs being too close and tail long.

Hens (nineteen entries), contained chiefly grand single birds, which was particularly the case with first-prize. The second were better matched, but neither equal to best in first-prize pen, these last being the old-fashioned Light Buff. Third-prize, too, were very light colour, but well-shaped; they had both, however, bad combs. Fourth well-shaped, but not a match, one being mealy. Fifth rather small. Pulletts (thirty-nine entries), were badly judged; first-prize being large, but far from Cochins in shape, being narrow, very long-tailed, mealy in colour, and one very badly twisted in hackle. Second a fine-shaped pair of light colour, rather overwashed to look well. Third-prize rather small, and one bird out of sorts, but sound and neat Cochins. Fourth a beautiful colour, but moderate in feather and rather wanting in cushion. Fifth rather spotted in hackle. The best single bird in this class was in Mr. Tomlinson's pen, 336, but not well mated.

In Partridge cocks the three prize birds were grand specimens, but of the rest the less said the better. The judging in this class did not please us, the second-prize being in our opinion the best. He was no doubt inferior to the first in comb and colour, but so really grand in shape, that we consider that he should have had the cup for the best Cochins cock in the Show: we have not for years seen a bird we liked so well in this breed. The cockerels showed the prevailing fault, being all clumsy in shape. Among the nine pairs of hens there was no pen well marked, the only bird so distinguished being one with a twisted comb in pen 372, which was speedily claimed by a well-known breeder. The winning pair of pullets (thirteen entries), were

better, being good in colour, but small and poor in comb. Second and third larger, but poor in colour. There is much room for a skilful amateur in this breed; he would find winning comparatively easy. Whites were good as a whole. First-prize old cock was not a good white, but large and grandly feathered. Second a little long in back, but fairly enough placed. Third very yellow, and somewhat clumsy behind. The first-prize cockerel carried his wings badly—so high, in fact, as to spoil the saddle completely. Second rough and bad in legs, otherwise in our opinion best of the class. Third a good bird, but wanting in that undefinable quality called carriage. The first-prize hens deserved their position, though one was somewhat wanting in cushion. Second-prize should have been disqualified, containing one pullet, and, if we are not much mistaken, the very pullet which won the cup at the Crystal Palace. No doubt showing pullets for hens has not the same fraudulent complexion as showing hens for pullets, and we do not mention the matter in that sense; still, it is not fair to other exhibitors, and the penalty should have been inflicted. It is only fair to add that the said pullet was about the very best in the Show, or that we can remember for some years. Third were not large, but neat, nicely matched, and good Cochins. The best single hen in the class was in pen 424, but her mate was nowhere. The first-prize pullets, again, were very unequal in quality, and neither so good as the one we have mentioned in the hen class. Second had beautiful combs, and were the best-matched in the class, but not so good as the best bird in first-prize. Third were good colour and shape. The whole were an excellent class, as were the hens.

BRAHMAS.—This once-despised breed now fills the largest classes at all good shows. Thirty-six old cocks contended, and a grand lot they were—the best lot of old birds we have ever seen. The cup bird was grandly feathered, good colour, and very massive; in fact, too massive for our taste, being almost like a Cochins. Second-prize was a shade yellow, and had a twisted hackle, but in other respects was a splendid bird, and was hid-up at the auction from eight to twenty-two guineas. Third was rather clumsy, and not, in our opinion, so good as same exhibitor's pen 461. Mr. Lingwood's, 462, was also a grand old cock, and there were other birds fit to show and win anywhere, the whole being a most difficult class to judge. The cockerels were one short of a hundred entries. The first-prize was a fine bird, but bad in saddle and tail, which was too upright, and had long streamers, which the owner deserves credit for showing without plucking. Second was rather coarse. Third fine in shape and saddle, but rather yellow. Fourth was large, but rather clumsy, and very brown on the wing. Fifth we did not like at all, being very coarse and a nasty brown on the shoulders. Sixth a very neat and stylish bird. The cup bird at the Palace was unnoticed in this class; he certainly was gone very yellow, and was said to be lump-backed, but we failed to discover this latter fault, and should have been disposed to put him second, displacing second to fifth. This class was far inferior to the cocks. The Selling class seemed to answer its purpose, five cockerels in consecutive order being marked "sold" by twelve o'clock Monday. The first-prize was a really good cockerel, and sold for eleven guineas and a half; he certainly would have been about fourth in the open class. Second was also very good, and realised five guineas, though yellow. Pen 592 also contained a very good bird. In hens, first were a long way ahead. Second also very good, but the rest were a poor lot, with a few good odd hens among them. Pulletts were a grand class of eighty-nine pens, the first three pens standing clearly out, but the rest being very difficult to judge. The light on this class was fortunately excellent, which was the sole cause of many Palace awards being reversed. The first-prize were large, finely-pencilled, and well feathered. Second-prize contained one young and small bird, which will ere long be far the best of the pair. Third also contained one very young bird with no tail yet grown, which will be as good as any in the class. Fourth were well marked, but wanting shape, and the same remark will apply to the sixth. Fifth were rather coarse in comb, but neat in shape, and pencilling good. There were besides several excellent pens highly commended, and almost any number of good odd birds, Mr. Pritchard especially having several good ones. The Selling class for hens and pullets was poor, with only a few exceptions; but the first-prize pen realised, we believe, £10.

The adult Light cocks (twenty-three entries), seemed, as a rule, rather out of condition. First was very large with little marking and rather yellow, but well-shaped. Second also wanting in marking, and also in feather. Third was small for an old bird, but beautiful colour and carriage. Pens 729, 741, and 748 were fine specimens. In the cockerels (sixty-nine entries), we thought a mistake was made in leaving pen 786 (Mrs. Williamson), out of the prize list, where we should have placed him rather high. He was rather yellow, but not more so than many of the prize birds, and very superior in almost all other points. Passing him, we can fairly congratulate Mr. Dean on his first-prize bird, which thoroughly deserved his position, and though, no doubt, rather small, is in every other point the nearest to

perfection we can ourselves remember to have seen. Second was pale in hackle, but good in every other respect. Third good style and colour, but small. Fourth also small but nice all over. Fifth rather wanted feathering. There were many other really good birds in this class. The hens (twenty pens), were grand but very difficult to judge, every prize pen without exception containing one bird much superior to "all the others," if that be possible. There was hardly a really bad pair in the class. Pullets also were remarkably good, though few birds were, perhaps, so good as the best of the hens. The fifth-prize had certainly the best bird in the class, but by no means well matched. We heard much quarrelling over the judging, and have already noticed what we think was a real omission in the cockerels; but after going over it three times, we think the pullets were well and fairly judged, our remark as to the odd birds being borne in mind. The first-prize contained one bird really grand, though hardly equal to the best in fifth. She was, however, little inferior, and her companion was only a little short of cushion. If we found any fault, it would be to put third-prize second, this pair being fairly good in all respects, and so beautifully and evenly matched as in our opinion to outweigh the better odd bird in the second pen, which was mated with rather a narrow pullet. It was, however, very hard judging all through, and Mr. Teebay is, in our opinion, rather to be congratulated on his success than blamed for shortcomings. Reviewing the Brahma classes, we would remark that many Dark breeders seem quite to have forgotten cushion and leg-feather in their pullets; while Lights have little now to wish for beyond marking in hackle, which last is greatly wanting, in many of the cocks especially.

MALAYS.—These were small classes, but it struck us at once that—in the cocks especially—there was some increase of size. We are glad to see it; it was time. First-prize cock was large, but coarse and gouty in the legs; second was a grand—mistake—not a grand bird by any means, the best bird in the class, 897, being left out. In cockerels, first-prize was almost too long in the leg; the second was good, and so was pen 908. The first-prize hen was very good; second small, and not so close in tail as should be. The first-prize pullet was leggy, but good in all else; second much like a Game, being wanting in shoulders, and too small. Pen 921 was much better in our opinion, which is borne out by the fact of her being a well-known winner.

FRENCH FOWLS.—Créves were all small classes, which may partly be accounted for by there being only two prizes each. The first-prize old cock was a long, long way ahead of all the others, though second was good also, and the highly commended pen, 930, also fine. Only two cockerels contended for two prizes; the first was good, but second was small, and should have been withheld, though perhaps the conditions hardly justified such a step. Hens were honestly shown as a rule, the white feathers being left in the crests. Again first were much the best, though second were good. The two prizes in pullets were nearly equal, first being best in size and second in combs. Houdans had not fair play by far. Old cocks (sixteen entries) paid £5 8s. in fees, and only obtained £3 in two prizes. First was fine in size and colour but had a deformed "double-double" toe. Second was fine dark colour but small, and entered at only three guineas by so good a judge of his value as Mr. Quibell. Either 960 or 961 was worth half-a-dozen of him, both being really good birds; we would, in fact, have given the two prizes to these two, giving preference to Mr. Quibell's. In cockerels the same remark as to unjust consideration applies, as it does in less degree to the hen and pullet classes. Cockerels paid £7 12s. in fees, to be awarded £3 in prizes. First was given to a dark but small bird; second good in all points. First-prize hens were light in colour, but large and well matched; second not so large, but beautiful plumage. These are not birds of colour, but we must, nevertheless, remark that they are the handsomest we have seen a long while. Pullets disappointed us; the first-prize, it is true, were a good pair, but one bird in the other pen was small, and the rest of the class not much to speak of. As a whole the Houdans showed a most decided falling-off.

SPANISH.—Old cocks were a middling lot. First-prize a grand bird, very little trimmed, but far out of condition and scabby. Second a wide face, but bad lobes. Third middling good. In cockerels (twenty-four entries), first was fine carriage and style, but only middling face; second a moderately good bird; third unusually good in comb and fur in feet, but earlobes much duplicated; fourth a sound bird, not matured, but promises to be better than most. Pen 1051 was also a very hopeful-looking cockerel, though not yet ready to show. Hens were a small class of seven, and we may remark that the first-prize pen contained the very best single hen we can recollect seeing for we don't know how long; the other, too, was fair, but it was one hen won the prize. Second a good pair by no means ready after moulting. Third in very poor condition indeed, and not at their best. Pullets were a nice class, first being a really capital pair, something like Mr. Jones's old form—well matched and in nice order. Second and third also good. We cannot forbear the remark that many birds in the Spanish classes were evidently good specimens spoiled by undue forcing.

HAMBURGS.—At Birmingham Blacks came first. First-prize cocks was very neat in comb, and in colour perhaps has never been equalled; the only fault we could find was a redundancy of earlobe. Second-prize similar in character, but rather smaller; third a fair average good bird. First-prize hens were not good; one was squirrel-tailed, and both far too long in the leg, and very deficient in lustre. Second-prize were smaller, but better in every other respect, one bird being the best in colour we have yet seen. Third, large and slightly heavy-looking. The Gold-pencilled winner was the best bird, perhaps, ever seen, and was run-up at the auction to no less than eleven guineas, at which price he was bought-in; every point was good, but the sickles especially were wonderful, and with patience (less than "the patience of Job") and care might do good service to a Hamburg exhibitor for years to come; this bird, however, was honest enough, and his owner may well "hold on" to him. Second and third were neat, but had bronzy tails. The female class was not up to the mark, even the prize pens being deficient. The first two Silver-pencilled cocks were fair, but far inferior to those shown two years ago. Third not yet ready to show, but when grown, if properly washed, would make as good a bird as any of the three. The pullets were better than in the Gold class, "the Duke" winning with a pair especially good in tail. In Gold-spangled cocks both first and second were grand birds, the first being chiefly superior in breast and bars. In the hens we were only thoroughly satisfied with the first-prize pen, the others being in poor condition. The winning Silver-spangled cock was a beautiful bird in all but legs. These were nearly white, and it is a question if this should not have displaced him; he was, however, clearly the best in all other points. Second and third were good average prize birds. Fourth was in bad order, or would be somewhat difficult to beat. The first-prize pair of hens contained one really grand hen, but, as a whole, this class has been far surpassed in former years. The second-prize were pretty good, but not at all a good match, and rather wanting in size of spangling on the shoulders.

POLISH.—The first-prize White-crested cock was barely through his moult, which made his triumph all the more creditable. Second also a good bird, with crest very honestly shown. The hens, on the contrary, were very severely trimmed. In Gold-spangles the first-prize cock was the only one in really good condition, second not being fairly moulted. The winning hens were very fine in all but tail coverts and tails, which were much shaded on the ground colour. The first-prize Silver cock was Mr. Adkins's well-known bird, and secured the cup. Mr. Beldon's second-prize had not fully grown his tail, and was curiously remarkable for a double or bifurcated spur on each foot. The first-prize hens were good in all points, except that much of the lacing looked sooty in colour through bad condition.

ANY VARIETY CLASS.—In this class a good pen of La Flèche won first, a fine pair of Cuckoo Dorkings second, and a very pretty pair of Sultans third. Mr. Fowler had also a nice pair of Leghorns; the rest struck us as rather a poor class.

GAME.—The Game fowls were fewer than usual, but most of the classes contained many excellent birds. The Judges appeared, however, to have an impression that highly commended cost half a guinea each, for we can never remember being so struck with the paucity of these cheap distinctions compared with the really good quality of the classes. With this exception, and the one or two cases named by us, we could find, and we heard, little fault with the judging. The first-prize Black Red cock was rather too long in the head perhaps, and third a shade too crooked in beak, but all were good. In stags there was a decided mistake, which we are convinced was a mere clerical error—*i.e.*, that the bird was in some way mistaken for one in the next pen. He was rather hump-backed, tremendously long in the thighs, and had been cut in both feet for duck-foot. We believe this award was really meant for the next pen, 1309, which contained a capital bird in every respect. First and second were very fine in all points. Fourth was perhaps a shade too dark, and fifth was a little weak in one back toe; but except the third-prize, there was little room for complaint. First and second Black Red hens were a mere toss-up; third had lost a bit of her comb in one of those squabbles in which some ladies will indulge; fourth looked to us rather soft. In the pullets third and fifth were gems, and would have been higher but that they were decidedly too small. Among the Brown Red cocks the winner stood a long way ahead; he was a laced-breasted bird, shown in the very pink of condition. Second and fourth were good too, though some way behind; but third was again a mistake, this bird having tremendously broad and soft sickles, almost like those of a Brahma, and being also too narrow behind. It was a singular coincidence to find the same broad sickles in the third-prize stag, but they were not in this case soft as in the old class; it is, however, desirable to remark on this feature, which looks so out of place in a Game fowl. The winning cockerel was a splendid dark laced-breasted bird. Both hens and pullets were a fairish lot, but several birds were in very soft feather. In old Duckwing cocks the first three prizes were the only birds good in colour, the fourth being

especially bad in this respect, showing much brown in the wing-bar, and still more on the secondary quills, besides a bad back. The first was very good and secured the cup; third was rather squirrel-tailed. Among the cockerels the first was a beauty, but too small; second and one or two others again showed the squirrel-tail, which seems creeping into this breed. Hens and pullets struck us as being worse in colour than we have seen them. Blacks and Brassy-winged were, on the whole, a bad lot. First-prize cock was a Brass-wing, very clumsy in legs, and we must say we liked second best, but nearly all were soft-looking. The first-prize hen was in bad condition, and appeared to have been broody, having lost her breast feathers, but we heard she handled well and do not question the award. The first-prize Pile cock was a beautiful yellow leg, far ahead of all competitors; he was all but perfect in symmetry and condition, but a little faulty in wing-bar, and a good streak of green-black in the tail; no other bird came near him. In the hens the first-prize was a very good gamey bird, but second again out of condition.

BANTAMS.—The first prize in Sebrights went to good Golds, the second to bad Silvers, the cock's hackles being striped instead of laced. In Whites we need not say who won; but the same gentleman's second-prize cock was very bad in comb. In Blacks the winning pen contained a wonderfully neat cock; third was also good, but second had ear-lobes much stained. In the general class, first was taken by Japanese, and second by Mr. Woodgate's White-booted birds. We are not sure we should not have a little changed some of the awards in the Game Bantams; but we must say that all were given to good pens. The number of good old cocks, so rare a few years back, was specially noticeable. In the first class, that for Black-breasted Red birds, the third-prize pen contained a cock very neat, but decidedly dull in colour, and fourth-prize contained one rather poor pullet; and all three birds were too short in face. In the Brown Reds, second-prize cock was an old bird gone very coarse and stocky. In the Any variety, the first-prize (Duckwings) contained one exquisite pullet, but the other was rather clumsy; and the cock, though very neat and gamey, showed signs of more "manual labour" upon him than we liked to see. The third prize pen of Piles also contained one good and one bad hen. The Black-breasted Red cocks were the best class of all; good birds abounded—richly abounded; and while we would perhaps have changed one award, we must say the judging was both good and fair, every prize-bird being an ornament to his circle, or rather pen. In the Any variety class for cocks, first and third were won by Piles, the second by a Duckwing, which should, we think, have been placed first. We must say, in conclusion, that we have never seen Game Bantam classes better filled than at Birmingham in 1873.

DUCKS.—Aylesburys showed some falling-off in weight, as will be seen from the following table:—

	1868.	1869.	1870.	1871.	1872.	1873.
	lbs.	lbs.	lbs.	lbs. oz.	lbs. oz.	lbs. oz.
1st prize	17½	17½	18½	17 12	18 12	17 6
2nd prize	—	17½	18½	16 12	18 1	17 0
3rd prize	—	17½	17½	15 4	17 4	16 14
4th prize	—	—	18½	18 10	16 11	16 12

The weights of the Rouen prize birds are as follows, one Duck and one drake constituting the pen in each instance:—

	1868.	1869.	1870.	1871.	1872.	1873.
	lbs.	lbs.	lbs.	lbs. oz.	lbs. oz.	lbs. oz.
1st prize	19½	18½	19½	19 5	19 10	19 10
2nd prize	18½	17½	18½	19 1	19 12	18 14
3rd prize	17½	17½	18½	18 15	18 7	—
4th prize	16½	17½	17½	18 10	18 2	—
5th prize	—	16½	17½	18 8	22 2	—
6th prize	—	16½	17½	17 10	21 0	—

There was a class provided this year of Rouen Ducks, to be sold at a price not exceeding two guineas the pair. The weights in these cases, for the four prize pairs respectively, are 15 lbs. 2 ozs., 12 lbs. 12 ozs., 13 lbs. 2 ozs., and 13 lbs. 6 ozs. These are probably about the weights at which we may expect to find Rouen Ducks when in a condition for the table.

In Black East Indians we thought the judging (and we examined this class carefully) very fair, the winners being good both in colour, size, and points. Mr. Sainsbury would easily have secured at least second had he matched his birds differently, but they were very badly paired, particularly in size, and in attempting to score two prizes (what a common mistake this is) he lost a chance of either. Mandarins and Carolinas had each classes to themselves, which classes proved a great attraction, being thronged all the time. Mandarins were a very even lot, but Carolinas were more easily judged. Good drakes were in every pen, but Ducks were scarce, and the rare lustre on those in the prize pens determined the awards. Call Ducks also were a nice class, first going to Mr. Gladstone's Whites, and second to Greys. In the Any other variety of Waterfowl, first-prize were Mr. Leno's pet D. Autumnahs (he also showed a pair of Viduatas), and second prize to Ruddy Sheldrakes. The feature of the class was, however, pen 1788, a beautiful pair of purple Gallinules, an African waterhen. The absence of web to the feet seems to have puzzled the Judge, and, perhaps, by

"Waterfowl" swimmers were really intended; but both the rarity and surpassing beauty of plumage in these birds should have brought them some notice.

GEESE.—These birds showed falling-off both in numbers and weight. Thirteen entries competed for eight prizes, so that most of the exhibitors were "in luck." The following weights will enable comparison to be made:—

	1869.	1870.	1871.	1872.	1873.
	lbs.	lbs.	lbs. ozs.	lbs. ozs.	lbs. ozs.
White—Old birds..1st	55½	56½	56 9	56 2	56 6
2nd	52	56½	56 9	51 12	58 0
Goslings..1st	50½	49½	48 6	50 12	46 0
2nd	42	42	44 0	41 8	45 0
Grey—Old birds..1st	67½	69	60 0	53 0	52 0
2nd	58½	53½	51 0	50 12	50 0
Goslings..1st	48½	51½	47 0	47 8	42 12
2nd	46½	49	37 0	46 12	42 8

In these classes the weights of the young birds are decidedly below the mark.

TURKEYS.—Mr. Lythall of course won in Turkeys in every class in which he showed. In the other (old cocks) Mr. Kendrick won with an American bird. The weights subjoined will show a falling off in most of the prize cocks, and a gain on the hens. All the Turkey classes were well and creditably filled.

	1869.	1870.	1871.	1872.	1873.
	lbs.	lbs.	lbs. ozs.	lbs. ozs.	lbs. ozs.
Old Birds—Single Cock 1st	34½	30½	36 4	38 5	37 4
2nd	32	30½	32 8	35 6	35 10
Pair of Hens 1st	37½	35	38 12	32 8	38 6
2nd	32½	34	35 8	28 4	38 2
Bred this year—Single Cock 1st	25½	24½	25 0	29 0	24 12
2nd	23½	23½	23 4	28 10	23 4
Pair of Hens 1st	28½	34½	28 10	31 0	31 6
2nd	27½	29	27 2	30 10	28 14

It only remains to speak of the general features of the Show. The total entries show a slight falling-off, being this year 1850 of poultry, and 491 of Pigeons, against 1996 of poultry, and 389 of Pigeons last year. Most varieties of poultry have decreased; but the all-devouring Brahma has increased by some sixty pens, and Pigeons by a hundred. The most disappointing classes were the Dorkings. The rest were mostly up to the mark. The Light had been again improved, and there are now very few really Dark pens. It is also worthy of remark that the gallery, which last year was so stiflingly hot as soon as the gas was lit, was now thoroughly ventilated. On this point we felt very anxious, and took particular pains to ascertain, late in the evening, how the case then stood; but with all these improvements, the accommodation is still a disgrace to such a Show, and unless something more be done, must ultimately drag it down below even Manchester. The poultry, it is well known, is the chief attraction of this Show, yet has only about one-fourth the floor space; and if some means cannot be found of treating exhibitors and the public more fairly, they will inevitably go elsewhere. The crowding at times was really painful, and greatly hindered us from forming a matured judgment in many cases.

The feeding was particularly careful and good this year, but some other points of the management very bad. The pens were floored with dark sand, and water given in large spittoons, in which latter the birds stood and dabbled, till both their pens and themselves were in a filthy condition it is impossible to describe. Why cannot a Show like this provide proper water-tins, and scatter clean chaff daily into every pen, over a little clean grit? By this means the birds would be kept both clean, healthy, and happy: as it was, if our own fancy were White Cochins, we should have been rather "mad" to see the condition of our birds.

The attendance of the public was very large, more than for very many years past. The following table of Monday's statistics will show this:—

	1869.	1870.	1871.	1872.	1873.
Monday	£195	£260	£233	£260 5s.	£324 3s.
ADMISSIONS.					
	1869.	1870.	1871.	1872.	1873.
Subscribers' tickets	4,937	4,702	4,392	4,897	5,858
Five shillings each	689	840	777	845	997
One shilling each	475	819	781	980	1,498

The sales were also very numerous, and high prices were realised. A Brown Red Game cock sold for £27, and a pen of Duckwing Bantams 18 guineas. The first-prize Dark Brahma pullets were bought-in at £30, and the second-prize were "run-up" to 24 guineas, at which they also were bought-in. It is our decided opinion that the interest in the poultry fancy is on the increase, and that something like a fresh "mania" is fast getting up; in the face of which we strongly advise all who "hold shares" in "good stock" to hold firm, in the hope of a rising market. We can never remember a sale at which there were so many and such eager buyers. We have mentioned Brahmas bought-in, but besides these the second-prize old Dark cock was run-up at auction from 8 to 22 guineas, at which he was knocked down; and the third-prize cockerel was claimed at £20. We may perhaps be able to give a summary of the most important sales next week.

We will only further remark that all the officials were courteous and obliging as ever, and did all in their power to assist us in every way. We could only wish that the awards were more frequently delivered in, more promptly copied-out, and more constantly kept posted-up on the Saturday.

The Judges officiated as follows: Mr. John Baily judged the Dorking, Malays, French fowls, Any variety class, Bantams (except Game), and fancy Ducks; Mr. Dixon took the Ham-burghs, Polish, large Ducks, Geese, and Turkeys; Captain Heaton did the Cochins; Mr. Teobay the Brahmans and Spanish; and Messrs. W. R. Lane, E. Lowe, and J. H. Smith the Game and Game Bantams. It gives us pleasure to add that Mr. Hewitt also put in an appearance on the Saturday, and though not able to take regular duty, kindly checked over, voluntarily, the Brahmans and some of the Cochins, "just for fun" and to assist his colleagues. He looked much better than we expected to find him, and though a little fatigued, seemed really to enjoy being in his old element again.

[We have another full report from a thoroughly qualified reporter, which we will insert next week.—Eds.]

THE PIGEONS.

MONDAY, December 1st.—I stand at an early hour at my hall door in Wiltshire with a light heart, for I have just tapped my barometer, and find that after a steady rise of some days the mercury is now ever bounding. Ah! thought I, this year 1873 is like many an old sinner, improving at the last. October better than September, and now we are going to have the old gentleman's last days, and they are to be better still. Shall I really see the Birmingham Show under sunlight? Will Birmingham streets be other than dirty, slippery, greasy, and the air smoky-tasting, wet? I have never seen Birmingham to advantage; I think I shall this time. "*Carpe diem*," which freely translated in this nineteenth century (later part, by the way), may mean, "Catch the train." Train duly caught, day improving every hour, but the train terribly, terribly slow. Comforting thought—"If slow, sure—i.e., safe, can't run into any other train." Discomforting thought—"Another train may run into us." Weary, weary hours—the train is so very slow. At length, at a few minutes to four, after a seven-hours ride, I am in Birmingham. On, on, to the Show. The day is still fine. Birmingham streets and air as good as can be under any circumstances. A throng like Cheapside. I cross over to the opposite pavement, which seems less crowded. I wonder whether this fine street, like Milsom Street, Bath, has a shilling and a sixpenny side, and the shilling side, having the better shops, has the most people. In the Show, but dark, hot; no light cages for Pigeons as at the Crystal Palace, and to see birds and judge their merits an utter impossibility. Baffled and beaten, I go out and hope for a fine morning's early visit. The hospitable doors of, now an old friend of mine, and an old friend of "our Journal," are, I know, open to receive me.

Tuesday morning I am in the Show in capital time; but wait awhile. I had never seen the country near Birmingham under sunlight, and how pretty it is! English hedgerow scenery—thoroughly English. It is Shakespeare's county, too, I remember, rich in wild flowers, and woods, and parks, and deer; and though the needs and necessities of business have altered it, yet these are counterbalanced greatly by the well-built villas, the tasty gardens, rich especially in conifers, and all the appearances so prominently revealing the comfortable, very comfortable, circumstances of the inhabitants.

Bingley Hall is, as ever, full—too full for personal ease and rapid progress. Up the gallery I find my cooing friends. The poultry I go not to; another is writing of these, and right well he does write.

First greet me the Almond Tumblers; and, by the way, how one's mind will turn to the Crystal Palace Show, seen only a fortnight since—"comparisons are odious," as said my copy-book—"comparisons are odiferous," as said Mrs. Malaprop—but one cannot help making them. Birmingham Show and Crystal Palace Show, the former like a fine old parent whose son has grown bigger and finer than himself, yet the old fellow is, I find, hale, and hearty, and strong—not so good-looking as his son Crystal Palace Show, but venerable and strong withal. I stand before the Almond Tumblers, shown here in pairs—few but choice.

The Carriers are, though fewer, yet said to be even better than those at the Crystal Palace Show; certainly the first-prize is a grand bird; there is one, No. 1863, highly commended—an excellent-going bird whose day is coming.

Next come Pouters, Red cocks—First-prize a very good colour, not good in style of limbs, but certainly rightly placed first; second an excellent Pouter, colour bad, limb very good. Red hens—first excellent, a little too much white in crop, but no other fault; second a very nice bird, but not a good colour, his being Blue bred very visible, but he has nice limbs. Blue hens.—Second was the lovely hen, to my mind, of the Crystal Palace Show, and the lovely hen of this Show as well, her only fault being slightly bishoped; still first was a bird of immense length,

No. 1957 has a Black put in by mistake, certainly a strange mistake, and an excellent bird. No. 1958 was a nice bird. Black cocks.—1965, young but has a good time coming. First a very nice bird; second very large but dugged thighs. Black hens.—First well-stocked and lovely limbed; second too much white. White cocks.—First rather more slender than second; the second well-nigh as good a bird as could be, and perhaps the best in the class. White hens.—First long-limb and feathers, but not too good a carriage; second very pretty hen, but wants a little more limb; 1992, third at Crystal Palace Show, but only very highly commended here. The class of White Pouters the best of the variety. Any other colour.—Surely a mistake. Meales not wanted here, and Yellows better with Reds. In the hens of Any other class all were Yellow and all good, but third-prize rather heavy.

Barbs, Black—First, wondrous skulls; second, very good indeed. Barbs, any other colour—First, Reds, well-known ones; second, a nice pair of Yellows. Barbs of 1873, very promising—First, wonderful for age.

Bulls, Shortfaced, more numerous than I feared—First, excellent Blues; second, Blues again, a little large; a Yellow commended pair, excellent in colour, and one good in head.

Bears—First and second, Mr. Woodhouse; I preferred the latter.

Tumblers, Shortfaced—First, Mr. Adams, excellent Red; second, a tidy pair of Black Mottles. Tumblers, Long-muffed, thorough Birmingham birds, and now bred to nice feather.

Rants, of course few. I heard a countryman remark, "They be fowls, surely."

Jacobins.—Here a difference of opinion; one class of fanciers and judges like the hog-mane, another class like it not, but an openness in the neck; hence at the Crystal Palace Show one class, the latter, won, here the former. I own I prefer the hog-mane. The Jacobins were very excellent.

White Fantails.—A truly superb class, and no wonder when Messrs. Maynard, Loverside, and Serjeantson sent their birds.

Trumpeters.—Very few, but good.

Owls, Foreign, the same. English Owls, a far stronger class,

but surely they were many of them half or part foreign—a kind of Englishman with foreigner's smaller size and look.

Nuns.—Good, and many Yellows among them.

Blue Dragons.—Very excellent. Red and Yellows—First and cup, superb Yellows; second, excellent Red birds; third, Yellows; 2212, good Reds again. Silver Dragons showed good specimens of the two varieties, the Black-barred and the Brown-barred—First and cup, the former variety; second, the latter.

Dragoons, any other colour—First and cup, lovely Whites, excellently shown; all in the class White.

The Magpies were very neat.

Antwerps of the higher fancy variety, of different colours, of good shape.

Archangels.—Glittering and gorgeous, but too few.

Swallows.—Neat and nice.

The Any other variety a truly interesting class.

In all, the Pigeon entries numbered 891, and putting aside the Crystal Palace Show, this was a very good one. The great heat of the evening is to be regretted. The badpens—some in corners, very dark—are also to be regretted. A stranger cannot fully understand the difficulties of a managing committee, but it is a pity that the pretty birds cannot be shown as well as at Glasgow, to say nothing of the Crystal Palace, which as a building is above comparison with any other. The fineness of the weather is a cause of great congratulation.

Then Birmingham was the initiator of many shows. Here first a great Exhibition; here a first Poultry Show. Here, I believe, Mr. Sims Reeves first came into fame. In fact, there is a pluck, an energy, and "a go" in the good folks which make everything that is done here noteworthy to every Englishman, whether he happens to agree with it or not. Hence a visit to the good town is always interesting.—WILTSHIRE RECTOR.

DOCKINGS (Coloured, except Silver Grey).—Cocks.—1, C. C. Barnell, Michel dever, 2, J. Drewry, Burton-on-Trent. 3, J. White, Warridy, Northampton. 4, J. Walker, Rochdale. 5, C. Fearon, Whitehaven. 6, Countess of Dartmouth, Patchull, Abington, Wolverhampton; W. H. Demson, Woburn Sands Reds.

DOCKINGS (Coloured, except Silver Grey).—Cockerels.—1, Mrs. Arkwright, Sutton Scarsdale. 2, J. Walker, Rochdale. 3, Mrs. Murray, Thunston, Derby. 4, T. Fox, Lincoln. 5, Mrs. Somerville, Chirk, North Wales. 6, Rev. J. F. Newton, Kirby-in-Cleveland; J. Wells, Drakelow, Burton-on-Trent; T. Statter, Manchester; J. White, W. Harvey, Sheffield.

DOCKINGS (Coloured, except Silver Grey).—Cocks or Cockerels.—1 and 4, R. W. Richardson, Bevelry. 2, J. Watts, King's Heath, Birmingham. 3, J. Smith, Beley-in-Arden. 4, E. Shaw, Oswestry.

DOCKINGS (Coloured, except Silver Grey).—Hens.—1, Mrs. Arkwright, 2, J. White. 3, T. Statter, Manchester. 4, Henry Langwood, Barking, Needham Market. 5, W. J. Thompson, Woodhorn, Morpeth. 6, J. Drewry.

DOCKINGS (Coloured, except Silver Grey).—Pullets.—1, J. White. 2, Mrs. Arkwright. 3, T. E. Kell, Wetherby. 4, Mrs. T. W. L. Hind, Kendal. 5, W. W. Burdett, Southend, Kent. 6, Rev. G. A. Baker, Old Warden Vicarage, Budegswade; Mrs. Somerville, Chirk, North Wales; W. H. Robson, Lincoln; E. Fearon. 7, J. D. Howson, M.D., Stafford; T. E. Kell.

DOCKINGS (Coloured, except Silver Grey).—Hens or Pullets.—1, R. Smalley, Lancaster. 2, W. Tyler, Birmingham. 3 and 4, J. Watts.

DOCKINGS (Silver Grey).—Cocks.—1, T. James, Bridge Haugh, Stirling. 2, J. Horton, jun., Shirley, Birmingham. 3, W. W. Rutledge, 4, Rev. J. F. Newton; Countess of Dartmouth.

DOCKINGS (Silver Grey).—Cockerels.—1, A. Darby, Bridgenorth. 2, W. G.

DUCKS (White Aylesbury).—1, 3, and 4, J. K. Fowler. 2, J. Walker. *hc*, W. J. Thompson; Mrs. H. J. Bailey, Rosedale, Tenbury. *c*, S. W. Cox, Spondon, Derby; W. H. Robson, Lincoln.

DUCKS (Rouen).—1, J. N. C. Pope, Bristol. 2, 3, and 4, R. Gladstone, jun., Liverpool. 5, T. Statter, Manchester. *hc*, W. J. Thompson; A. Dickinson, Duxington, Whitehaven; W. Stephens, Highnam Green, Gloucester; T. Statter, R. Gladstone, jun., *c*, W. Brierley, Middleton, Manchester; S. B. White, Isle of Wight; *hc*, J. M. Kilvert, West, Salop; *c*, S. Sainsbury, Devizes (2). *c*, Mrs. Hayne, Fordington, Dorchester; S. Barn, Whithy; J. Walker.

DUCKS (Mandarin).—1 and Cup, W. Binns, Pudsey, Leeds. 2, R. Wilkinson, Guildford. *hc*, M. Leno; J. Walker.

DUCKS (Carolina).—1, H. Mapplebeck, Woodfield, Moseley, Birmingham. 2, W. Binns. *hc*, R. Wilkinson; Mrs. Arkwright; J. Walker.

DUCKS (Call).—1, Mrs. H. J. Bailey. 2, R. Gladstone, jun.

DUCKS OR ORNAMENTAL WATER-WALKERS (Any other variety).—1 and *hc*, M. Leno. 2, W. Binns.

GEESSE (White).—1, J. K. Fowler. 2, Mrs. H. J. Bailey. *Goslings*.—1, J. Walker. 2, J. K. Fowler. *hc*, T. Watson, Colleshill.

GEESSE (Grey and Mottled).—1, J. Walker. 2, J. K. Fowler. *hc*, T. Watson. *Goslings*.—1, S. H. Stott, Preston. 2, J. K. Fowler. *hc*, F. E. Rawson; E. Shaw.

TURKEYS—Cocks.—1, E. Kendrick, jun., Lichfield. 2, F. Arnold, Whittlesford, *hc*, Mrs. Line, *all*; H. J. Gunnell, Milton, Cambridge; F. E. Rawson, Thorpe, Halifax; W. Wykes, Wolver, Hincley; Hon. Mrs. Colville, Lullington, Burton-on-Trent.

TURKEYS—Cockereils.—1, F. Lythall, Ofchurch, Leamington. 2, F. Warde, West Farleigh, Maidstone. *vhc*, J. K. Fowler; E. Arnold; F. Lythall (2). *hc*, F. Lythall; W. B. Etches, Whitchurch; Miss J. Milward, Newton St. Loe, Bristol; W. Wykes.

TURKEYS—Hens.—1, F. Lythall. 2, E. Kendrick, jun. *vhc*, F. Arnold. *hc*, E. Kendrick, jun.; W. Wykes; W. B. Etches.

TURKEYS—Pullets.—1, F. Lythall. 2, J. Walker. *hc*, F. Arnold; E. Kendrick, jun.; T. Watson; W. B. Etches; W. Wykes; F. Warde.

PIGEONS.

TUMBLERS (Almond).—1 and 2, R. Fulton, New Cross, London. 3, H. Yardley, Birmingham. *hc*, R. Fulton; J. Ford, Monkwell Street, London.

CARRIERS (Black).—Cocks.—1, R. Fulton. 2, W. Siddons, sen., Lichfield Road, Aston. *vhc*, E. Horner, Harwood, Leeds. *hc*, H. M. Maynard, Holmewood, Ryde, Isle of Wight; H. Yardley; W. Siddons, sen. *c*, J. Isaac, Kenilworth; J. Thompson, Bingley; R. Fulton; W. Siddons, sen.

CARRIERS (Black).—Hens.—1, R. Fulton. 2 and *hc*, W. Siddons, sen. *vhc*, R. Fulton; 2, E. Horner; *c*, F. Smith, Sully Oak, Birmingham.

CARRIERS (Dun).—Cocks.—1, F. Horner. 2, R. Fulton. *hc*, H. M. Maynard.

CARRIERS (Dun).—Hens.—1, W. Siddons, sen. 2, R. Fulton. *vhc*, R. Fulton; W. Siddons, sen. *hc*, E. Horner; W. Siddons, sen.

CARRIERS (Any other colour).—Cocks.—1, R. Fulton. 2, W. Siddons, sen. *hc*, R. Fulton; W. Siddons, sen.; J. F. White, Birmingham.

CARRIERS (Any other colour).—Hens.—1, R. Fulton. 2 and *vhc*, J. C. Ord, Lupus Street, London; S. W. *hc*, J. F. White.

CARRIERS (Black).—Young.—1, R. Fulton. 2, W. Siddons, sen. *vhc*, F. Smith; H. M. Maynard. *hc*, J. Peace, Burton-on-Trent; J. F. White; W. Siddons, sen. *c*, G. F. Whitehouse, King's Heath, Birmingham.

CARRIERS (Any other colour).—Young.—1, R. Fulton. 2, J. F. White. *vhc*, J. C. Ord; E. Horner.

POUTERS (Red).—Cocks.—1, R. Fulton. 2, F. Gresham, Sheffield. *vhc*, E. Horner; R. Fulton.

POUTERS (Red).—Hens.—1, R. Fulton. 2, W. R. Rose, Kettering. *vhc*, W. R. Rose; W. Harvey, Sheffield.

POUTERS (Blue).—Cocks.—1 and *vhc*, R. Fulton. 2, A. H. Stewart, Birmingham. *hc*, F. Gresham; R. Fulton.

POUTERS (Blue).—Hens.—1, R. Fulton. 2, F. Gresham. *vhc*, A. H. Stewart. *c*, F. Gresham; W. Harvey.

POUTERS (Black).—Cocks.—1, H. Pratt, Birmingham. 2, F. Gresham. *vhc*, W. Harvey.

POUTERS (Black).—Hens.—1, F. Gresham. 2, W. R. Rose. *vhc*, R. Fulton. *c*, W. Rose; F. Gresham.

POUTERS (White).—Cocks.—1, R. Fulton. 2, W. R. Rose. *vhc*, H. Pratt. *hc*, Mrs. Ladd, Cade; R. Fulton.

POUTERS (White).—Hens.—1 and *c*, R. Fulton. 2, Mrs. Ladd. *vhc*, W. R. Rose; Mrs. Ladd; H. Pratt.

POUTERS (Any other colour).—Cocks.—1, W. R. Rose. 2, R. Fulton. *vhc*, Mrs. Ladd.

POUTERS (Any other colour).—Hens.—1 and *vhc*, R. Fulton. 2, W. R. Rose, *hc*, H. Pratt; E. L. Fulton; H. M. Maynard. *vhc*, H. M. Maynard; F. Smith; J. Fielding, jun., Rochdale.

PARDS (Any other colour).—1, R. Fulton. 2, H. Yardley. *vhc*, R. Fulton; E. Horner.

PARDS—Young.—1 and *vhc*, F. Smith. 2, J. Pease.

BALDS.—1, E. Fulton. 2, G. South, New Bond Street, London. *vhc*, W. Woodhouse, Lynn. *c*, J. Fielding, jun.; W. Choyce, Sibson.

TRAPLADS.—1 and 2, W. Woodhouse. *vhc*, G. South. *c*, H. Yardley; W. Woodhouse.

TRAPLADS (Short-faced).—1 and *vhc*, H. Adams, Beverley. 2, J. Fielding, jun. *hc*, R. Fulton. *c*, J. Ford, Monkwell Street, London.

TRAPLADS (Long-nosed).—1, H. Yardley. 2, W. Todd, Erdington. *hc*, J. Watts; H. Yardley; W. Todd. *c*, W. M. Mapplebeck, Woodfield, Moseley.

TUMBLERS (Any other variety).—1, W. Ellis, Ilke, Leeds. 2, W. Harvey. *vhc*, R. Fulton. *hc*, E. Horner. *c*, J. Ford.

BESTS.—1 and *c*, T. G. Green, Saffron Walden. 2, H. Yardley.

JACOBS (Red or Yellow).—1 and 2, Capt. H. Heaton, Worsley, Manchester. *hc*, G. South; S. Shaw, Stainland, Halifax; R. Fulton (3); J. Thompson (2).

JACOBS (Any other colour).—1 and *hc*, R. Fulton. 2, Capt. H. Heaton.

FANTALS (White).—1, H. M. Maynard. 2 and 3, J. F. Loversidge, Newark. *vhc*, Rev. W. Serpantson, Acton Burnell Rectory, Shrewsbury. *hc*, J. F. Loversidge; Rev. W. Serpantson. *c*, W. Choyce, Sibson, Atherstone.

FANTALS (Any other colour).—1 and 2, H. Yardley. *vhc*, H. Yardley; W. Choyce. *c*, W. Choyce.

TRUMPETERS (Mottled).—1 and 2, E. Fulton.

TRUMPETERS (Any other colour).—1, R. Fulton.

OWLS (English).—1, J. Fielding, jun., Rochdale. 2, H. Yardley.

OWLS (Foreign).—1, W. Binns, Pudsey, Leeds. 2, S. Shaw, Stainland, Halifax. *hc*, W. Boucher, Lancaster Road, Notting Hill, London; H. Yardley; J. Pease; F. Smith.

NISSES.—1, J. B. Bowden, Blackburn. 2, W. Harvey. 3, Rev. A. G. Brooke. *hc*, Mrs. A. G. Brooke; E. Horner.

TERTLES (Red or Yellow).—1, S. Shaw. 2, R. Fulton. *hc*, O. E. Cresswell; E. Horner; F. T. Dew, Weston-super-Mare; R. Fulton.

TERTLES (Any other colour).—1, W. Boucher. 2, R. Fulton. *hc*, E. T. Dew; W. Ellis.

DRAGONS (Blue).—1 and Cup, G. South. 2, W. Gamon, Chester. 3, F. Graham, Birkenhead. *hc*, W. Gamon (2); W. H. Mitchell, Moseley, Birmingham (3); W. Hill, Handforth; F. Graham.

DRAGONS (Red or Yellow).—1 and Cup, F. Graham. 2, R. Fulton. 3 and *c*, G. South. *hc*, F. Graham; G. South.

DRAGONS (Silver).—1 and Cup, F. Graham. 2 and 3, H. Yardley. *hc*, W. Bishop, Dorchester (3); G. South.

DRAGONS (Any other colour).—1 and Cup, W. Bishop. 2, F. Graham. 3, J. Pease. *c*, J. G. Dunn; W. Bishop.

MAGPIES.—1, J. B. Bowden. 2, E. Horner. *hc*, W. C. Dawson (2); R. Fulton; J. Watts.

ANTWERPS (Silver Dun).—1 and *hc*, W. Gamon. 2, H. Yardley. 3, H. P. Ryland, Erdington, Birmingham.

ANTWERPS (Blue).—1, H. Yardley. 2, *hc*, and *c*, W. Gamon. 3, J. W. Ludlow, Birmingham.

ANTWERPS (Red-Chequered).—1 and 2, W. Gamon. 3, W. Ellis. *hc*, H. P. Ryland; J. W. Ludlow. *c*, H. Yardley.

ANTWERPS (Blue-Chequered).—1, W. Gamon. 2 and 3, J. W. Ludlow. *hc*, W. Gamon (2); H. P. Ryland.

ANTWERPS (Toming).—1 and 3, W. Ellis. 2, J. J. Sparrow, Grosvenor Mews, Berkeley Square, London.

ARCHANGELS.—1, W. Harvey. 2, R. Fulton. *hc*, R. Wilkinson, Guildford; H. Yardley.

SWALLOWS.—1, E. Horner. 2, W. Choyce.

ANY OTHER VARIETY.—1, W. Hill. 2, J. B. Bowden. 3, W. Harvey. 1, 2, and 3, J. W. Ludlow. *hc*, J. W. Ludlow; W. C. Dawson; H. Yardley.

AVY ORNITHOLOGICAL SOCIETY'S SHOW.

THE following awards were made at this Show, held November 22nd:—

SPANISH.—1, A. McIntyre, Coylton. 2, W. Merry, Kirkmichael. 3, W. Wallace, Mauchline.

HAMBURGS.—Golden.—1, J. Pollock, Patna. 2, J. Aitken, Girvan. 3, J. Davidson. *Silver*.—1 and 3, Mrs. Murdoch, Corton, Ayr. 2, J. Aitken.

GAME.—Bantams.—1, J. Taylor, Johnstone. 2, J. Cooper, Ayr. 3, T. D. Blaid, Ayr. *Any variety*.—1, W. Thompson, Dalmeington. 2, W. Copland, Ayr. 3, W. Arthur.

SCOTCH-GRAYS.—1, T. Wallace, Loans, Troon. 2 and 3, W. Robertson, Ayr.

ANY OTHER VARIETY.—1, A. Wylie, Johnstone (Polands). 2 and 3, H. Smith, Irvine (Cochins and Brahmans).

PIGEONS.

POUTERS.—1 and 2, W. Law, Crosshouse. 3, A. C. Glass, Ayr.

CUNTS AND MAGPIES.—1, A. H. Imrie, Ayr. 2, J. G. Glendinning. 3, J. McCutche, Ayr.

PARTALS.—1 and 3, R. Blair, Thornhill. 2, J. Galt, Kilmorie.

JACOBS.—1, W. Mackie, Tarbolton. 2, W. McClive, Ayr. 3, J. Tomlinson, Galston.

TURBITTS.—1, J. Muir, Dalry. 2, J. Tomlinson. 3, A. H. Imrie.

TUMBLERS.—Common.—1, H. Fulton, Beith, Maifets. 2, A. H. Imrie. 3, W. A. Crawford.

ANY OTHER DISTINCT BREED.—1, S. Beddeley, Hereford (Carriers). 2, H. Smith, Irvine (Trumpeters). 3, S. D. Beddeley.

ANY OTHER VARIETY.—1, W. McClive, Ayr (Carriers). 2, R. Cumming, Beith (Pouters). 3, A. H. Imrie.

CANARIES.

GLASGOW DONS.—Yellow.—Cocks.—1, M. Adam, Ayr. 2, R. Crawford, Kilmorie. 3, D. Reid, Kilmorie. 4, W. Campbell, Kilwinning. *Hens*.—1, D. Reid. 2, R. Baxter, Beith. 3, D. Dick, Kilmarnock. 4, M. Adam, Ayr.

GLASGOW DONS.—Buff.—Cocks.—1, M. Adam. 2, W. Gibson. 3 and 4, R. Baxter. *Hens*.—1, D. Robertson, Glasgow. 2, H. Davidson. 3, J. Howat. 4, R. Crawford, Kilmorie.

PUREBLOOD.—Yellow.—Cocks.—1, W. Hunter, Kilmorie. 2, D. Smith, Stevenston. 3, D. Robertson, Glasgow. 4, D. Dick, Kilmarnock. *Hens*.—1, W. Smith, Ayr. 2, R. Baxter, Beith. 3, J. Speirs, Ayr. 4, T. M'Connell, Ayr.

PUREBLOOD.—Buff.—Cocks.—1, H. Crawford. 2, M. Adam. 3, T. M'Connell. 4, H. Calder, Ayr. *Hens*.—1, D. Dick. 2, W. Campbell, Kilwinning. 3, H. Davidson. 4, R. Baxter, Beith.

MCLES.—1, D. Young. 2, D. Crawford.

PARROTS.—1, W. Paterson, Ayr. 2, Miss McKechnie, Ayr. 3, J. S. Boyd, Irvine.

OAKHAM POULTRY SHOW.

THIS was held on November 26th and 27th in a spacious Riding School, which is well adapted for such a splendid display as met the view, well arranged, and all the working staff kind and obliging, commanded by "Wellington," the Secretary. The competition in the first four classes was confined to the county, the chief prize being a £10 challenge cup for the best pen. It is a great mistake to confine the competition to the county, for only the winning pen was worth the trouble of taking home, whereas if the cup had been given to the best pen in any open class it would have done the Society good by the numerous entries which would have been secured. A £10 cup given by the Lord Lieutenant of the county would have brought the best birds from all quarters. The next class was for *Cross Breeds*, a class of which we cannot see the utility; then followed what we may term the birds of the Show, commencing with *Dorkings*, which it was really a treat to see, the winning cock beating the first-prize Crystal Palace bird rather easily in a good class. Dorking hens came next; they were fine, massive, heavy birds, the first being Rose-combed, well-grown pullets of eight months old; in fact, second, third, and highly commended all deserved first prizes. Silver-Grey Dorking hens were hardly up to the standard. White Dorkings came out very good; heavy weights and pure in colour, good, square, well-developed bodies. The *Spanish* were hardly up to form. *Cochins* were good in all classes, especially the prize birds. *Brahmas* were numerous and good in the Dark classes; the Light *Brahmas* were but poorly represented, body colour being ruddy and huckles mealy. *Houdans* and *Crève-Cœurs* were numerous and well represented. A special cup, valued £5 5s., given by the Marchioness of Huntly for the best pen of the two varieties, was awarded to the Crève-Cœurs. *Hamburghs* came out well, the cup going to the Gold-spangled. *Game* of all varieties were strongly represented. The cup-winner, a splendid Brown Red, came up to the improved standard; in fact, he is the best Brown Red that has appeared for some years. Second and third were very good. Hens and pullets competed together in the Black and

Brown Red class ; the first prize went to a very stylish Black Red pullet. Duckwing and Piles in the cock class went together, Duckwings being the winners, but none proved of extraordinary merit. The same may be said of the Duckwing and Pile hens. *Bantams* in all varieties were well represented.

Turkeys and Geese were also well shown. *Ducks* of all varieties came out well. The Selling class was large and good. Birds of most sorts fit to win in any open class at our largest shows were prizetakers.

Pigeons were a nice collection. The names of the winners will show that the quality was good. There were a few slight mistakes, but few grumblers were to be heard throughout the Show.

DORINGS.—Coloured.—Cock.—Cup, J. Longland, Grendon, Northampton. 2, J. Walker, Rochdale. 3, T. C. Barnell, Micheldever. *hc*, J. Longland; W. H. Crew, Etwell, Derby. *c*, Rev. E. Bartrum, Berkhamstead. **Hens or Pullets.**—1, A. Parby, Bridgerton. 2, Rev. E. Bartrum. 3, W. H. Crew. *hc*, J. Longland; *c*, Speed, Exton, Oakham. *c*, C. White; O. E. Cresswell, Early Wood, Bagshot.

DORINGS.—Silver-Grey.—Hens or Pullets.—1, O. E. Cresswell. 2, Wren and Page, Lowestoft. *c*, Marchioness of Exeter, Burchley Park, Stamford (2).

DORINGS.—White.—Cock.—1, O. E. Cresswell. 2, Rev. F. Tearle, Gazeley Vicarage, Newmarket. *hc*, S. Westerdale, Twyford, Melton Mowbray. *c*, C. Speed. **Hens or Pullets.**—1, Rev. F. Tearle. 2, J. Robinson, Garstang. *hc*, A. Darby; *c*, Speed, Exton, Oakham.

SPANISH.—Black.—1, M. Brown, Ab Kettleby, Melton. 2, H. F. Cooper, Wal-sall.

SPANISH.—Chickens.—1, H. F. Cooper. 2, Mrs. E. Allsopp, Worcester. 3, S. W. Haalam, Whitwick, Leicester.

COCKINS.—Cinnamon, Buff, or Partridge.—Cock.—Cup, H. Feast. 2, J. Stephens, Wal-sall. *hc*, J. W. Crosby, West Bromwich; Mrs. E. Allsopp. **Hens or Pullets.**—1, H. Feast. 2, Rev. R. L. Story, Lockington Vicarage, Derby. *hc*, W. E. Cave, Market Harborough; Mrs. E. Allsopp. *c*, W. Birch, Barnacle, Coventry.

COCKINS.—White or Black.—Cock.—1 and 2, R. S. S. Woodgate, Pembury, Tunbridge Wells. **Hens or Pullets.**—1, H. Yangman, Woodford, Wolverhampton. 2, Mrs. A. Williamson, Leicester. *hc*, Lady G. Gordon, Orton Longueville, Peterborough; R. S. S. Woodgate.

BAHAMA POOTRA.—Cock.—1, H. W. Castle, London. 2, H. Feast. *hc*, Rev. J. G. B. Kitch, Danbury, Chelmsford; W. Hughes, Oakham. **Hens or Pullets.**—1, Rev. J. D. P. Eason, Liverpool. 2, E. Kendrick, jun., Lichfield. *hc*, J. S. Clarke, Omble, Mrs. A. Williamson, H. Vaughan.

HOLLANDS.—Cock and Hen or Chickens.—1, W. Dring, Faversham. 2, J. French, Melton Mowbray. *hc*, G. W. Hibbert, Godley, Hyde; Mrs. C. Hill, Foxhall, Alton; Mrs. Whitte, Braunton, Oakham; A. F. Faulkner, Thrapston; H. Feast. *c*, Mrs. C. Hill; H. V. Story, Nottingham.

CREVE-COEURS.—Cock and Hen or Chickens.—Cup, W. Dring, Faversham. 2, W. Cutlack, jun., Littleport. *hc*, G. W. Hibbert; R. B. Wood, Uttoxeter; H. Feast; J. Robinson.

HAMBURGS.—Silver-spangled.—1, J. Robinson. 2, W. Hughes. *hc*, H. Feast; W. Hughes (2). **Silver-pencilled.**—1, J. Robinson. 2, H. Feast. *hc*, T. Hanson, Keighley.

HAMBURGS.—Gold Spangled.—Cup, T. Boulton, Hanford, Stoke-on-Trent. 2, W. K. Ticker, Ipsal. *hc*, Gold-pencilled.—1, W. K. Ticker. 2, J. Robinson.

GAME.—Red and other dark colours.—Cock.—Cup, S. Matthew, Stowmarket. 2, G. Bagshall, Dravecot, Stafford. 3, H. Lotan, Omble. *Hen or Pullet.*—1, G. Bagshall. 2, E. F. Eason, Liverpool. 3, H. Lotan. *hc*, E. Winwood, Worcester.

GAME.—White, Piles, and other Light colours.—Cock.—1, S. Matthew. 2, G. Lucas, Mansfield. 3, E. Winwood. *hc*, A. Medwell, Clonsham, Oakham; J. Andrews, Worcester. *c*, W. B. Everard, Leicester. **Hen or Pullet.**—1, J. Richardson, Longborough. 2, Hon. & Rev. F. Dutton, Windrush Vicarage, Burford. 3, E. Winwood.

BANTAMS.—White, Clean Legs.—Cock and Hen or Pullet.—1 and 2, Rev. F. Tearle. *hc*, H. Feast.

BANTAMS.—Blue, Lean Legs.—Cock and Hen or Pullet.—Cup, W. H. Shackleton, Bradford. 2, H. Ashton, Nottingham. *hc*, Rev. J. G. B. Knight, Danbury, Chelmsford; T. P. Carver, Langthorpe, Boroughbridge.

BANTAMS.—Gold or Silver-laced.—Cock and Hen or Pullet.—1, M. Leno, Dunstable. 2, W. Stringfield, Lowestoft. *Any other variety.*—1, R. S. S. Woodgate (Booted). 2, H. B. Smith, Broughton, Preston (Pekin).

GAME BANTAMS.—Cock.—Cup and 2, E. Winwood. 3, W. R. Jeffries, Ipswich. *hc*, W. B. Jeffries. *c*, E. Winwood; J. Anrews, Worcester. **Hens or Pullets.**—1, T. Horton, Buckingham. 2, F. Maitland, Worcester. 3, E. Winwood. *hc*, W. B. Jeffries.

POLANDS.—Cock and Hen or Pullet.—1, G. W. Rotherby, Lonth. 2, H. Feast. *hc*, J. McConnell, Exvas Harrod Hereford; A. Darby.

ANY OTHER VARIETY.—Cock and Hen or Pullet.—1, H. Feast. 2, J. Foster, Kettering (Black Hamburgs). *hc*, W. Cutlack, jun. (Black Hamburg); J. Steeden, Mad-norton, Buckingham (White Siskies); Rev. N. J. Ridley, Newbury (Malays). *c*, R. S. S. Woodgate.

TURKEYS.—Cock.—1, T. P. Derry, Godley. 2, E. Kendrick, jun., Lichfield. **Hens.**—Cup, M. Kew. 2, T. P. Richardson, Edgemoor, Bramshall.

TURKEYS.—Keeper.—1, J. Walker, Rochdale. 2, M. Kew. **Hens.**—1, J. J. Walker. 2, M. Kew.

DUCKS.—White Aylesbury.—Cup, J. Walker. 2, T. P. Carver. *hc*, T. Sear, Tigewick, Buckingham; G. H. Finch, Burley-on-the-Hill, Oakham; M. Kew. **Ducks.—Rouen.**—1, J. Walker. 2, J. White, Whiteley, Netherton. *hc*, J. Fisher, Ashwell, Oakham; W. Birch, Barnacle, Coventry; W. Hughes; M. Kew.

DUCKS.—Any other variety.—1, H. B. Smith. 2, M. Leno. *hc*, J. Walker; M. Leno; H. B. Smith.

GESE.—Pure White.—Cup, J. Walker. 2, T. M. Derry. *hc*, M. Kew. Young. 1, M. Kew. 2, B. Hodson, Sixhills, Rascn. *hc*, J. Christian, Barrow, Oakham.

GESE.—Grey.—1, J. White. 2, M. Kew. *hc*, B. Hodson. *c*, T. M. Derry. Young. 1 and 2, Hon. C. W. Fitzwilliam, Alwalton, Peterborough.

SELLING CLASS.—Cock or Pullet.—Cup, H. Yardley, Birmingham. 2, Mrs. Allsopp, Worcester. 3, H. Lotan, Omble (Game). *hc*, J. Longland (Porkins); J. S. Clarke, Omble (Brahmas); T. M. Derry (Cochins); J. Richardson (Game); Marchioness of Exeter, Burchley Park, Stamford (Dorings); Mrs. Woodcock, Leicester (Brahma); M. Brown (Spanish); C. Speed (Dorings); Newham and Manley, Wolverhampton; W. Hughes (Holland).

SELLING CLASS.—Hens or Pullets.—1 and 3, C. Speed (Dorings). 2, J. S. Clarke (Brahma). *hc*, J. Taylor (Partridge Cochins); H. W. Sneath, Sleaford (Cochins); J. Foster (Hamburg); Rev. J. D. Goske, Litcham, Chertsey (Brahma); T. M. Derry (Chickens); A. F. Faulkner, Thrapston; H. Wilkinson, Early, Skipton; Dr. J. Holmes, Chesterfield (Dark Brahma); H. Yardley, Birmingham.

SELLING CLASS.—Turkeys, Geese, Ducks, Guinea Fowls, Pea Fowls, or Gold or Silver Pheasants.—1, T. M. Derry (Turkey). 2, J. Walker (Geese). 3, T. Sear (Aylesbury Ducks). *hc*, M. Kew (Turkeys and Geese).

LOCAL CLASSES.

DORINGS.—Chickens.—Cup, C. White, Clipham, Oakham.

CROSS-BRED.—Chickens.—1, M. Kew, Market Overton, Oakham. 2, Mrs. H. Winfield, Market Overton, Coventry. 3, Rev. G. Skipworth, Oakham. *hc*, Mrs. Finch, Burley-on-the-Hill, Oakham; Rev. G. Skipworth; M. Kew.

DUCKS.—Cross-bred or Common.—1, J. Fisher, Ashwell, Oakham. 2, B.

Painter, Burley-on-the-Hill, Oakham. *hc*, Rev. F. L. Salisbury, Market Overton; M. Kew.

PIGEONS.

TUMBLERS.—1, H. Yardley. 2, E. Horner, Harewood, Leeds.

CARRIERS.—Cock.—1, E. Walker, Leicester. 2, E. Horner. *hc*, E. Walker; E. Horner. *Hen.*—1, E. Walker. 2, H. Yardley. *hc*, E. Walker; E. Horner (2).

CARRIERS.—Young.—1, E. Walker. 2, E. Horner. *hc*, E. Walker; C. H. Clarke, Old Sneinton, Nottingham.

POTTERS.—1 and 2, H. Pratt, Knowle. *hc*, W. R. Rose, Kettering; W. Siles, Rushton, Kettering.

JACOBS.—1, O. E. Cresswell. 2, T. W. Swallow, Northampton.

PANTALS.—1 and 2, J. Walker, Newark. *hc*, J. F. Loversidge, Newark; H. Yardley. W. Gaubille, Thorpe Satchville, Melton.

TRUMPETERS.—1, J. Lederer, Bootle, Liverpool. 2, G. Hardy, Shepherd's Bush, London. 3, J. E. Horner. *c*, J. Horner.

NUSS.—1, H. Yardley. 2, E. Horner.

TERRITS.—1, G. Hardy. 2, E. Horner. *hc*, G. Hardy; H. Yardley.

RENTS.—1, T. D. Green, Saffron Walden. 2, H. Yardley. *hc*, J. W. P. James, Hereford.

ANY OTHER VARIETY.—1, H. Yardley. 2, J. H. Watkins, Hereford. *hc*, R. B. Wood.

SELLING CLASS.—1, 2, and *hc*, W. Gamble. 3, W. Siles. *c*, J. H. Watkins; G. Hardy.

JUDGES.—Mr. Fielding and Mr. Douglas.

AIRDRIE POULTRY SHOW.

This Show was held in the Market Buildings, Airdrie on the 28th and 29th November, and it was the best that has taken place there both in point of number and quality. The *Spanish* and *Cochins* that took first honours were the same birds as gained the special prizes at Kilmarnock. The *Game* classes were well filled with first-rate birds. The other classes do not call for special mention.

In *Pigeons* there was a decided improvement on former years.

SPANISH.—1, 2, and 3, W. Paterson. *Chickens*—Special, 2, and 3, W. Paterson. *Airdrie.* *hc*, A. Walker, Kilmarnock. *c*, J. Bryce, Airdrie.

DORINGS.—1, J. Malcolm. 2, J. Stevenson. 3, W. Paterson. *hc*, F. Hunter, Hamilton. *Chickens.*—1, J. Malcolm, Langton, Laurieston, Falkirk. 2, W. Paterson. 3, A. M'ara, Muthill, Perth. *hc*, J. Stevenson, Chapelhall, Airdrie. *c*, W. Weir, Inches, Larbert.

BRABMAS.—1, T. Barker, Hillend, Burnley. 2, J. Young, Kingsknowe, Sleaford. 3, J. Stevenson. *hc*, A. Semple, East Kilbride. *c*, W. Paterson.

COCHINS.—1 and 3, W. Paterson. 2, D. M'Whammet, Mayburgh, Blair Adam. *hc*, W. Bondrith, Airdrie. *c*, Mrs. Chalmers.

SCOTCH GAMES.—1 and 3, R. Clark, Dalsert. 2, D. Robertson, Grahamston, Falkirk. *hc*, W. Weir. *c*, Capt. Lyon, R.N.

HAMBURGS.—Golden spangled.—1 and 2, R. Cunningham, Stewarton. 3, E. Robertson, Craig Elvan, Airdrie. *hc*, A. Robertson. *c*, J. Young, Craigneuk, Motherwell. **Golden-pencilled.**—1, D. Gibb. 3 and *c*, P. Hamilton, Wishaw. 2, W. Nelson, Jonston. *hc*, R. Dickson.

HAMBURGS.—Silver-spangled.—1, E. Cameron, Stewarton. 2, Capt. Lyon, R.N. *hc*, E. Robertson. *hc*, A. Wright, Bridge of Weir. *c*, J. M. Campbell.

Silver-pencilled.—1, J. Stevenson. 2, R. Miller, Stewarton. 3, J. Borland, Kilmahire. *hc*, W. Paterson. *c*, Capt. Lyon.

POLANDS.—1, J. Stevenson. 2 and *hc*, J. Laird, Johnstone. 3, A. Wylie, Johnstone. *c*, W. Paterson.

GAME.—Black Red.—Special, C. Jamieson, Forfar. 2, J. & C. Sneddon, Linwood, Paisley. 3, W. Paterson. *hc*, C. Jamieson; W. Chalmers, Leslie, Fife. *hc*, R. Stewart, Blair Adam; J. Wishart, Kirkealdy. *c*, T. Taylor, Airdrie; W. Paterson.

GAME.—Brown Red.—1, T. W. Mitchell, Perth. 2, Miss M. J. Nelson. 3, W. Paterson. *hc*, R. Stewart; C. Jamieson. *c*, J. Wishart; W. Paterson.

GAME.—Any other variety.—1, J. Allison, Shotts. 2, W. Nelson. 3, W. Paterson. *hc*, R. Stewart. *hc*, C. Jamieson; J. & C. Sneddon. *c*, J. Allison; W. Paterson.

BANTAMS.—Game.—1, T. Barker. 2, W. Paterson. 3, Miss M. J. Nelson. *hc*, J. Gray, Bathgate; J. Aitken, Johnstone; W. Paterson; M. Fleming, Johnstone. *c*, J. Gray; T. Barker.

BANTAMS.—Any other variety.—1, R. H. Ashton, Mottram, Manchester. 2, A. Robertson. 3 and *c*, J. Marshall. *hc*, W. Baird, Airdrie.

TURKEYS.—1, W. Paterson. 2, A. Mitchell. 3, W. Weir.

ANY OTHER VARIETY.—1, A. McLean, Barnhead. 2, G. Anderson, Accrington. 3, J. Forbes, Airdrie.

DUCKS.—Aylesbury.—1 and 2, A. Robertson. 3, J. A. Dempster. *hc*, W. Weir. *c*, W. Paterson. *Any other variety.*—1, W. Paterson. 2, Miss M. J. Nelson. 3, W. Dignid, Meadowhall, Motherwell. *hc*, and *c*, A. Robertson.

SELLING CLASS.—Single Cock.—1, C. Jamieson (Game). 2, H. M. Hutchison, Braehead, Kirkealdy. 3, W. Paterson (Dorking). *hc*, R. Boyle, Carnoustie (Cochins). *hc*, J. R. Kilgour (Bantam); W. Weir. *c*, J. Young, Craigneuk, Motherwell; G. Guthill (Gomen); J. Allison.

SELLING CLASS.—Hens or Ducks.—1 and 3, W. Paterson (Dorings and Spanish). 2, G. Guthill (Dorings). *hc*, J. S. Ferguson, Dalnair (Game); W. Paterson (Brown Red Game); W. Weir.

PIGEONS.

POTTERS.—Blue or Black.—1 and Special, M'Gill Skinner. 2, J. E. Spence. 3, W. Paterson. *hc*, E. Robinson. *Any other variety.*—1, M'Gill Skinner. 2, T. Findlay, Craigneuk. 3, J. S. & A. Robb, Gabberton, Alloa. *hc*, W. Paterson.

FANTS.—1 and 2, R. Blair, Thornhill, Paisley. 3, J. E. Spence. *hc*, E. Robinson. *c*, W. Neilson.

JACOBS.—1, W. Brydone. 2, W. Paterson. 3, W. Nelson. *hc*, J. E. Spence. *c*, H. Coatsdon.

CARRIERS.—1 and 2, S. D. Baddley, Hereford. 3, A. G. Neil, Cupar Angus.

BARBS.—1, W. Brydone. 2 and 3, J. Glen, Dushyhill, Cambuslang. *hc*, J. Gray, Bathgate. *c*, A. G. Neil.

TUMBLERS.—Short-faced.—1 and 2, J. Marquis. 3 and *hc*, W. Brydone, Duns. *c*, H. Coatsdon. *Any other variety.*—1, R. Blair. 2, A. Robertson. 3, T. Mullion. *hc*, and *c*, J. Glen.

ANY OTHER VARIETY.—1, W. Brydon (Owls). 2, W. Paterson (Dragons). 3, T. Findlay. *hc*, A. Duncan. *c*, J. Gray, Bathgate (Yellow Dragons).

JUDGES.—Poultry: Mr. Green, Glasgow, and Mr. Harley, Edinburgh. **Pigeons:** Mr. Stuart, of Glasgow.

CRYSTAL PALACE POULTRY SHOW.

BEING anxious to purchase the White-footed Bantams which took the first prize and cup (pen 2100), I took particular notice of them, and, to my surprise, when I went to the Palace this morning (November 18th) I found the cock had exchanged pens with one highly commended (pen 2099). I pointed out the fact to the Secretary and one of the Committee, who found the Judge who judged the class, and he gave it as his opinion that

the birds had been changed. He would not go beyond an opinion, although one pen took the cup and the other was only highly commended, and he had judged them but the previous day; but this opinion was fully confirmed by the exhibitor who was next called, and who admitted the birds were changed, and of course restored the right birds to their right pens. He said it was a mistake on his part. I would ask, Should such mistakes be allowed to pass without some official notice? and why was the exhibitor allowed to handle the birds at all after they were penned? He must have had the birds from the two pens out at one and the same time; otherwise, how could the mistake have happened about which I complained? Fortunately I bought the right birds after all. In justice to the management I must say they took immediate action upon my representing the matter to them.—HARRY W. JOHNSON, Woodville, Elmers End, Beckenham.

[It is a curious fact that these mistakes always are made in favour of the person who makes the mistake. In this instance he was Mr. R. S. S. Woodgate.—EDS.]

CLEVELAND POULTRY SHOW.

This was held in the Odd Fellows' Hall, at Middlesbrough, on November 27th, and was managed by an excellent Committee, and superintended by Mr. Torbock, the Hon.-Secretary and Treasurer, and if number of entries be any guide, then the Cleveland Society has started with the confidence of the fancy. Unfortunately the room proved far too small for the number of pens, and in addition to their being placed in double tiers, two smaller rooms had to be pressed into service, and in some cases the light was anything but good. The birds should all have been in their pens by 11 A.M. on the 26th, but from some cause many did not arrive till the following day, numbers being too late for competition, although the Committee allowed all to be penned and compete however late, if the class had not been judged.

[We are from what of space compelled to postpone further details till our next issue.]

- DOAKINGS**.—1 and 2, W. H. King, Rochdale. 3, Pickering & Co. Driffield. *hc*, T. P. Carver, Langthorpe; H. H. Taylor, West Hartlepool; J. Watts, King's Heath, Birmingham.
- COCHINS**.—*Buff or Cinnamon*.—1 and 2, G. H. Froeter, 3, W. Bainbridge, Middlesbrough. *rh*, J. Watts. *Any other variety*.—1, H. Vaughan, Wolverhampton. 2, G. H. Froeter, 3, J. W. Corner, Egton, Whitby.
- SPANISH**.—1, Pall ster & Hawkins, Topcliffe, Thrusk. 2, Pickering & Co. 3, A. Canby, Barton-on-Humber. *c*, T. Flintoff, Newby, Stockton.
- BRAMA FOOTBEN**.—1, R. Moore, East Rainton. 2, C. Venables, Castle Eden. 3, J. Watts. *hc*, G. Robinson, Sunderland; H. H. Taylor. *c*, W. Hewison.
- GAME**.—*Reds*.—1, C. Venables. 2, T. Blackburn, Inghy, Greenhow. 3, J. Robshaw. *hc*, T. W. Lister, Stokesley; R. Brerton, South Otterington; A. Canty, c, J. Dawson, Hope Town, Darlington. *Any other variety*.—1, W. Youngsbond, Darlington. 2, H. H. Staveley, Tibthorpe Manor, Duffield. 3, C. Widdas. *hc*, T. W. Lister.
- HAMBROUS**.—*Golden spangled*.—1, A. Harburn, Bishop Auckland. 2, W. Tinkler, St. Helen's, Bishop Auckland. 3, J. Preston, Alerton, Bradford. *Silver spangled*.—1, J. Preston. 2, R. Moore. 3, J. Robshaw, Whinley. *c*, G. Alderson, West Hartlepool.
- HAMBROUS**.—*Golden pencilled*.—1, J. Preston. 2, T. H. Readman, Whitby. 3, A. G. Mitchell, Bishop Auckland. *c*, R. Moore. *Silver pencilled*.—1, R. Moore. 2, J. Studdard, Colne, Lancashire. 3, J. Preston. *c*, W. G. Furdon.
- POLANDS**.—1, G. Blakey, Great Briffeld.
- GAME BANTAMS**.—*Reds*.—1 and 3, J. & W. Gill, Bishop Auckland. 2, W. C. Dawson, Whitby. *hc*, W. C. Dawson; T. Blackburn; J. Ferry, Cowper, Morpeth; W. C. Moody, Newcastle. *c*, G. Alderson; S. Howe, Middlesbrough; T. Ayre, West Auckland. *Any other variety*.—1, J. K. Torbock, Middlesbrough. 2, T. Ayre. 3, J. Watts. *hc*, J. & W. Gill.
- BANTAMS**.—*Any other variety except Game*.—1, T. P. Carver. 2, R. H. Ashton, Mottram. 3, J. Watts. *hc*, J. H. Cartwright, Bishop Auckland; W. Ludgares, Barton-on-Humber; J. R. Torbock. *c*, A. G. Mitchell, Pickering & Co.
- ANY OTHER VARIETY**.—1, E. Locke, Ludlow. 2, G. Alderson. 3, G. Bennington, Stockton. *hc*, A. E. Pease, Gainsborough; J. Preston. *c*, H. H. Taylor.
- SELLING CLASS**.—*Price not to exceed 3s*.—1, J. R. Torbock. 2, T. Blackburn. 3, J. Watts. *hc*, J. Robshaw; T. E. Carver; G. Robinson; G. H. Froeter; T. H. Readman; J. K. Torbock. *c*, J. & W. Gill; W. J. Wetherell, Whitby; G. Seoby; T. H. Readman.
- SELLING CLASS**.—*Price not to exceed 1s*.—1, Pickering & Co. 2, J. W. Corner. 3, W. J. Wetherell. *hc*, H. H. Staveley, Driffield; T. P. Carver; M. Maynard. *c*, J. A. Rutherford, Kirkcaldham.
- PIGEONS.**
- POUTERS**.—*Blue*.—1, G. Robinson. 2, J. Watkin, Northampton. 3, J. Kilpatrick, Whitby. *rh*, Guthrie & Hope, Hexham; J. Dye, Hexham. *hc*, J. A. James, Hereford; E. Beckwith; A. A. Vander Meersch, Lower Tooting; W. B. De. Pudsey. *c*, J. P. Fawcett, Whitby (2).
- POUTERS**.—*Any other colour*.—1, L. Watkin. 2, J. Kilpatrick. 3, G. Robinson. *rh*, F. C. Taylor; E. Horner. *hc*, J. Harrison, Hall; J. R. Torbock; B. Hudson. *c*, G. Robinson; J. Dye; J. Robson, Durham.
- POUTERS**.—*Blue*.—1, F. Horner. 2, S. D. Baddeley, Hereford. 3, P. R. Spencer. *hc*, G. Robinson; E. Beckwith, Monkwearmouth; E. Horner; J. Chadwick. J. Dye; F. K. Spencer.
- POUTERS**.—*Any other colour*.—1, S. B. Baddeley. 2, F. Horner. 3, J. R. Torbock. *hc*, J. Chadwick, Bolton. *c*, H. A. Ayrton, Sallburn-by-the-Sea; E. Beckwith.
- BARNS**.—1, W. H. Tomlinson, Newark. 2 and 3, E. Horner. *hc*, J. W. P. James, Hereford; E. Beckwith; A. A. Vander Meersch, Lower Tooting; W. B. De. Pudsey. *c*, J. P. Fawcett, Whitby (2).
- JACOBS**.—*Red*.—1 and 3, J. Young, Bishop Auckland. 2, A. A. Vander Meersch. *hc*, T. Pearson, Pickering (2); J. & F. Joy, York (2); J. Smith, Walkley. *W. Dugdale, Burnley. c*, W. Bulmer, W. Kitchen, Fosse valley (2).
- JACOBS**.—*Any other colour*.—1, W. Dugdale. 2, A. A. Vander Meersch. 3, W. Binns. *hc*, E. Horner; A. A. Vander Meersch. *c*, W. Kitchen.
- OWLS**.—*English*.—1 and 2, W. Binns. 3, J. Gardner, Preston. *hc*, J. Gardner; G. Alderson; G. F. & A. T. Umpleby, Boroughbridge; T. W. Bone, Darlington; W. Binns; J. Dye. *c*, T. W. Clementson; J. Young; T. Richardson; J. Dye.
- OWLS**.—*Foreign*.—1, E. Horner. 2, W. Dugdale. 3, J. Gardner. *hc*, J. Gardner; H. Cockton, Middlesbrough; A. A. Vander Meersch. *c*, J. Gardner.
- FRANTS**.—1, F. Lowbridge, Newark. 2, W. H. Tomlinson. 3 and *rh*, J. Walker. *hc*, W. H. Tomlinson; J. E. Loversidge; E. Beckwith; J. & F. Joy; E. Horner; A. A. Vander Meersch. *c*, T. C. Taylor; H. C. Bosman.

- MAGPIES**.—*Black*.—1, A. A. Vander Meersch. 2, E. Horner. 3, W. Sefton. *rh*, M. Ord. *hc*, E. Horner; W. Kitchen. *c*, J. & F. Joy (2).
- MAGPIES**.—*Any other colour*.—1, W. Kitchen. 2 and 3, E. Horner. *hc*, J. Gardner; M. Ord (2); A. A. Vander Meersch. *c*, J. Gardner; W. Binns.
- SWALLOWS**.—1, W. Kitchen. 2, J. Gardner. *hc*, J. Smith; E. Horner (2); J. W. Edge, Erdington. *c*, J. Gardner; J. & F. Joy; W. Kitchen.
- DRAGONS**.—*Blue*.—1 and 2, W. Sefton, Blackburn. 3, Guthrie & Hope. *rh*, W. Sefton; J. N. Harrison. *hc*, T. W. Clementson, Hexham; W. Sefton; E. Horner; J. G. Dunn, Newcastle. *c*, J. Gardner; E. Lee; T. W. Clementson.
- DRAGONS**.—*Any other colour*.—1, W. Sefton. 2, J. Chadwick. 3, J. G. Mole, Durham. *hc*, W. Bulmer, Stockton; E. Beckwith; W. Binns.
- ANTWERPS**.—1, W. Kitchen. 2, E. Horner. 3, J. Gardner. *rh*, T. W. Clementson; W. Binns; H. T. Peirson; G. Sadler, Boroughbridge; W. Binns.
- ANTWERPS**.—*Short-faced*.—1, J. Gardner. 2, W. Binns. 3, E. Horner. *hc*, J. & F. Joy. *hc*, J. Gardner (2); W. Hardcastle, Wingley. *c*, T. Peirson.
- TRIBLES**.—*Short-faced*.—*Almond*.—1, E. Horner. 2, J. Gardner. 3, E. Beckwith. *hc*, E. Horner; W. Kitchen. *c*, J. W. Harling, Burnley.
- TRIBLES**.—*Short-faced*.—*Any other colour*.—1, J. W. Harling. 2, A. A. Vander Meersch. 3, J. & F. Joy. *hc*, J. Gardner; E. Beckwith; E. Horner. *rh*, T. Peirson. *hc*, E. Beckwith; J. & F. Joy; M. Green, Hexham. *c*, G. Thompson, Newcastle; Guthrie & Hope.
- TRIBLES**.—*Long-faced*.—*Any other colour*.—1, E. Horner. 2, J. Dye. 3, W. Sefton. *c*, J. W. Harling.
- EARS OR BEARDS**.—1, A. Jackson. 2, G. Thompson. 3, J. Dye. *hc*, A. A. Jackson, Chequerbent, Bolton; J. Chadwick.
- ANY OTHER VARIETY**.—1, W. Sefton. 2 and 3, M. Ord. *hc*, J. W. P. James; Guthrie & Hope; E. Horner; A. A. Vander Meersch. *c*, G. H. & A. T. Umpleby.
- SELLING CLASS**.—*Price not to exceed 50s*.—1, J. Gardner. 2, W. Sefton. 3 and *rh*, Guthrie & Hope. *hc*, J. Young (2); G. Robinson; G. F. & A. T. Umpleby; E. Horner; W. Binns. *c*, J. Gardner; J. Young; R. H. Blacklock, Sunderland; G. Sadler; T. Wood; R. Barrett; P. R. Spencer.
- SELLING CLASS**.—*Price not to exceed 15s*.—1, T. W. Clementson. 2, E. Horner. 3, J. Dye. *hc*, J. Young (2); E. Watkin; E. Beckwith (2); R. H. Blacklock; W. Binns. *c*, Guthrie & Hope (2); A. J. Lederer. 2, S. D. Baddeley. 3, J. & F. Joy. *hc*, E. Horner. *c*, A. Silvester, Sheffield.
- TURKEYS**.—*Any other colour*.—1, E. Horner. 2, J. Lederer. 3, P. R. Spencer. *hc*, S. D. Baddeley; H. A. Ayrton. *c*, A. A. Vander Meersch; P. R. Spencer.
- TURKEYS**.—*Red or Yellow*.—1, J. W. Edge. 2, A. A. Vander Meersch. 3, W. Kitchen. *hc*, J. Gardner; J. Young; E. Horner. *c*, J. & F. Joy.
- TURKEYS**.—*Any other colour*.—1, A. A. Vander Meersch. 2, J. Hairsme. 3, J. Young. *hc*, E. Horner. *hc*, T. C. Taylor; T. Foster; W. Binns; W. Kitchen; J. Dye.
- NUNS**.—*Black*.—1, T. Foster. 2, E. Horner. 3, J. Hairsme. *hc*, J. & F. Joy; E. Horner. *c*, J. Gardner; T. C. Taylor; H. Vaughan; A. A. Vander Meersch.
- NUNS**.—*Any other colour*.—1, 2, and 3, E. Horner.
- LOCAL CLASSES—CHICKENS.**
- COCHINS**.—*Buff*.—1 and 3, J. R. Torbock. 2, N. Newson, Middlesbrough. *Any other variety*.—1, P. Hanson. 2 and 3, J. R. Torbock.
- DORINGS**.—1 and *hc*, E. Barker, Stokesley. 2 and 3, C. Widdas, Howden-le-Wear.
- BRAMAS**.—*Dark*.—1 and 2, J. R. Torbock.
- BRAMAS**.—*Reds*.—1 and 2, C. Widdas. *Any other variety*.—1 and 2, C. Widdas.
- HAMBROUS**.—*Golden spangled*.—1, P. Hanson. *Silver spangled*.—1, 2, and 3, T. C. Taylor, Middlesbrough. *Golden pencilled*.—1 and 3, E. Barker. 2, P. Hanson.
- GAME BANTAMS**.—*Reds*.—1 and 3, W. Henderson, Whitby. 2, R. Henderson, Middlesbrough. *Any other variety*.—1, W. Henderson.
- ANY OTHER VARIETY**.—1, P. Hanson.
- SELLING CLASS**.—*Cock*.—1, E. Barker. 2 and 3, C. Widdas. *c*, P. Hanson. *Hen*.—1 and 3, C. Widdas. 2 and *hc*, E. Barker. *c*, P. Hanson.

YOUNG PIGEONS.

POUTERS.—*Red or Yellow*.—1, H. Cockton. 2 and 3, T. C. Taylor. *Any other colour*.—1 and 2, H. Cockton. 3, T. C. Taylor.

CARRIERS.—*Black*.—1 and 2, H. Cockton. *c*, H. Ayrton. *Dun*.—1 and 2, H. Cockton. 3, T. C. Taylor. *c*, J. K. Torbock. *Any other colour*.—1 and 2, H. Cockton. 3, H. Severs, Middlesbrough.

BARNS.—*Black*.—1 and 2, T. C. Taylor. 3, J. Dent, Middlesbrough. *Dun*.—1, 2, and 3, T. C. Taylor.

TURKEYS.—*Mottled*.—1 and 2, G. Woodward, Linthorpe. 3, H. A. Ayrton. *Red*.—1, T. C. Taylor. 2 and 3, H. Severs.

TRIBLES.—*Short-faced*.—1, J. Dent. 2, T. C. Taylor. *Long-faced*.—*Any colour*.—1, T. C. Taylor. 2, H. Severs. 3, G. Woodward.

SELLING CLASS.—*Cock*.—1, H. Cockton. 2 and 3, J. K. Torbock.

JUDGES.—*Poultry*: Mr. E. Hutton, Pudsey. *Pigeons*: Mr. E. Hutton, and Mr. T. Rule, Durham.

BURTON-ON-TRENT POULTRY SHOW.—The entries close on the 9th of December. The Judges are Mr. Lowe, Comberford, and Mr. Hutton, Pudsey.

ALDERNEY COWS.—The information about Alderney cows is too sparse to be of much use. How long have "H. S.'s" cows been brought in at night? Ours since the first week in November. The relative ages and the number of calves which they have had should be given when telling of the quantity of butter, as they increase in the quantity of milk after each calf up to a certain time, I believe. Any further hints on their management will be welcome.—HILLSBRO.

OUR LETTER BOX.

- RETURNING A HAMPER (Jack)**.—We know of no rule on the subject. If we sold a fowl we should not ask for the hamper. If we bought a fowl and the seller asked for the hamper, we should return the hamper.
- ROUF PILLS (E. B.)**.—Try both. We have never had occasion to use them.
- LUMP IN PIGEON'S WING (J. Turner)**.—Your bird has the complaint called "wing disease." Pluck-out the light-feathers of the wing so troubled, and by the time they have grown again the wing will most probably be well.
- BRAMAS (Subscriber's Wife)**.—Write a letter to Mr. L. Wright, and send it to our office, stating what you need. (H. J.). The dark Brahma is the better and harder bird. The hen is a staunch sitter and good mother.
- PULLEYS' FACES SWOLLEN (J. G. F.)**.—Your pullets are suffering from severe cold and incipient roup. Keep them warm, feed them well on soaked bread or starchy mixed barley meal, wash their heads frequently with vinegar and water, and try Baily's roo pills for them.
- BELDING TURKEYS (L. A. B.)**.—So long as a Turkey hen moult freely

and lays well she may be retained as a breeding bird. Yearling hens may be mated with an aged cock.

BREEDING DUCKS (Idem).—If your Ducks be of very early hatch you can use them, but it is better to have Ducks and drake of different ages.

JACOBI POINTS (Idem).—Red Jacobins require to have pearl eyes, short beaks, round skulls well covered by their hood of feathers; no white on the cheek or throat below the mouth; a long, close, and even chain or ruff of feathers extending down the neck and front of breast; and even flights of white feathers.

POULTRY ESTABLISHMENT (R. L.).—We think it would not be profitable.

RED ON SPANISH COCKEREL'S FACE (M. D.).—We should be inclined to attribute the red marks on your Spanish cock's face to defect in his breed. Any tendency to apoplexy would be shown at once in the comb, which would become purple. The shaking of the head is nothing more than a habit of birds of the breed when their gills and wattles are long.

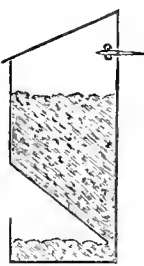
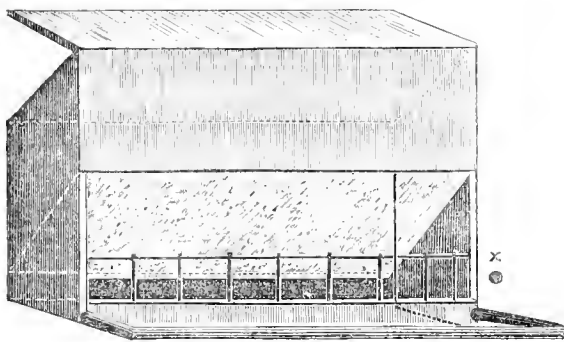
PULLET LAYING IRREGULARLY (R. P.).—Your Brahma pullet is most likely suffering from rupture caused by excessive internal fat. There is little chance of cure, but light and scanty diet with frequent doses of castor oil may give her relief.

BREEDING HOUDBANS (S. H.).—We should prefer breeding from the dark-coloured cock with light hens. We should avoid breeding from light-coloured pullets.

FOWLS' NECKS FEATHERLESS (B. G.).—Your birds most probably are over-fed and feverish, and pick each other. Reduce the amount of whole corn given by one-third. Three acres should be an ample run for them; but perhaps at this season there is not much green picking for them. Throw to them some growing turnips or swales freshly pulled, and let them peck them to pieces and eat them. Game fowls and Brahmas would give both eggs and chickens. Crève-Cœur or Spanish for eggs only, and their colour defies the smoke.

WORMS IN PIGEONS (H. Hills).—In a putrid state, not examinable.

AVIARY SEED-HOPPER.—In answer to "J. P., jun.," I enclose a sketch of



a useful self-supplying seed-hopper suitable for an aviary. I hope the diagram is sufficiently simple without much explanation. I have exposed part of the front to show the sloping piece of glass or tin, or in a large hopper, wood, down which the seed runs, and falling through a small space left between the bottom edge and the back, keeps up a continuous supply. It can be made of any length and depth according to circumstances, and if the front be covered as far as the line *x*, it will be well to insert stout upright wires at short intervals, or a series of pigeon-holes to prevent the birds scattering the seed, which they take an apparent pleasure in doing as long as there is any to scatter. The lid may slope either way.—W. A. BLAKSTON.

CROSSING THE BULLFINCH AND CANARY (Old Subscriber).—The Bullfinch and Canary will not breed together. The attempt to bring about such a result has often been made. It is always a failure. A month or

two back there was a detailed account of a season's experience and its result.—W. A. BLAKSTON.

KEEPING RABBITS FOR EXHIBITION (J. T. B.).—It is difficult to advise; but as you are not accustomed to them, obtain some good Silver-Greys, as they are hardy. You can procure them from any of the well-known exhibitors and breeders whose names you will find in the catalogues of shows. The price will depend upon the quality, which must be good for your purpose. If you procure them young of course they will be less in price, and you may probably procure them from 12s. the pair, good ones a few months old.

BOOKS (Old Subscriber).—You may obtain "Langstroth on Bees," if you apply to Messrs. Sampson, Low, & Co., Fleet Street.

HONEY VARYING (H.).—In answer to your inquiry, we have to say that the honey gathered from some kinds of plants is richer in saccharine matter and crystallises sooner than the honey gathered from other kinds of plants. For instance, the honey from field mustard (*Sinapis arvensis*), will crystallise two months sooner than the honey gathered from white clover. In a jar there is often some clear honey floating on the top of the crystals beneath it. Besides, in no instance can we find two different kind of plants yield honey alike.

REMOVING BEES (T. M. R., of York).—Mr. Pettigrew in removing bees from place to place closes the doors of his hives early in the morning with fly-proof wire, and when more ventilation is needed he puts pieces of fly-proof wire over the crown holes, thus permitting a current of air through the hives. Then the hives are nailed and tied fast to their boards. They travel safely by cart and railway a distance of twenty-five miles. They might safely be sent five hundred miles. He often removes them short distances, say two or three miles, on an evening after working hours. One mile is rather too short a distance to remove bees, for they travel farther than a mile for food, and many of them would return that distance to their old stand. Honey is

gathered so fast and plentifully from heather, that we think it is desirable for you to remove yours two miles to it.

REGGIDE (F. R. L.).—You will make a great mistake if you kill the queen of your hive. Let it swarm next year, and put the swarm into an improved hive. If a second swarm come put it into another hive, then drive all the bees out of the old one and unite them to the second swarm. Thus you will have two swarms in better hives, and the honey to take from the old one. If a second swarm do not come, drive all the bees out of the old one into another hive on the twenty-first day after the first swarm was obtained.

HONEYCOMB (H.).—There is nothing the matter with the comb which you have sent for inspection. It is quite natural and sweet. When you gave it to bees it appeared to be full of sealed honey, but many of the cells were half full of pollen or farina. The bees took the honey, as they always do, and left the farina in the comb. Though bees store honey in cells containing farina, and seal it up there, they cannot use such cells for breeding purposes. In Great Britain bees unfortunately gather more farina than they require, and the superabundance is stored in combs that might be better employed for breeding young bees.

SEA GULLS (Q. H. B.).—We have sent your query to a good authority, but have received no reply.

WARNING.—"J. G.," "B. K.," and half a dozen others have written telling how they were more or less victimised by the offerer of cheap cloth, &c. No more need be published.

RAT TRAPS (F. P.).—We do not know where Brailsford's are to be obtained.

METEOROLOGICAL OBSERVATIONS,

CAMDEN SQUARE, LONDON.

Lat. 51° 32' 40" N.; Long. 0° 8' 0" W.; Altitude 111 feet.

DATE.	9 A.M.				IN THE DAY.				Rain.	
	1873. Nov. and Dec.	Baromet. corrected to sea level.	Hygrometer.		Direction of Wind.	Temp. of Soil at 1 ft.	Shade Tem- perature.			Radiation Temperature In sun. On grass.
			Dry.	Wet.			Max.	Min.		
We. 26	29.876	51.0	50.5	S.W.	45.1	55.0	36.4	55.0	34.1	0.222
Th. 27	29.152	45.0	42.6	W.	46.4	54.2	43.8	80.1	40.1	—
Fri. 28	29.986	43.6	41.2	W.	45.2	52.4	41.1	55.6	36.1	0.010
Sat. 29	29.846	53.0	51.3	W.	46.0	55.0	47.8	59.8	39.5	0.078
Sun. 30	29.881	44.4	41.0	N.W.	46.3	54.8	42.4	75.9	37.2	—
Mo. 1	30.532	37.4	36.6	W.	45.4	49.0	31.8	60.1	26.8	—
Tu. 2	30.513	48.4	47.7	W.	44.2	52.6	35.3	53.2	34.0	—
Means	30.012	46.1	44.4		45.2	52.4	39.9	63.7	35.4	0.310

ERRATUM.—Barometer on 24th should have been 29.906 instead of 30.066 and the moon 29.922 instead of 29.945.

REMARKS.

26th.—Rainy morning, fine midday; rain at 4 P.M., and again at night.
27th.—Lightning and wind in the night and early morning; fine at 9, brilliant at noon, and fair all the rest of the day.
28th.—Rather dull morning; fine all day and bright moonlit night, though there was a slight shower about 10 P.M.
29th.—Wet morning, soon clearing off; bright about noon and till 3 P.M.; rain at 5; fine evening, but sale at night.
30th.—Fine morning, and very bright between 1 and 2 P.M.; fine afternoon and evening.
Dec. 1st.—Rather thick though frosty at 9 A.M., clearing off by noon; some bright sun between then and 3 P.M.; fair all day.
2nd.—Much warmer though damp; sun occasionally bright; slight rain between 9 and 10 P.M.
Temperature much the same as that of last week. Rapid rise of barometer—viz., 0.534 inch between 27th and 28th, and 0.651 inch between November 30th and December 1st.—G. J. SYMONS.

COVENT GARDEN MARKET.—DECEMBER 3.

THERE has been no variation in the general course of business that calls for much notice. The supplies are ample. Among the continental produce received this week were some very good Asparagus and Lettuces from Paris.

FRUIT.

	s. d.	s. d.		s. d.	s. d.
Apples.....	4	0 to 1	0	Oranges.....	100 6 to 12 0
Chestnuts.....	bushel	10	0	Quinces.....	doz. 1 0 3 6
Grasshoppers.....	lb.	2	0	Pears.....	doz. 1 0 2 0
Pulberries.....	lb.	1	0	dessert.....	doz. 2 0 3 0
Cobs.....	lb.	1	6	Pine Apples.....	lb. 3 0 6 0
Lemons.....	100	8	12	Walnuts.....	bushel 10 0 16 0
Melons.....	each	1	0	ditto.....	100 2 0 2 0

VEGETABLES.

	s. d.	s. d.		s. d.	s. d.	
Artichokes.....	doz.	3	0	to 6 0	Mushrooms.....	pottle 1 0 to 2 0
Asparagus.....	100	0	0	0	Mustard & Cress.....	punnet 0 2 0 0
French.....	25	0	0	0	Onions.....	bushel 2 0 4 6
Beans, Kidney.....	100	2	0	0	pickling.....	quart 0 6 0 0
Beet, Red.....	doz.	1	0	3	Parley per doz.....	bunches 0 0 4 0
Broccoli.....	bunch	0	1	6	Partridges.....	doz. 0 9 1 0
Cabbage.....	doz.	1	0	1	Pears.....	quart 0 0 0 0
Carrots.....	100	1	6	0	Potatoes.....	bushel 3 0 4 6
Cauliflower.....	bunch	0	6	0	Kidney.....	do. 0 0 0 0
Celery.....	doz.	3	0	6	Round.....	do. 0 0 0 0
Coleworts.....	doz. bunches	2	6	4	Radishes.....	doz. bunches 1 0 1 6
Cucumbers.....	each	0	1	0	Rhubarb.....	bushel 0 0 0 0
Endive.....	doz.	0	0	0	Sausages.....	bushel 0 0 0 0
Fennel.....	bunch	0	3	0	Sparrows.....	doz. 1 0 2 0
Garlic.....	lb.	0	6	0	Scorzonera.....	bushel 1 0 0 0
Herbs.....	bunch	0	3	0	Sea-kale.....	basket 2 6 3 6
Horseshoe.....	bunch	3	0	4	Shallots.....	lb. 0 3 0 0
Leeks.....	bunch	0	3	0	Spinach.....	bushel 2 0 3 0
Lettuce.....	doz.	1	0	1	Tomatoes.....	doz. 2 0 4 0
					Turnips.....	bunch 0 2 0 4
					Vegetable Marrows.....	0 0 0 0

WEEKLY CALENDAR.

Day of Month		Day of Week		DECEMBER 11—17, 1873.		Average Temperature near London.			Rain in 48 years.	Sun Rises	Sun Sets.	Moon Rises.	Moon Sets.	Moon's Age.	Clock after Sun.	Day of Year.		
				Day.	Night.	Mean.	Days.	m.	h.	m.	h.	m.	h.	Days	m.	a.		
11	Th	Michelius born, 1697.		46.5	32.6	39.5	17	59	af 7	49	af 3	34	11	40	0	22	6 24	345
12	F	Nees Von Esenbeck died, 1837		48.0	37.0	42.5	18	59	7	49	3	morning.	52	0	22	5 26	346	
13	S	Twilight ends 5.55 P.M.		47.5	36.5	42.0	23	0	8	49	3	41	0	3	1	23	5 28	347
14	Sen	3 SUNDAY IN ADVENT.		46.9	34.3	40.6	21	1	8	49	3	52	1	14	1	24	4 59	348
15	M			47.0	33.6	40.3	19	2	8	49	3	3	3	26	1	25	4 30	349
16	Tu	Cambridge Term ends.		46.5	32.9	39.7	15	3	8	49	3	17	4	41	1	26	4 1	350
17	W	Oxford Term ends. Philip Miller died, 1771.		45.9	34.0	39.9	20	4	8	49	3	34	5	1	2	27	3 31	351

From observations taken near London during forty-three years, the average day temperature of the week is 46.9°; and its night temperature 34.4°. The greatest heat was 63°, on the 11th, 1844; and the lowest cold 7°, on the 16th, 1853. The greatest fall of rain was 1.24 inch.

JUDGING AT ROSE SHOWS.



AM much delighted that my letter to you on the Manetti stock has evoked so much discussion, and I hope that the one I now indite may fare as well.

I want to bring before my Rose brethren the subject of judging at the shows. I should like there to be some definite laws on certain points laid down as a guide to exhibitors and judges. I refer more particularly to the varieties exhibited and their re-

spective value in a judge's eyes.

1. Is a box of twenty-four varieties improved by the insertion of two or three Tea Roses, although they may not be such fine blooms as the twenty-one Hybrid Perpetuals?

Now this is a very important question, concerning which I never find two men have the same opinion. If I knew who was to judge my Roses I should make-up my box accordingly. If I knew my friend Mr. Keynes were to judge, I should put in three or four fine Teas. If Mr. Paul were judging, I should try my utmost to have twenty-four even blooms of good Hybrid Perpetuals. If Mr. Cant were judging, I should put all the fine Teas I had; but if Mr. Turner were the arbitrator, Teas would be conspicuous only by their absence. Mr. Keynes, I know, would give me two or three good marks for a fine Tea; while, on the other hand, if it destroyed the symmetry of the stand, however fine itself, Mr. Paul would give me a bad mark. Now, should this be?

2. Ought not a Tea Rose when a fine bloom is shown always to mark double points? I think so, and for this reason, that the Tea Rose is so much more difficult to cultivate. I find walls are necessary for it to do well, and have built over 100 yards of low wall for it; but the very protection the wall affords proves a drawback to the exhibitor. His Teas are, as a rule, over by the middle of June, and then nothing but puny blooms can be found on a long wall. At Whitsuntide last year I had a thousand blooms of Marechal Niel. I decorated my church entirely with these and beautiful blooms of Souvenir d'un Ami, but when the exhibition season began I had the greatest difficulty in finding a Tea Rose. Then, again, there is the diversity of colour and form to be considered. Surely this should gain some reward.

My idea of a perfect box would be to have three lovely Teas, one in each row. Nothing so breaks the somewhat stiff appearance of a stand as a fine bloom of Marechal Niel, Souvenir d'Elise, and Souvenir d'un Ami. But if the judge does not think so, but, on the contrary, condemns the stand, as I have had mine condemned over and over again, because there were one or two blooms not equal in size to the remainder, it is very annoying to find that you have been beaten on a matter of taste. I should prefer that Teas were excluded from stands where Hybrid Perpetuals are shown, rather than that a judge should regard size and evenness to the detriment of taste and skill. On this point I want to hear the opinion of your readers.

With regard to Teas, my selection is a much smaller one than my friend Mr. Handley's. I only grow Devonensis, Madame Willermoz, Niphetos, Catherine Mermet, Souvenir d'Elise, Souvenir d'un Ami, Marie Van Houtte, and I am going to try Souvenir de Paul Neron. Of the Noisettes I only grow Marechal Niel, Celine Forestier, and Triomphe de Rennes. I think that by far the finest Tea Rose that has come out since Marechal Niel is Catherine Mermet, and I rejoice to see the forward position it has attained in the lists which have lately appeared in "our Journal."—JOHN B. M. CAMM.

NEGLECTED BEDDING PLANTS.—No. 1.

A RAILWAY journey invariably reveals the fact that certain districts are more favourable to the perfection of certain things than of others, although the latitude may in all cases be the same and the natural advantages but little different. This observation is not confined to tender or half-hardy subjects, but extends to some that are indigenous. A few years ago, being in Derbyshire, I could not but notice how robust and strong was the variegated form of *Dactylis glomerata*, and that it almost approached the old Ribbon Grass of former years, whilst with me it merely exists, and there are plenty of other places where it is in the same condition. Nature, however, provides a class of plants suited for each locality, and it is to such local differences that the following stray notes are specially devoted.

Arabis albida variegata.—It is nearly twenty years since I called attention to this plant as being one of the most useful of the dwarf white-leaved or variegated plants; and as being ornamental in winter as well as in summer, I do not hesitate to place it in the first position of usefulness for both of these seasons; but I find some exception taken to it in places that suffer much from dry summers, although with me it withstands drought better than Daisies and many other plants. I find it flourishes more luxuriantly further north, where there is more moisture and less sunshine. I saw it lately in the centre of Northumberland in a more robust condition than I ever observed it in the south of England, the whole plant having such an amount of vigour as it rarely or never assumes in a more southern latitude, and yet it showed no disposition to run into the green state. It was not in one locality alone that it was to be met with, but in all it seemed to play an important part in the ornamental department, its compact habit rendering it suitable for edgings or lines, and its hardness of constitution enabling it to withstand frosts and rain; long periods of dry weather alone seemed to injure it. I saw it within a stone's throw of the German Ocean, and it was good there. Strange to say, its compeer *Arabis lucida variegata*, dwarfed, and with a golden variegation, is but seldom seen. I have never known it do well in Scotland, except at one or two places; many who have tried it have also failed, or have only met with indifferent success in propagating it.

Dactylis glomerata variegata.—It is nearly twenty years since I found this plant near the centre of Lanca-

shire, where it was growing luxuriantly, and where, I believe, it continues to do so still; but with as much attention given it as many other tender plants receive I have lost it two or three times, and have ceased growing it, excepting in some special places; for its unhappy look, even when it does not entirely die-off, leaves so little to admire in it, that something else has been substituted in its stead. Its non-thriving in the south I attribute in a great measure to our dry summers, as with plenty of moisture it succeeds. Some years ago I noticed it at Chatsworth in the greatest luxuriance, and more recently I have seen it in the northern counties equally strong. This state of things might be easily accounted for, but in connection with it a question arises in my mind, Whether the ordinary form of *Dactylis glomerata* is so abundant in our meadows as it used to be? In one or two cases that have come under my immediate observation it is not so, as fields which some years ago at hay-cutting time presented a greater proportion of this grass than any other are now almost destitute of it. I ask, how is this to be accounted for? Recent drainage in the case I refer to has had nothing to do with this result, for the ground did not require draining, neither has extraordinary manuring been the cause; but if its disappearance be due to a decay in its constitutional power, we may feel assured that the variegated form will be still more affected.

Double Daisies, though not bedding plants for summer, have become a necessity for spring ornament. Residents in the north and west have no difficulty in multiplying them to any extent; but there are localities in the south where it is not at all easy to keep it through a dry summer. It may be said, Apply the watering pot. But this is not always possible. Water is often not at command in such places, and the necessary supply to maintain a healthy condition cannot be afforded. I have more than once lost almost all my stock in a dry season, and I find others are liable to the same mishap. Planting in a shady moist place may be recommended, but situations of this kind cannot always be had for everything; and the ordinary idea that a plant having for its origin one of the commonest of those of our fields, must be hardy enough to endure the open air of this country at all times, is not correct; for although it will endure any degree of cold, a long period of dry weather is fatal to it, and a lower summer temperature will also be found more beneficial than a dry warm climate. In the north it thrives with the least possible attention in places not the most inviting, and at the proper season furnishes flowers in great abundance.

Coprosma Baueriana variegata.—This pretty plant is not so plentiful as might be expected, neither does it appear to be propagated so quickly as many plants. Here I am afraid it has never had the soil necessary for its success; I believe a sandy peat suits it best, and on such a soil I have seen it thriving almost as well as the Variegated Periwinkle. When well grown its glossy green foliage with a broad, clearly-defined margin of cream colour, shining, as it were, in the sun or shade, renders it one of the prettiest plants we have; besides, in habit it is everything that could be desired. I only wish it would grow faster, and furnish cuttings in greater numbers; for when they are to be obtained there is no difficulty in striking them. There is also a hope that the plant may prove hardy enough to stand mild winters out of doors.

Gentianella.—Unlike the Daisies and Pansies, I hardly think this will endure the ordeal of being transplanted twice in the year; therefore the plants ought to have room enough to grow and flower in the same place for two or three years at least. Much as there has been said in favour of this plant, it certainly has its likes and dislikes, and amongst the former, a cool moist place in the north or west would seem to be the best place for it. Some time ago I noticed some lines of it in the north of England that were at least 18 inches wide, with an appearance of spreading further if allowed; the soil was a dark-coloured sandy one, and there were a great number of rainy days every season. I had not the good fortune to witness these fine edgings while in flower, but they must have been very grand; and the robust, healthy appearance of the plant was also good. In dry calcareous soils it is not easy to make it do well, though in others like that described it thrives like a weed.

Mesembryanthemum incanum variegatum.—There are few plants of recent introduction more popular than this, if we except the Golden Feather Pyrethrum. It seems to glory in a hot bright summer day, and the hotter and drier the better. I rather think that this plant likes a soil the reverse of that which gives vigour to the *Gentianella*. As the plant is liable to

be cut-off by the first frost it must be protected in winter, and a pot or two kept in a warm place will in general furnish cuttings for a good supply of plants in spring. As it is not prudent to plant them out too early, it is easy to propagate any reasonable number. For covering the groundwork of a bed where fancy figures are introduced I do not think there is anything more suitable than this *Mesembryanthemum*; certainly there has not been a tender plant introduced of late years that equals it for many purposes, and it seems to be as much at home hanging over the edge of a vase as in a flower bed.—J. ROBSON.

COTONEASTER SIMONSII.

How conspicuous is a flower, a leaf, or a berry of any rich colour from this time to March! We welcome all colours, but none seems to have such a striking and decided effect as scarlet. Everything out of doors for the next few months has a dead, cold, chilly, uninviting appearance. Flowers are going; the calm and beautiful shades of autumnal foliage have passed away, and we have little lingering behind to cheer and beautify save the ever-recurring and little-varying sombre shades of evergreens. We therefore doubly appreciate anything apart from foliage. Little there is but berries, and I know of none that have so ornamental an effect as those of *Cotoneaster Simonsii*.

It cannot be denied that, as a rule, there has been but one object studied in arranging shrubberies—that of planting solely for spring and summer effect. Autumn and winter are quite overlooked with regard to anything in the way of berries, &c. Nothing is expected then but green leaves and bare branches; yet when we meet with a bush of brilliant-coloured berries they seem to make the same impression on the eye as, in summer, a flowering plant of surpassing beauty amongst others less attractive. Now, and until the birds, which are very fond of them, deprive us of its berries, this *Cotoneaster* has a very pleasing effect amongst *Rhododendrons* and other shrubs, also against walls and trellises. It is one of those tractable plants that can be employed for a dozen purposes. Left to grow at will it is straggling and rampant, and in large borders, placed well back, I like to leave it to itself. It grows up amongst the thick masses and over them, at the same time doing no harm, rather otherwise, for it breaks their stiffness. The straggling shoots here show-off their berries to great advantage and give a singularly beautiful effect. If, however, it is desired to keep it more within bounds, the knife will soon bring it to any shape required. Plants of this *Cotoneaster* make handsome pyramids, standards, or round-headed bushes. In whatever style or in whatever position, in the mixed border or as single specimens, they will always at this time of the year prove highly interesting. To save the trouble of much pruning, and to induce the plant to produce more berries, an occasional replanting will have a very decided influence. This I especially commend to the notice of persons with only small gardens, and who wish to have a few plants.

The brilliant scarlet berries are much larger than those of the well-known *C. microphylla*, and much prettier to my idea, especially just before they are ripe; they then have an orange shade on the scarlet. The plant is as well suited for covering walls and trellises as *C. microphylla*, indeed it covers a wall faster. It has not the pendulous habit of the latter, nor is it quite evergreen, except, perhaps, in sheltered positions, as on a wall. It is well suited for covert-planting, as much for food as for shelter for the game; at the same time the effect of large masses near drives, walks, &c., would be excellent. To keep the berries is the difficulty. Nothing comes in better at Christmas for wreaths; a few sprays, too, look well by candlelight if mixed with stands of flowers. Then, again, short bits about 3 or 4 inches long, well studded with fine large berries, such as can be cut from walls—and they are well worth netting for the purpose—have a striking effect intermixed with the fruit, such as Apples and Pears, for the dinner-table. A few of them standing out amongst flat small pans of *Selaginella denticulata* placed down the sides of the dinner-table have a very chaste and effective appearance, only to be once seen to be highly appreciated.

There is yet one other purpose to which I must draw attention—namely, to make stock to work on *C. microphylla*, and at once have a weeping tree not to be surpassed. Handsome as *C. microphylla* is, either covering a wall or hanging from a rock, to have a weeping standard of it—to me who have seen

one, far surpasses those effects. The graceful outlines of growth, loaded with crimson bead-like berries, is the standard of perfection for a weeping tree.

Now if more is wanted to make it an everybody's shrub, and to be planted by thousands, it is in the easy and quick way in which it can be increased by seed, which grows as freely as Ash seed. I find that if large strong plants are planted-out rabbits seem to meddle with it but little; but of course, if planted where there is little else for them to eat, it, like almost all other shrubs, will be attacked.—JOHN TAYLOR, *Maesgwynne*.

PASSIFLORA QUADRANGULARIS.

This is one of the most beautiful climbers I have ever seen, and a fit companion for *Thunbergia Harrisii*, to which reference has been made lately in your Journal. Like it the *Passiflora* requires to be planted-out, and to be allowed to grow freely; by frequently stopping it the plant may be had in bloom throughout the autumn months. It requires a warm house, say 60° by day and 50° by night. I have a plant treated in this way with hundreds of flowers just about to open, and yet it has been flowering for the last two months, and I should say will continue to flower another month. I planted it at the back of a lean-to house, and allowed it to run over the roof on wires a foot from the glass, where it answers the purpose of shading the more tender plants during the summer. As the leaves are of a beautiful green they may be used for many purposes in winter, especially for garnishing the dessert, and like *Thunbergia Harrisii*, which I have in the same house, it is very free from insects. I keep it well syringed in summer. It is easily propagated by cuttings.—O. ORPET.

ROYAL HORTICULTURAL SOCIETY.

CAN anyone inform the Fellows of the Royal Horticultural Society what its true position is? A few days since I received the circular signed by Sir D. Cooper and others, by which it appears the Society is on its last legs, and going the wrong way as fast as possible. I now receive a notice from the present Council, stating in effect that all the statements contained in the former circular are false, and that the Society is now in a much better state both financially and otherwise than it was in February last. This statement of the Council agrees exactly with the position of the Society so clearly set forth by Sir Alfred Slade and others during the stormy meetings held at the beginning of this year. It seems unless something can be done to lay before the Fellows, in a manner the truth of which cannot be disputed, the real state of the Society, that all we can look for is a repetition of the same stormy meetings which were a disgrace to any body of gentlemen, and the ultimate collapse of the Society. Could not some three or four entirely disinterested persons be found who would thoroughly go into the question, and tell us plainly whether the statement set forth by Sir Daniel Cooper and others, or that of the present Council, is the truth? Both cannot be, and the Fellows have a right to have the truth.

If the statement of the Council is right, then the Society is now in a much more flourishing condition than it was in February last, and in that case had we not better go on with our present Council another year, and trust that they will be able to pull us through the troubles bequeathed them, and believe all will turn out for the best? It is true the Council is rather strong in the Kensingtonian element, but they are gentlemen who would be above injuring the Society for their own advantage; and we must remember that a large proportion of our funds come from those living in the neighbourhood of the gardens, and that therefore something is due to them.—PHILIP CROWLEY, F.R.H.S., *Waddon House, Croydon*.

I WILL not presume on your time and patience to turn back a quarter of a century or so of pages of "our Journal" to find where I expressed myself in regard to horticulture and the general public in much about the same spirit as that which now animates our worthy counsellor, G. F. Wilson, Esq., in regard to the public and South Kensington Garden. Why the garden has drifted over for the especial delectation of surrounding *clintide* and the mere dilettante of horticulture, so to speak, I have for a long time been wanting to know; but I do know that I helped to purchase the ground with my "shillings," and in my especial walk I have done my best, without fear or favour, to maintain horticulture at South Kensington simply for the benefit of all. It is the million we must

encourage. So if a clique wants to keep the South Kensington Garden to themselves, let them strike the bargain with H.M. Commissioners, and let the Royal Horticultural Society come to an amicable arrangement, if possible, with Her Majesty's Commissioners to hold their shows and meetings there, but to return in name and deed to its natural home at Chiswick, or anywhere in fact, rather than be obliged to wear the trammels, or be subject to the secondary position now awarded. I have a "guinea Fellow subscription" ready any minute for the preservation of the Royal Horticultural Society, and more if need be, to insure its future maintenance and to relieve us from our present obligations. I also hope, if I am allowed the opportunity, to be worth at least ten guineas annually, though indirectly, to the Society. Depend upon it, horticulture can take care of itself, and the sooner the members and Fellows, good and true, in the acceptance of the term, render themselves free and independent for the sake of horticulture the better.—ROBERT FENN, *Rectory, Woodstock*.

At South Kensington, on the 3rd, the appeal to the Fellows was much discussed. On the morning that the Council's answer came out I was at a Lily sale. A shrewd countryman of mine said, "I have you seen the answer? It hits you hard." I said, "It seems to me a clever piece of special pleading." He assented, and we went back to the Lilies. At the Wednesday Show I was attacked by a Fellow. My answer to him was, "You know that the new Council was not elected by a fair representation of the Society, but by a hard whip-up of the resident Fellows, and of those they influenced, who wanted to keep the garden private. You know that the state of horticulture in connection with the Society is exciting great dissatisfaction; therefore if the head and tail of the answer are unsound, you may judge of the body." Dr. Denny repudiates the appeal. I thought he read it through before signing; he most certainly signed it with the utmost willingness; he appears to have changed his mind. Mr. Turner I was most sorry for when I heard him regret having signed, as I think he did so much on the belief of those who signed before. I did not draw up the appeal. I need hardly say I believed its facts, or I would not have signed. I believe them still, though the Chancery suit may now be less near than I then expected.

Not all the legal talent in the Council, and I admit it to be great, can explain away the great fact that, while the South Kensington Garden land, bought out of the surplus of the 1854 Exhibition, mainly out of the people's shillings, worth, at a low computation, £12,000 a-year, pays rent (when it does pay it) only £2,400 a-year, the rest of the consideration is supposed to be made-up by the garden serving the great public object of promoting horticultural science. Put the value of this last to the proof. At this moment, if I were to suggest to my brother horticulturists who are engaged in the task of reconstituting the Society—or, if fate so wills, of making a new one in preparation for the old one falling, as it must assuredly fall before long, into our hands—if I were to suggest that we should pay Her Majesty's Commissioners £500 a-year for the privilege of holding our committee meetings and shows at South Kensington—in fact, for its use for horticultural objects—the idea would be scouted, and I should be told that they must pay us for showing; they must at least give some prizes, and charge us nothing. Therefore it surely follows that land worth at least £12,000 a-year, for which a rent of £2,400 a-year is paid, and that only once in five years, is being mainly used by a rich neighbourhood, which can afford to pay its value, as recreation ground for their families; is not this too great an abuse to be long tolerated in these days? I could hardly help laughing when told of the Kensingtonian Council having been most polite to horticulturists. I thought when people had used the cat's paw to gain their object, pussy was likely to be treated most affectionately as long as there was a chance of the paw being wanted again. Personally (with one exception), I have no reason to find fault with the present Council (if it be a Council), except in one particular. I was not on the Council which they caused to resign, having gone out under the bye-law for extreme length of service, or, considering the number and length of the later Council and Council-committee meeting, I might say servitude, before the *émoué* came. The fault I have to find is that, as I am told, the surplus money yielded by the country shows has been applied to the general purposes of the Society. I was on the Council when the country shows were first considered; they were new, and there was risk. It was suggested by the proper authority that, as

country shows could not be reckoned to the goal of the South Kensington estate, the "Expenses Committee" ought not to sanction the risk. We then said, "We will take the risk of loss; but as you decline risk of loss, you can have nothing to say to the profit if there be any." Experienced people have a way of disliking risk. I thought it was a plucky thing of the Council, and proved their being strong horticulturists, or they would not have taken it. The shows did yield a profit, which was considered sacred to horticulture proper. Most of the surplus from Bury St. Edmunds was put into the successful orchard house at Chiswick Gardens. I am told, I hope that it is not true, that the country shows' surplus has been used for the general purposes of the Society.

The country horticulturists appear to be fairly roused. I believe that the horticultural power of the country has determined to assert itself to take its proper position, and to have a real representative Society. If this be so, no Kensingtonian power or interest can long stand against it. I fear that you will consider this letter too long, but pray let me add just this: My first letter ended with an appeal for some one with time and a fresh head at his disposal to come forward and take the lead. Such a leader is more than ever wanted. He ought not to be too old. I know by experience that after a certain age people like attending to their own gardens better than controversy, though they may feel bound by a sense of duty to take their share in distasteful preliminary work.—GEORGE F. WILSON.

A CENTURY OF ORCHIDS FOR AMATEUR GROWERS.—No. 15.

ACINETA.

I AM quite aware that many of the aristocratic collections of Orchids do not contain any of the plants belonging to this genus; indeed, the remark is often made that those old Acinetas are not worth growing. From such an opinion, however, I beg to differ; for although these are not high-priced plants, they are none the less handsome and interesting, and well deserve the amateur's care.

Acinetas are evergreen plants of easy culture, requiring to be grown in baskets, which should be suspended from the roof, because the long spike which issues from the side of the pseudobulb near the base takes a downward direction, and pushes through the bottom; this, if they are grown in pots, cannot escape, and therefore the bloom is destroyed. The outside layer in the wire or wooden baskets should be long sphagnum moss, and the plants should be surrounded with a mixture of rough fibrous peat and sphagnum moss, to which may be added some pieces of charcoal to keep the whole open. They enjoy copious supplies of water during the growing season, but may have a long season of drought during the winter, their thick fleshy pseudobulbs sustaining them for a long time without water.

A. BARKERII.—This is an old inhabitant of our plant houses. The pseudobulbs are dark green, supporting a pair of broad leaves of the same colour; racemes produced from the side of the pseudobulb, and pendulous, bearing numerous fleshy, rich yellow flowers, which last a considerable time in full beauty if kept from wet. It blooms about midsummer. Native of Mexico.

A. HUMBOLDTI.—Pseudobulbs large, somewhat angular, bearing a pair of large, broad, membranous, ribbed, dark green leaves. The racemes are about a foot long, pendulous, and many-flowered. The flowers are large, thick, and fleshy; colour deep chocolate brown, speckled and spotted with crimson; they are slightly fragrant, and open early in summer, but are not very long-lived. As a rule, the flowers of both these plants pass away some days sooner than would be the case if a little care were exercised in preserving them from water; therefore no water should be given after the buds begin to show colour, for as the spikes push through the bottoms of the baskets they form a channel, which carries the water straight to the blooms, and I have seen these destroyed in this manner before fully open. Native of Brazil.

MILTONIA.

Amongst this genus may be found some of the most beautiful objects which decorate our Orchid houses; they may be distinguished by the similarity of both sepals and petals, and in having an undivided sessile labellum, which is, as it were, glued to the column. The pseudobulbs are somewhat flat, and bear narrowish leaves, which have the somewhat objectionable character of always exhibiting a yellow unhealthy hue; the

grand flowers, however, compensate for this. The Miltonias are very easily grown if exposed well to sunlight; when grown under heavy shade their foliage may be kept green enough, but then very little flower results. Naturally Miltonias are epiphytes, but under cultivation they succeed best treated as pot plants. The drainage must be ample, and kept in perfect working order, and the compost should be peat and sphagnum moss in about equal parts. Lately we saw in a contemporary that the great secret of Orchid-growing lies in giving the plants bottom heat. Now, I can understand any tree or shrub which takes root in the ground in a tropical country reaping advantage from bottom heat under cultivation, but I certainly am at a loss to understand upon what natural law bottom heat can be necessary to any plant which grows upon the branches of the forest trees, throwing its roots out into the air, and deriving its nourishment solely from the moisture of the atmosphere. For this digression, however, I must ask pardon, and return to my subject, the Miltonias, fine species of which I purpose including in my Century.

M. SPECTABILIS.—This species seldom grows higher than 6 or 8 inches. The pseudobulbs are compressed, and bear a pair of short, narrow, thin leaves of a yellowish hue. Scape radical; flowers large and solitary; sepals and petals white; lip large, flat, measuring from 3 to 4 inches in diameter, in the best varieties rosy violet bordered with white. It blooms from July to the end of August, and lasts upwards of a month in full beauty. Native of Brazil.

M. MORELLIANA.—In every aspect of growth this plant resembles the preceding; indeed, by some it is considered a variety. Upon this, however, it is not necessary to raise an argument; suffice it to say that in a cultural sense it is most undoubtedly distinct, and both are of such sterling merit that no amateur's collection should be without them. As in the previous kind, the scape is one-flowered, the flower large and flat, measuring in good varieties from 3 to 4 inches in breadth of labellum; sepals and petals deep rich purple; lip broad, rich purple, veined with rose. It blooms at various times during August, September, and October, and lasts six weeks in beauty if not allowed to get wet. Native of Brazil.



Miltonia Morelliana.

M. CANDIDA GRANDIFLORA.—We have in the present a plant which differs considerably in habit. The pseudobulbs are more ovate, and are not flattened to the extent of either of the preceding, and the raceme bears several flowers instead of these being solitary. Pseudobulbs thick and somewhat ovate, bearing narrow, longish, light green leaves; scape radical, bearing several flowers, which are somewhat distant; sepals and petals

large, rather incurved, yellow, with transverse, broad, brown bands; labellum pure white, tinged with pink. It blooms during September and October, and lasts upwards of a month in good order. Native of Brazil.

M. CLOWSEY MAJOR.—In habit somewhat resembling the preceding, and, like it, a fine variety of the normal form of the species. Sepals and petals flat, yellow, transversely barred with deep brown; lip purple, bordered with white; the flowers are produced in September and October, and retain their beauty a long time. Native of Brazil.

M. REGNELLI PURPUREA.—This is a fine plant. Pseudobulbs somewhat oblong, bearing a pair of light green leaves nearly a foot in length; the scape is radical, erect, and many-flowered; sepals and petals white, tinged with rose; lip large and flat, deep purplish crimson. These most beautiful flowers are produced in September and October, and if kept free from damp last a month in perfection. Native of Brazil.—**EXPERTO CREDE.**

ROSE STOCKS.

No doubt all Rose-maniacs have read Mr. Peach's remarks on the Manetti stock and those of "D. D." on the Briar. My own experience is dead against the Briar. It is a terrible disappointment to deal with a plant that you wish to grow well at the head, and it will persistently grow at the root. Years ago I determined never to plant another Briar, but on coming to my present abode, where—at any rate some years ago—most of the Roses were on the Briar, I determined to try again. The result has been that last year I arrived precisely at the same conclusion, and in consequence never put in a rod. It cannot be denied, even by the greatest opponents of the Briar, that some Roses do well, extraordinarily well, on this stock, notably the summer Roses and the Teas. In this union there appears to be such a mutual understanding between stock and scion—they have so evidently taken each other for better, for worse—that both are on their very best behaviour. The bud grows rapidly; and the stock, having plenty to do in carrying sap for the head, has less inclination to disport itself at the root. On the other hand, the Hybrid Perpetuals as a class, if we except some two dozen, do fairly the year after budding; but then transplanting comes, and a few years of miserable sickly existence terminate the struggle. Possibly the removal is somewhat to blame. The roots of the Manetti are something tangible; they go hither and thither, and the removal of a well-established Manetti is a trial. So also it may be with a well-established Briar; but then so many of the attachments to mother earth are not roots, and these useless, nay, injurious additions removed, how insignificant do the true roots appear! and doubtless many of the smaller are easily left in the soil. Certain it is that often the Briar stock when trimmed looks a sorry object; and should it not do well for a year or two, you have a hard stem offering a convenient nidus for lichens and other troubles, which add neither beauty nor utility to the stock.

The great objection, however, to the Briar is the sucker-growing. Any Rose-watcher must have remarked this irremediable characteristic. Let alone the root, the whole stem for two or three years bristles with them, and, however treated, is ready to burst into vigour at the slightest provocation. Cut out the bud as deeply as you please, ply your weapon ruthlessly, yet what numbers start again! Matters are on a different footing with the Manetti. Once fairly cut out the buds, and in ninety-nine cases out of a hundred you have seen the last of it. In this respect I entirely coincide with Mr. Peach. So little disposed is the Manetti, if properly treated, to throw out a shoot on the stem or the root, that if the head of a budded plant be removed, and the bud by any accident get knocked out, the great probability is that the whole stock will die: any way, its existence will be very unlike the usual vigour of the Manetti, the shoots thrown up being little larger than a knitting needle. Now, granting that "D. D." has hit upon the right plan of making the Briar stock successful, I do not see that he avoids or can avoid the sucker nuisance—for this reason, that the eyes of these robust-growing shoots are so imperceptible near the base. I believe the Briar as a stock is brought to its highest pitch of excellence by Mr. Prince's plan. Like "D. D." I have sown and watched with no results, but I mean to try again; there is some mystery in this part of the performance. Judging from Mr. Prince's plants, we have in the seedling Briar a stock surpassing, perhaps, the Manetti for results of first-class blooms, but apparently to us outsiders far more difficult to obtain. Until we conquer this difficulty,

my ballot-paper, though it is illegal to show how I vote, shall be crossed Manetti. Only in the single point of ease in budding a standard could my experience place the Briar before my pet stock, and the fact that the wood runs so much longer in the Manetti makes ample amends.

I thank the Rev. C. P. Peach and also Mr. Farrer (in whom I fancy I recognise one of my anonymous correspondents in the general Rose election last year), for the hint about excess of manure in planting the Manetti. I have several times been disappointed in planting strong plants of Manetti Roses that have never made any wood afterwards and gradually gone back. I may have overdone it, and I certainly shall make a note of it.

I make my own Manetti cuttings. I cut out the eyes deeply for a foot or more, so that when the following autumn the rooted cuttings are moved, they are planted shallow, and have a bare stem of ten or more inches above the ground. If flush of buds I put two buds into each stock, one on either side of the stem, and one a little higher than the other, but as close to the ground as possible. I confess my utter inability to bud successfully below the surface. When in the following spring the bud starts, I cut off the head of the stock, and the bare stem is useful for the first fortnight or so to tie the growing bud to save it from the wind; at the same time the soil is drawn up to the stem to bury the junction for an inch or more.

This season one of my rooted Manetti cuttings gave me a truss of bloom. This is the second time I have bloomed the Manetti. I had the pleasure of taking in two or three growers who had never seen it. This has happened to me only once before in the last fifteen years.—**JOSEPH HINTON, Harminster.**

I HAVE just read in last week's number of your Journal the question in Mr. Baker's letter—"I have plants which are six or seven years old, and this season they have made shoots from the collar over 5 feet in height: where can you see that on the Briar?" I answer him. I will show him a Rose on the Briar, certainly seventeen years old, which this year, and has for several years past, made shoots nearly as long. I have seen in the south of Ireland a Cloth of Gold Rose make shoots 7 feet long on a Briar several years old, and I have in my garden a this-year's shoot of a six-year-old Rose on a Briar that I have just measured, and I find it is 13 feet long. Where can you see that on a Manetti? My own experience, therefore, leads me to say to Rose-growers, Do not give up the Briar. I have too often seen the worked Rose disappear, and the Manetti become a splendid bush, in the gardens of inexperienced Rose-growers, for them to be very fond of. I have a Gloire de Dijon on a Briar standard at least twelve years old, the head of which is some 5 feet across, and from which I am obliged to cut every June straggling shoots of the year from a foot long. This Rose stands, I may say, out in the open, and I have cut splendid blooms from it on Christmas-eve. I and others, my neighbours, find it almost impossible to get Gloire de Dijon to grow here on its own roots.—**AMATEUR, Co. Dublin.**

EARLY PEAS.

As the season is now at hand for sowing the very early kinds, I will give you the result of my trials last season.

Owing to the cold and wet state of the ground I delayed sowing until February 11th. I then sowed on a south border Emerald Gem, Ringleader, Alpha, and Kentish Invicta. There was little or no difference in the time of their showing above ground, but Emerald Gem was by three days the earliest in flowering, Ringleader next, Alpha and Invicta both showing together four days later—just seven days behind the first.

I commenced gathering from Emerald Gem on June 14th, and from Ringleader on the 20th; the other two exhibited about as much difference as between the time of their flowering. The day I sent Emerald Gem to table some gentlemen, dining with my employer (without knowing it was a new Pea), remarked that it was the best-flavoured early Pea they had ever tasted. It is very distinct in foliage, with well-filled pods. This season I mean to try it against William I. and Sangster's No. 1 Improved.—**S. TAYLOR, Sion Hill, Kidderminster.**

LILIUM PURPUREUM.—Mr. Stevens will offer by public auction on Thursday, the 18th inst., what is said to be a beautiful new Lily from California, *L. purpureum*. The flowers vary in colour from a purple to a purple-lilac. It is the first time this Lily has been offered; and the collector, who has found it in

Humboldt County, writes that it is very fragrant and the finest of all Californian Lilies. At the same time an unusually large sale of other rare Lilies will take place.

LEAF MOULD.

I AM now collecting about twenty or thirty loads of leaves, which I shall put into a square heap, confining them by means of a few hurdles, if I have no better place. If they are dry I shall well water them, and they will soon produce a gentle heat. I then put them on the Sea-kale and Rhubarb pots, and about eight weeks afterwards I begin cutting Sea-kale, and by having a succession I secure a good supply throughout the winter. In spring I remove the leaves to where I intend growing Vegetable Marrows, and in May I plant-out two or three strong plants of these; they seem to enjoy the leaves, and I get a good supply as long as the season lasts. In winter I turn the heap, in spring I find it fit for the potting shed, and in the following winter for flower beds and borders. I never think of using manure while I have a supply of leaf mould. The leaves are principally Beech, and by collecting them every year I have always a good supply. I avoid having any more sticks with them than I can help. I have never once doubted its being a very useful article in the garden, and I find it suits Cinerarias and other plants admirably when mixed with sandy loam.—O. ORPET.

ORNAMENTAL PLANTING.—No. 12.

DETAILS OF PLANTING—CONTINUED.

THE manner in which the lifting, packing, and removal of trees are done materially affects their future prosperity. Every sound root and fibre that a tree has, when placed in its permanent position, contributes to its safety and to the promotion of a free strong growth in the ensuing season. The natural proportion or balance of root and branch ought always to be maintained so far as it is practicable, and it is doubtless owing in some measure to inattention to this important fact that many trees are lost. It will, I think, set the whole matter clearly before your readers if I describe the method which was lately followed in transplanting an *Araucaria* of about 12 feet high.

Four men were required for the job, each of them having a spade and digging-fork. First of all, the branches were secured by a string fastened to the stem at about 8 feet from the base, coiling it thence downwards around each tier of branches, bracing them upwards and inwards as closely as possible. Then a circle was marked on the soil, at 18 inches from the stem, as a centre. At about a foot outside this came another circle, and the men were set to work, taking care that no spade came inside the outer circle, outside which a trench was made about 18 inches wide and deep. Then with the forks the foot of soil lying between the outer and inner circles was carefully removed from the roots; and when this part of the work was finished there stood the tree with a solid ball of earth 3 feet in diameter, the sides bristling with roots a foot long. Meanwhile a couple of new garden mats had been prepared by sewing two sides together with packthread, and a trolley brought close at hand for the removal. The soil was excavated from beneath, and the combined mats passed under, enclosing the whole ball with the pliant roots packed safely around it, all being made firm and secure by means of a packing needle and string. The tree was then lifted on the trolley and wheeled to its destination.

The position selected for this tree was upon a lawn that was made about two years ago, and the removal of the turf brought to light a curious soil, or rather mixture of soils. Charcoal dust, ashes, stone chippings, and other *debris* were found with soil proper—a light sandy loam; for this was originally a slight hollow which had been filled up with some of the refuse that always accumulates near a new building. An area of 36 square feet of the surface was broken up and thoroughly stirred 18 inches deep, nothing being removed from this somewhat singular mixture excepting pieces of wood; then the tree was hoisted into position, the mats removed, the roots straightened-out, carefully arranged, and packed firmly with soil in regular order from the bottom of the ball upwards, and a thick mulching of fern placed on the soil over the roots. Immediately after the branches were released the tree was secured by four wires fastened to its stem and to stout pegs driven into the soil on opposite sides, and the work was finished.

The trolley which was used proved so thoroughly efficient

that I send a sketch of it (*fig. 1*). The obtuse angle at which the long handle is fixed renders it a powerful lever, so that by tilting down the end of the trolley a heavy plant may be pushed

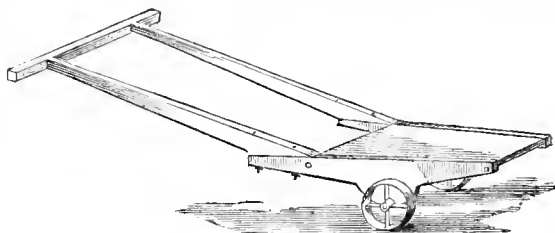


Fig. 1.

upon it, and then lifted by depressing the handle. Thus, large shrubs may be removed with much less labour than when the ordinary four-wheeled trolley is used. *Fig. 2*, a form of the



Fig. 2.

common rock barrow, is a useful implement for transplanting smaller shrubs. It has no legs, and shrubs may be taken up with a large ball of earth, placed upright upon it, made fast by cords, and removed with greater facility than by any other means.

It is best, as a general rule, to plant all Conifers on mounds that are made broad, low, and flat rather than high and narrow and with steep slopes or sides, the object being to slightly elevate the tree so that it may run no risk of damage from an excess or accumulation of rain water about its base, and at the same time not to put it upon a high mound that will very



Fig. 3.

likely become parched and dried-up by the hot sun of the succeeding summer, which is about the most critical period of a tree's existence. *Fig. 3* represents a section of the right form of mound, *fig. 4* of the wrong one.

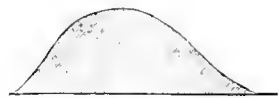


Fig. 4.

Another very important matter, concerning which it is probable greater ignorance prevails than any other part of tree culture, is the application of water. In a fine planting season, like that which we now have in the south of England, when high winds disperse the fogs and mists of November, so much that bright sunny days relieve the gloom of winter in an unusual degree, special attention should be given to newly planted specimens of large size and of an evergreen character. From the length and density of the branches, the roots of these trees cannot derive much benefit from passing showers, and they suffer very much from the excessive evaporation caused by drying winds; so that if water is not given abundantly to both roots and branches the shrubs will be injured, as will be clearly seen in the weakly growth that follows. If high winds and dry weather prevail in March some water may also then be required—not a mere dribble applied to the soil about the roots, but an abundant drenching over every part. Only take care so to plant that superfluous water passes freely from the roots, and harm can hardly arise from excessive watering. Close attention should be given to this matter throughout the summer.

To recapitulate. A tree or shrub must be lifted carefully with a compact ball of soil in proportion to its size, and with as many sound roots as possible. The soil must be thoroughly prepared for it by stirring, draining, and any mixing or addition of other soils that may be found necessary. All damaged roots must be removed with a clean cut. Every root must be

and out straight after it has been examined, and packed firmly and evenly in the soil. Do not plant deeply, but select or make a slight elevation similar to the diagram, rather than a low damp position, covering the roots with about 6 inches of soil. Mulching, securing firmly with wire stays, and watering if required, should be done with the planting. In a word, carefully study and attend to the requirements of a tree and it will grow; neglect those requirements, and it will probably fail to do so.—EDWARD LUCKENST.

POLYANTHUSES.

WE have much to thank "PHILANTHOS" for in his recent papers on some grotesque and quaintly-named forms of the Polyanthus, and I trust he will consider it a redeeming point in a "florist" of the very strictest sort, that such an one can appreciate these strange shapes and thoroughly enter into their peculiar beauties. I should feel much indebted to "PHILANTHOS," if he would kindly suggest any way in which I could get some of these Polyanthuses with the curious calyx. It would hardly be worth while expecting them from seed saved from parents of the more normal forms, although I have occasionally had seedlings from the florists' varieties of Auricula which have come "Pantaloons" and "Hose-in-Hose." The "Galligaskins" I have never met with, but I think it the most delightful of all these curious forms, and likely to sport from seed to still further eccentricity.

A correspondent, "G. S.," calls attention to what he has cause to think a fact—viz., that with respect to thrum-eyed Polyanthus seedlings, some when planted in rich soil have become pin-eyed. I do not write to dispute what "G. S." and an observer in Queen Anne's time have both remarked, but I should greatly like to learn how far this strange modification has been noticed. For myself, I have only to say that I have been acquainted with the florists' Polyanthus nearly all my life, and I grow it now. Probably it is cultivated by its growers in as rich soil as may be used, yet I never saw a standard Polyanthus sport from "brevistyla" to "longistyla." I have never heard or known of it as a thing to fear, that some mistreatment might turn our thrum-eyes into pin-eyes. We feel quite sure of the steadfastness of our florists' flowers in this respect, both in the Polyanthus and its more radiant sister the Auricula. But it may be that commoner strains are affected by a variation from which established varieties of high refinement are free. Perhaps "G. S." would kindly tell us in what strains he has observed this change. I might just remark by the way, that strict identity of a seedling Polyanthus is not for a time so easily secured as that of an old variety. It is just possible when seedlings are transplanted that some tiny plant, or yet inactive seed of this irregularly germinating family, may unawares be taken to grow as one with a selected seedling, if there be soil of the seed-bed about it.

"G. S." complains of the mischief done to his Polyanthuses by slugs and birds. Against the slugs, I think a hand-encounter by lantern light, on a moist and balmy night, is the best method of attack. If the enemy is very numerous at first, and the plants not in bloom, fine quicklime from a large sort of pepper-caster may be dusted over the foliage, and a good syringing in the dew of the morning will wash it off. Excursions into the garden at night are wondrously effective and very interesting. You learn who are your enemies, and may despatch, besides the slugs, large worms, woodlice, beetles that leave a posterity of insidious grubs, the ever-abominable earwig, and caterpillars. If that arch pest the wireworm would but show at night, how scarce we might make him! Toads, if their services can be secured by an enclosed garden like mine, are among our best of friends. I fear that birds can be kept from flowers only as from fruit, by some bounds which they cannot pass, and that we must sometimes be content to grow choice flowers that have tasty parts for birds, with accompaniments for protection. My Polyanthuses are safe because bloomed in pots sunk in ashes in cold frames, and I do not know what to recommend to preserve these flowers from the birds, except some safeguard of net or glass.—F. D. HORNER, *Kirkby Malzeard, Ripon.*

I WILL reply to the anomaly stated by your correspondent "G. S." respecting his seedling Polyanthus. He says that a thrum-eyed flower had the next season become pin-eyed. This is simply impossible. In a thrum-eye the anthers are fixed in the neck of the tube, forming the eye, and this is one of

the grand features of the flower. In a pin-eye the anthers are at the bottom of the tube, with the pin-eye or stigma rising to the top. I am aware of the fact that in some varieties really thrum-eyed, through what I conceive to be either some defect in culture or some effect of atmospheric influence, the tube of the flower does not advance in length in proportion to the growth of the style in its early stages; hence the stigma protrudes through the thrum or anthers until a more advanced state of the bloom, when it assumes its true character. Some varieties are so short in the style that without a surgical operation it is difficult to obtain access to them for the purpose of fertilising.

The Pantaloons and Galligaskins of another correspondent are curious monstrosities, and not at all in accordance with the true character of the flower, which in the artistic style of its markings is unapproached by any other of Flora's gems.

I have often wondered why my kind friend "D." of Deal, does not take the Polyanthus under his especial patronage, feeling assured it would not disgrace the lovely Auricula, or decrease the interest of the spring exhibitions.—DERA, *Market Rasen.*

ROLLER BLINDS TO INCREASE WARMTH.

MY vinery is span-roofed, 90 feet by 16, in three divisions, with two 4-inch pipes on each side near the glass, and a good saddle hoiler. I presume from the great surface of glass my gardener cannot have ripe Grapes before August, and I wish to have them by the end of June. I think of having outside roller blinds to let down at night, and perhaps only roll-up one of them by day in cold weather. What difference in the inside temperature would such blinds probably cause?

I begin forcing March 1st. To have ripe Grapes by July 1st, when should I light fires? My Vine roots are all inside, and the rods yearly are long and strong.—J. MACKENZIE, *Inverness.*

[We have some misgivings as to the roller blinds you mention answering your purpose, although such a covering is an excellent help to keep out frost from a houseful of plants. Where the glazing of a house is faulty, as where there are very small squares, perhaps not well fitted to each other, the innumerable openings in the roof for the egress of heated air are attended with a great sacrifice of fire heat, and in that case waterproof canvas blinds will be of great service. In all cases, however, let them be drawn-up in the daytime if there be any sun; and presuming that your house faces south, we would recommend that as much sun heat be shut-in as possible. We would, therefore, shut-up the house so early that the temperature might rise to 80°, if it would, early in spring, although it might recede during the night to 45° in the morning. Heat, however, is both easier obtained from the sun, and is easier kept when the glazing is in good close condition. When such is the case the blinds may be dispensed with, as they are costly, liable to mishap from high winds, and are not durable. There can be no question but they will keep out a great degree of cold, but whether it is prudent to apply them or add more piping is a question that ought to be taken into consideration. We should certainly prefer the latter plan, as there is less likelihood of a break-down with inside heating than with outside covering. It would be well to inquire if your present boiler is capable of heating the additional piping that ought to be given, say as much more as you have, which will be four instead of two pipes, and in doing so we would not advise so much piping to be attached to a boiler of a particular size as it is represented that boiler will heat; rather have a boiler a size larger, for we do not think anything is gained by working a boiler or pipes up to what is said to be their powers of accomplishing; rather let both be worked easily, less coals will then do, and that is a consideration in these days. Most likely you will find if the quantity of piping be doubled that an additional 5° or more of temperature will be attained, with a suitable boiler, without using more fuel than now.]

It will certainly be advisable to begin firing before March 1st. Begin by degrees; say shut the house up in the last week in January, and give fire on cold nights only. If your house contains nothing but the Vines, we would continue the fire in the daytime, and let the temperature sink at night even to 35°, if the weather be very severe, until some move be made in the Vines, when, of course, more warmth must be maintained at night. Where it is advisable to economise fuel—and under present circumstances everyone is anxious to do so—day forcing is cheaper than night, and the Vine allows of this, while the Cucumber will not. It is therefore better to encourage a high

day temperature to get the Vines on; and although a little fresh air is necessary, the quantity of this is very small until they are in bloom, when, of course, fine weather may be expected, air may be more liberally given, and the mode of treatment frequently recommended in our columns may be followed. There is, however, always something about a place which influences the ripening of Grapes and other fruits, certain localities being much earlier than others in the same latitude, and although your garden is so far north, it may nevertheless be earlier than others two or three degrees farther south. Dryness in the soil and atmosphere, shelter of situation, and other conditions, often make up for differences of latitude.—J. R.]

VISIT TO JAPAN.

I ARRIVED at Onomichi on the 18th of August, and left by overland again on the 20th for Okayama. Between Onomichi and Okayama the country is in a very high state of cultivation, and the crops were in full bloom. The Rice plant was in flower, and the Cotton crop was reported excellent. The rain was late in coming this year, the farmers were fearful of a very bad Rice crop, and becoming disaffected, they broke out in a state of rebellion in three districts. But in the result their fears were groundless, for the Rice crop is turning out much better than last year's, and the farmers say the price will fall to 3 hoo a picul. The weight of a picul is 133 lbs., so we shall see Rice very cheap here, if all is well. I may add for the information of your readers that a hoo is about 1s. 1d. in English money.

I have been studying the method adopted by the Japanese in the cultivation of the Potato root, which was first introduced into this country by the Prince of Satsuma. The Japanese Potato [*Dioscorea*] is somewhat sweet in taste, and in shape it is not very dissimilar to the Dahlia root. It is an excellent vegetable, and I have used nothing else for the past six weeks. It has peculiar fattening qualities, and would be invaluable as a food for animals, especially for the feeding of pigs; in this respect it is very superior to the English Potato, and on my return I shall try to introduce it at home. I have seen several pigs in Kobé and Yokohama which have been fed entirely on the Potato, and I have been surprised at their great weight; cattle will also fatten on it sooner than anything else. The mode of raising the crop is curious. The old Potato is first set, and it throws out running shoots. After a plentiful fall of rain these are carefully removed from the old root, and reset in rows on ground prepared, and from them the new Potatoes shoot. They are very prolific, and will, I am sure, suit the English market. The farmers here will soon commence cutting their Rice, and preparing their land for the winter Turnip crop.

We arrived at Okayama late on the 22nd, and remained three days, and returned by the large and important town of Fukuyama, at which place the Prince of Bizen has his castle, which is beautifully situated close to the town. The population is estimated at about 45,000, or about the same as your old city (York). On the road I bought seven Ducks very cheap, and sent them on by a coolie to the station at Fukuyama to await our arrival. From the number of people who had collected on the road at the outside of the town, I soon found out that I was the first European who had ever visited the town, and therefore that I was an object of much curiosity. The head Yakanin (Mayor) met me, and, after passing the usual civilities, he accompanied me and my officers into the town; and it is as well he did so, as the streets were narrow and so crowded with people, who had come out to see me, that it was with the greatest difficulty we could force our way for about one mile to a European store, kept by a Japanese, where we got some refreshment. We proceeded to Onomichi by Jin-ri-sho, six ri distance, arriving there at 10.30 p.m. Owing to it being the fast month amongst the farmers we were unable to get any fish, and had to live on Rice and Pumpkin soup for three days, and I can assure you we were pleased when we left once more by road for Hiroshima, where I had left the cook and provisions, and where we can buy fresh beef daily at 2½ cents. per pound, or a beast tongue for half a hoo—6½d.

I am going overland again to Shimonoski, and on my arrival there I will write you another letter.—J. TASKEN FOSTER.—(*Yorkshire Gazette*.)

nurserymen. It came out in 1861 with the following beautiful Roses—viz., Charles Lefebvre, François Lacharme, Maurice Bernardin, Prince Camille de Rohan, Madame Clémence Joigneaux, Madame Boutin, Madame Julie Daran, Duc de Rohan, Alphonse Damaizin, Madame C. Wood, Maréchal Vaillant, Olivier Delhomme, Souvenir de Comte Cavour, Vicomte Vigier, and Turenne, honeycombed in the centre. They were a splendid lot. All are here except Olivier Delhomme and Turenne; but I know them all. It was the finest lot that ever came out in one year.—W. F. RADCLIFFE.

FLOWERS FOR OUR BORDERS.—No. 22.

PLUMBAGO LARPENTÆ.—LADY LARPENT'S LEADWORT.

No plant has given rise to greater diversity of opinions than the *Plumbago Larpentæ*; by some it has been injudiciously extolled, whilst by others, less successful in their treatment of it, the plant has been as unduly depreciated. Its thin fragrant blossoms, and but partial hardiness, doubtless de-



Plumbago Larpentæ.

tract considerably from its merits; but the bright colour of its flowers, and the peculiar freshness of its ciliated foliage, will always procure it admirers. The late period at which it blossoms renders it, perhaps, more liable to injury from the early frosts and autumnal rains than many plants which are not one whit more robust.

When treated as a hardy herbaceous perennial it suffers less from the cold of the winter months than from the late springs so characteristic of our climate. The average temperature of the winter at Shanghai (one of the localities where this plant is found), scarcely exceeds that of the same season in England; but the spring frosts, so injurious to many of our shrubs and perennials, are unknown in that latitude, and the summers are not only considerably hotter than our own, but also of longer duration; so that the plant is, up to a late season of the autumn, subjected to a degree of heat by which it is so thoroughly matured that it is enabled to resist the cold of the winter months with far more success than the succulent

FRANÇOIS LACHARME ROSE.—This is in all English and foreign catalogues, except that of one of our most distinguished English

specimens produced under the influences of an English autumn.

The plant may be left in the borders throughout the year, in favourable situations, upon a dry subsoil; but, as a general rule, we would advise the same precautions as suggested for several other plants previously figured—protection from long-continued rains in autumn, and a covering of ashes, sand, or dry fern leaves during the winter months. But even with these precautions, plants thus exposed will rarely present so favourable an appearance as those which have been preserved in a cold frame or dry cellar. When dug-up and potted, the tops should be allowed to remain uncut whilst they continue green; and so long as the soil does not become quite dry but little water will be required during the winter. It will be found to succeed best in peat; but, as a substitute, when this is not procurable, sandy loam, with a considerable portion of thoroughly decayed leaf mould, may be used. In either of these soils its growth is rapid, an abundance of suckers being generally produced, which, if taken off and struck on a mild bottom heat, will make flowering plants the same season. It may also be readily increased by division of the roots in spring, about the period they commence their growth.

As a pot-plant its cultivation is remarkably easy. We have observed that it may readily be preserved in any convenient place, in a half-dry state, through the colder months of the year. When it pushes in spring it should be repotted; and if the specimen is large it should have a second removal as soon as the first pot has become filled with roots. Beyond these attentions nothing will be needed but free supplies of water and a few supports for its slender flexible stems.

Without indulging in extravagant euceniisms of this plant as a window ornament, it may yet be said to be of great value on account of the bright blue tint of its flowers, which continue in perfection for a longer period than when exposed in the open borders.

Although we have placed at the head of this notice the name by which the plant is best known, it is proper to state that *Plumbago Larpentei* is described under two other names which, strictly speaking, have priority in their favour—viz., *Valoradi plumbaginoides* and *Ceratostigma plumbaginoides*. The latter generic name refers to the curiously-formed stigma, which, under the microscope, presents a highly interesting appearance. The plant was introduced to cultivation as long ago as 1815.—(*W. Thompson's English Flower Garden, Revised by the Author.*)

ROSES IN EXPOSED SITUATIONS.—No. 1.

I WILL not attempt to interest those who grow Roses as pets in the success of this flower in exposed situations—they will tell us that such positions are not suitable; nor, indeed, is it any part of my present purpose to gainsay the necessity of affording shelter without shade to the rosery. Some of us have no option as regards the site of the intended rosery, and are martyrs to circumstances. All have not sheltered positions, and many persons are consequently under the necessity of growing Roses in an exposed position and at a great disadvantage. The only advantage, as far as I have experience, in growing Roses in an exposed situation, is that they are never smothered with aphids nor so subject to mildew as those cultivated in a sheltered and very often confined place; the latter, I am persuaded, is far more unsuited for healthful Rose culture than a bleak situation. Want of air, full sun, and nourishment are the surest forerunners of plagues of plant lice and fungi.

Than ours there is probably no more bleak and exposed position in the kingdom where gardening is practised or Rose culture attempted, for it is at an elevation of upwards of 500 feet above the sea level. Exposed to the east and west, the breezes from those quarters experience no check in their course. Mile after mile in one direction is moor that knows no cultivation except in the distant vales or dales, and in the other direction miles of ocean. It is truly wonderful how free the plants are of aphids and mildew, how vigorously they grow and bloom, to what a size the blooms attain, and what their substance of petals is as compared with Roses coddled in corners and warm nooks, and the life starved out of them by the roots of the sheltering subjects.

The soil is a strong loam with a moist clay subsoil, but stagnation of water is prevented by deep drainage. Sedges formed a part of the natural herbage. The ground was trenched two spades deep, the top spit with its turf being placed at the

bottom of the trenches, and on this was put a layer of fresh cow dung 6 inches thick, mixing it with the soil beneath, but not a great deal. The bottom spit was then turned on the dung roughly. It is astonishing what an effect bringing up fresh soil has on after-fertility, especially in the case of lands long under tillage or alternate husbandry. The surface, from frequent manuring and the decomposition of the roots and herbage of the annual crops, becomes rich in vegetable matter as compared with the amount of mineral or inorganic substances; but by bringing to the surface soil that has not been moved before, we increase, often double, the proportion of these, and ameliorate the soil, and the inert understratum is by exposure altogether changed.

The Roses were planted as soon as the ground was ready. It was indeed in a rough state for planting, but to wait until the surface was mellowed by frost would have been to have lost a season. The plants were put in, the holes filled up with some light rich soil—about equal parts loam and manure. Being dwarfs on the Manetti stock they were planted so that the union of the stock and bud was about an inch above the level of the surrounding ground, and the rough soil of the bed was put round so as to cover the junction about a couple of inches. They were therefore on slightly raised mounds. No mulching was applied: to have done so would have defeated the object of bringing up the under soil, as for its amelioration the influence of the atmosphere must be felt, and to have mulched would have shut out the air and made the surface a soapy mass, almost as close as the lower bed of soil. Mulching was reserved until spring, immediately after pruning, which was not performed until the upper part of the previous year's shoots had broken; some would be an inch long, and the strong shoots were cut to three or four eyes, the moderately vigorous to two, and the weak to one eye. The mulching almost hid them. By-and-by came the tender shoots, which, with the leaves, fell a prey to hares and rabbits. Two-feet-six-inches-high wire netting kept them off. Two-feet netting is practically useless against hares.

After this disaster came the worm in the bud—caterpillars that curl and hide in the leaves, which succumb to crushing between the fingers. Aphides innumerable appeared. Soft-soap solution, 2 ozs. of soap to the gallon, disposed of these. Whence came the caterpillars and aphides unless with the plants? Vigorous shoots were made, carrying magnificent foliage and large flowers with thick leathery petals, which stood sun and rain bravely. Mildew did not put in an appearance, except on some weak growers worked standard high on the Briar, which are about as useless in an exposed position as anything can be conceived. Their heads are so liable to breakage, and the foliage and buds to damage from rubbing and brushing each other, as to take away any beauty of foliage or flower.

November came, and with it winds that blew off the heads of many of the Roses, and those which escaped had many—in fact a majority, of the best shoots broken off at their origin. It was also manifest that some of the kinds, from their weak growths and not flowering, could not long survive in such a position, and the winter destroyed many of these. To have mulched early in winter might have prolonged their existence; it is hardly to be expected it would have done more. Besides, if the kinds were too tender to withstand an ordinary winter without mulching, it is plain they were totally unsuited, even with mulching, for standing a severe season.

So much for the first year's experience. The weeds were kept down, there being few owing to the mulching, and in autumn the beds were pointed over with a fork. A bad beginning, says the old adage, makes a good ending, and there is no school whose teaching is so sound as that of experience.—G. ABBEY.

THE FERNS OF THE WORLD.

FERNS are the most graceful group in the vegetable kingdom. From the pigmy *Woodsia* 3 inches high to the *Dicksonia* that towers up to 30 feet, all are elegant, and all are refreshingly tinted. In some respects they are the most popular of plants, for many species are long-lived anywhere—in the window of the town-artisan's room as well as in the fernery of the wealthy. Moreover, they are easily cultivated; they require no manure, their only demands being moisture about their roots and fronds.

They are the world's plants. We have about fifty species natives of this country. In Brazil they abound on the moun-

tain ranges of the Organ and Andes—the tree Ferns, as represented in our engraving, abound there. Two hundred and fifty species have been recognised within a circle of fifty miles diameter in Peru, 340 species in the British West Indian islands, and 450 in Java alone. Mr. Williams, in his "Select Ferns," adds—

"Borneo, Sumatra, Malacca, and the Philippine Islands abound with them, as well as the whole of the East Indies; and very few, comparatively, from the latter country are in cultivation, though many are peculiarly beautiful and interesting. In Mexico great numbers exist, some three hundred species having been described which are not in cultivation. In Western Africa great quantities of Ferns are found, and many of them species that are peculiar to that country. At Fernando Po, some considerable distance up the mountains, a splendid *Cyathea* is found, forming groves, and reaching upwards of 30 feet in height. It is a fine species, and the crown, rachis, and stipites are densely covered with large, black, chaffy scales. Again, if we come round to the Cape, in South Africa, a quantity of Ferns exist there that have never yet been introduced to our gardens, and no doubt many new species on that continent still remain unknown to science. So also in many other places where the atmosphere is sufficiently humid they are to be found, from the humble species of an inch in length to the noble arborescent kinds, rearing aloft their splendid crowns of fronds on stems from 10 to 40 feet high, beautifying the landscape, and forming objects of individual grace and elegance which we are only now just beginning to realise for ourselves."

On some of the East Indian islands the tree Ferns are so numerous and so social that their stems are literally crowded, and Ferns gradually diminish in numbers as the temperature of the latitude decreases. In the torrid zone they number in the proportion of 1 to 20 of other plants; but in the islands of the tropics, where the atmosphere is still more moist, their proportion is still larger—in Otaheite being as 1 to 4, in St. Helena 1 to 2, and in Tristan da Cunha as 2 to 3. Passing to colder regions the proportions are much lower, being in England 1 to 35, and in Scotland 1 to 31. Where moisture and shade are absent they are still more restricted in numbers, being in the Grecian Archipelago 1 to 227, and in Egypt only 1 to 971. In the Arctic regions no Ferns have been found, and only four species on the North

Cape of Norway; and in Baffin's Bay only one, *Lycopodium Selago*.

Ferns maintain a high position if their utility is considered. Their fronds are among the most graceful ornaments of the boudoir, the dinner table, the bouquet, and the head-dress. Capillaire is prepared from the Black Maiden-hair, *Asplenium Adiantum-nigrum*; and Mr. Williams details that—

"The pith of *Cyathea medullaris* is eaten by the New Zealanders, and the stems of *Pteris esculenta* and *Callipteris esculenta*, as well as the tuberous roots of *Nephrolepis tuberosa*, have been used for food, but, generally, when nothing better was to be obtained. *Lastrea Filix-mas*, *Ceterach officinarum* and *Scolopendrium vulgare*, &c., have been used medicinally; but with the exception of the first they are not in much repute. The styptic drugs brought from Sumatra under the barbarous names of Penghawa Djambi, and Pakoe Kidang, are supposed to be the produce of Ferns. A species of *Cibetium*, which is very common in the Sandwich Islands, has had its stipites stripped of the long dense hairs with which they were clothed, and carried away to California and Australia, for the temporary purpose of stuffing cushions and beds."



Tree Ferns in Brazil.

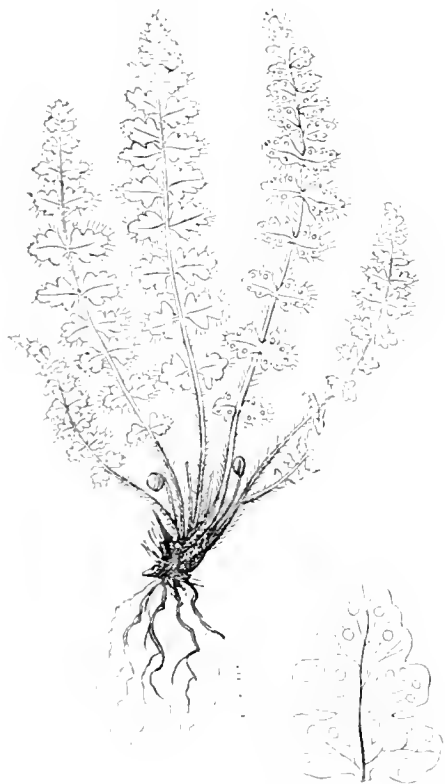
room, and fifty that are fitted by their habit to adorn pendant baskets.

When we mentioned the tree Ferns, let it not be supposed that they are to be seen only in their native countries. Even in the conservatory of the Royal Horticultural Society, at South Kensington, *Dicksonia antarctica* may be seen with noble crests of fronds, although their stems are only beginning to rise. In the stoves of Kew Gardens are tree Ferns like those we have here portrayed.

Tree Ferns have usually been avoided by private growers of

stove plants, on account of their height soon exceeding that of their glazed residence, but that objection seems now to have been removed, for the scienced editor of *The Irish Farmers' Gazette* writes as follows:—

“When, some few years ago, people in these countries were first made familiar, by means of imported full-grown living stems, with examples of the gigantic Fern Flora of New Zealand and other distant lands, the impression obtained that their increase in height and bulk was an exceedingly slow process, and speculation was rife as to the great age of these black, fossil-like, yet living patriarchs of the antipodean Fern gullies. Experience has, however, dissipated the impression and set at naught the speculation. From what we now know of the growth and development of tree Ferns under glass, the conclusion is inevitable that as regards rapidity in both respects they have few equals in the wide range of the vegetable kingdom. Here is an example necessitating the bold and successful experiment which we shall describe presently.



Woodia hyperborea.

“Very few of those who may read this but will have been to see Mr. Bewley’s famous fernery at Rockville, Blackrock, and admired the stately tree Ferns which rear their tall stems and expand their luxuriant coronals beneath its lofty double-glazed roof, which roof we have seen threatened to be lifted from its fastenings, or, at all events, burst through by the sheer force of vegetation, as exemplified by the marvellous development of the growing fronds. Now, this fernery is not many years at all erected, and yet more than once has the rapid growth of the New Zealand tree Ferns created a difficulty by threatening to lift the roof or find their way through it. This difficulty was met more than once by the expedient of sinking in the floor and lowering the roots and stems. This succeeded for a time; but there was a point beyond which the sinking process could not be carried, and meanwhile the huge ebon volutes of *Cyathea medullaris* again touched the roof. What was to be done? the roof should either go up or the New Zealanders come away.

“In this fix a bold and hazardous experiment suggested itself, which was at once carried into operation, and so far with most satisfactory results. Each tree was lifted from its position, laid prone upon its side, and with no keen knife or cunning hand, but with an ordinary cross-cut, worked by strong arms, connection between stem and root was quickly severed at the collar. The stem, however, was yet too long, and the saw went to work again, taking another section, and reducing its length by some 3 or 4 more feet. Again was the rootless stem, with its spread-

ing fronds, placed upright in its position, and made firm in its rockwork mound. In replanting, the only precaution taken by Mr. Sayers—Mr. Bewley’s very worthy and intelligent gardener—was that no soil should be in immediate contact with the stump; clinkers, broken bricks, and such like only being allowed to touch the buried portion. Nothing could be more satisfactory than the result: the subjects thus summarily operated on seemed scarcely conscious of it, but boldly held up their leafy honours, and continued to throw-up new fronds, and are now growing away as though nothing happened; but rather look as if that ere many more years go by they will call for a repetition of the operation.

“When congratulating Mr. Sayers on the success which attended his bold experiment, he modestly, and, as we believe, truly, said, ‘In any other than a double-glazed house I do not believe it would have been so successful.’”

POTATO-GROWING EXTRAORDINARY.—Some extraordinary results in the way of Potato-growing are reported from the United States. Last spring Messrs. Bliss, of New York, offered premiums for the greatest weight of sound tubers grown from 1 lb. of two of their new seedling Potatoes. The conditions were stringent, to prevent any overreaching, and the competitors were required to make a sworn declaration that they had been observed. For Early Vermont, Mr. J. I. Salter, Stearns Co., Minnesota, obtained the first prize of 100 dollars, having produced 609 lbs.; the second prize of 75 dollars fell to Mr. Pearson, of St. Lawrence Co., N.Y., for 437 lbs. only. For Compton’s Surprise, the first prize of 100 dollars was obtained by Mr. A. Robinson, of Rockingham Co., New Hampshire, for 511½ lbs.; the second to Mr. Pearson for 450 lbs., and the third to Mr. Salter for 394 lbs. Four prizes were given for each sort, the best average being made by Compton’s Surprise, which gave a remarkable produce in many parts of the States. But 609 lbs. from one is an extraordinary result, when we are told that only the usual methods of planting were permitted, propagating from slips being expressly forbidden.—(*English Mechanic*.)

WORK FOR THE WEEK.

KITCHEN GARDEN.

PREPARE another bed of *Asparagus* to keep-up a succession; use well-prepared dung and leaves. The weather up to the present time having been so favourable to the growth of *Broccoli*, the means before recommended should be resorted to to check it, and to prevent the frost having direct influence on the heart of the plant. Earth-up *Cabbage* if not done, as the weather is favourable. If young *Carrots* are wanted very early, seed should now be sown on a slight hotbed. Dung should be prepared for early *Cucumbers*; it should be well shaken to pieces and mixed, as on this being properly done depends the length of time which the bed retains its heat. Take advantage of the present fine weather to tie-up *Endive*, and house a quantity. Another crop of *Dwarf Kidney Beans* may now be sown if a constant succession is required. If frost should be likely to set in severely, cover *Peas* and *Beans* that are up with partially-decayed leaves. Cinder ashes should never be used for this purpose. Every fine mild day draw-off the lights entirely from young *Radishes*; this will give them strength to form bottoms. Continue to cover a small portion of *Sea-kale* at a time. When the first portion is out and the pots or tubs are taken off, cover the roots with a little litter to prevent their being injured by frost.

FRUIT GARDEN.

Continue pruning and nailing fruit trees. Let the standard trees in the orchard have their share of attention. Take off shoots for grafting; select those which are moderately vigorous and that are growing at the end of bearing shoots. In cases where several branches of a tree have become so luxuriant as to prevent a fair distribution of sap, or where the growth has been so rampant as to prevent the formation of blossom-buds, cut the strongest roots so as to check the too-luxuriant branches, as uniform growth will be attended with advantage, inasmuch as vigour and fruitfulness are severally promoted by directly opposite means. The practice frequently recommended of cutting the roots every year or so and surrounding them with a trenchful of rich manure, though, I doubt not, attended with good results, possesses this anomalous feature, that the system owes the whole of its success to a perpetual doing and undoing, producing fertility by rendering the tree deficient of nourishment at one time, and supplying it with too much at another. When trees are not so productive as they ought to be from over-luxuriance, raising the roots nearer the surface, applying no manure except as mulching, and attending to early and judicious summer pruning, are to be preferred to a yearly mutilation of the roots, except under circumstances where it is desirable to have as many fruit-bearing trees upon as small a piece of ground

as possible. Where the roots of Apples, Pears, &c., are within from 9 to 18 inches of the surface, over-luxuriance of the trees may soon be overcome by judicious summer pruning, merely preserving as many leaves on the shoots as will insure a healthy mutual action of the roots and branches, and not so many as will shade those buds at the base of the shoots and on small short spurs that can only be rendered fruitful by a free exposure to light and air. In extreme cases, such as in old fine-looking Pear trees that have become barren in the centre, raising the roots and supplying the tree with young wood would be advantageous.

FLOWER GARDEN.

The weather is now a little more favourable for new ground work than it has lately been. Continue planting shrubs, trees, Roses, and Rose stocks for future budding. Prune and nail or tie-in all climbers on walls, trellises, pillars, &c. The florist may now take breath if his Tulips are all safely in the ground and in a growing state, and, comparatively speaking, out of harm's way. He may now occasionally "overhaul" his collection by looking through his book, when his favourite flowers will recur with all their beauties to his fervent imagination. I need not enlarge on his feelings, for those only who have experienced them can appreciate how pleasurable they are. The Carnation grower's chief care must now be to prepare his compost for next season. His turf must be turned often during the next three months, carefully picking out of it the florist's plague, the wireworm. His leaf soil also must be shaken-up and sweetened, and a proportionate quantity of thoroughly decomposed stable manure must be made sure of, whatever other crop may go without. If he intends to have large and fine flowers he must not be too fastidious about manure, but it must be well rotten. Picotees are not so apt to become foul, or "run," as Carnations, and they will, consequently, bear a richer compost. Still, where Carnations and Picotees are grown for exhibition, one hundred pots might easily be cultivated at "high pressure" in order to win some of the prizes.

STOVE.

A cautious application of fire heat must still be observed here; keep the temperature rather low than otherwise for fear of exciting a premature growth. Cleanliness and a judicious use of the watering-pot should be strictly attended to. A small quantity of air may be advantageously admitted on fine days, and will greatly assist in purifying the atmosphere of the house. Many stove plants with large fleshy roots, such as the different varieties of Ipomeas, should now be allowed to go nearly or quite dry, and they should be well framed-in.

GREENHOUSE AND CONSERVATORY.

Attend to the removal of Chrysanthemums and all other plants as they get shabby. Some of the early Camellias will now be ready to take their place. Occasional fires will be useful during dull, damp, or rainy weather, taking care not to raise the thermometer unnecessarily high. All drip must also be avoided. Early Hyacinths will soon be in flower, and with care a succession of them may be kept up till spring. For late-flowering bulbs the best pots are 5-inch (18's) for one bulb, and 6 or 7-inch (32's and 21's) for three bulbs, and where a fine display is sought for, three grown together in one pot secure that object much better than single bulbs. For potting, the soil should be as rich as possible, such as one-half fresh loam cut from a pasture, with the turf decayed in it, and well-decomposed cow or horse manure, with a small quantity of clean sand well intermixed. If, however, this kind of compost cannot be obtained, then the lightest and richest at command must be employed instead. Drain efficiently, and after filling the pots lightly with the soil, place the bulbs upon the surface, slightly pressing them into the soil. After watering, if the soil is not sufficiently moist, set the pots out of doors on a dry bottom, and cover them with old tan, ashes, sawdust, &c.

FORCING PIT.

This structure must be kept fully occupied with all the different plants usually employed in forcing for the decoration of the conservatory or drawing-room. In successfully forcing many plants the application of bottom heat will be found indispensable; a well-constructed tank is therefore absolutely necessary in this department.—W. KEANE.

DOINGS OF THE LAST WEEK.

FRUIT AND KITCHEN GARDEN.

In this department the work has been similar to that noticed in previous weeks' "Doings." We have been fortunate in having a continuance of dry weather, which has given us an opportunity to push forward all digging and trenching, as well as making alterations, laying Box-edgings, &c.

Planting Fruit Trees.—This is a matter which is worth noticing, and may be useful to amateurs and others who have had but little experience. If a fruit tree of any description is planted in a careless manner without any previous preparation of the ground, no after-treatment will cause the trees to give the satisfaction which they would have done if properly planted

at first. On looking over a very large collection of fruit trees the other day, many Pears on the Quince, and Apples on the Paradise, were observed to be planted irregularly—that is, as regards depth; the union of the stock with the scion was in many instances from 3 to 9 inches above the surface of the soil. In every case where trees on the above stocks are planted, the union of stock with scion should be level with the surface of the ground. In some instances the nurserymen are to be blamed for working the stock too high. We have had a Chaumontel Pear tree in a pot sent home worked on the Quince stock 18 inches above the surface of the soil. The result of treating the trees in this manner will be early productiveness, but the fruit, though of good flavour, is small, and the trees will not long continue in good health. Apples worked on the Crab stock, and Pears on the Pear, should not be planted deeper than they were in the nursery. Sometimes the trees do not come home with good roots. In many cases the purchaser is to be blamed for this; people try to buy in the cheapest market, and will not pay a fair price for their trees. Walking through a plantation of fruit trees one day with the nursery foreman, we came to some labourers carefully lifting some large specimens; they were saving the fibrous roots by digging a trench and working the earth away from the tree, which seemed to be their usual plan of operations. They were immediately stopped by the foreman, and told to dig the trees up by driving their spades into the ground nearer the bole, and to wrench the trees up without removing the earth. We were ordering trees and became alarmed, remarking that we did not care to have the trees just ordered lifted in that way. The answer was something like this, and is suggestive, "You select the best trees and pay the best price, it will be different in your case; those they are lifting are a job lot, it would not pay us to be careful with them." Our advice to planters is this, Go to the nursery, select your own trees, and pay the best price for them; they will be by far the cheapest in the end. Nurserymen have to pay rent and taxes, and these are also times of dear labour; they are also like the fruiterers and "costers"—much of their stock is unsaleable, or must be disposed of at a sacrifice. Trees that do come home from the nursery with the roots mangled should have the injured part cut clean off with a sharp knife, and in planting see that the radius of the hole is wider than the longest roots. These should not be bent to go into a narrow space. The best material to place round the roots is decayed turfy loam, and if the loam and ground are poor a little rotted manure may be mixed with it.

FORCING HOUSES.

Pine Apples.—At present, airing the houses and maintaining a moderately moist temperature are all that they require; the bottom heat can easily be kept-up to about 85° by using the hot-water pipes under the beds. Where houses are not fitted with such appliances, and the heat must be kept-up by tan or other fermenting material, the labour is great, and it is almost impossible to keep the roots healthy. From our small stock we have not been able to cut any Smooth-leaved Cayennes as yet; but even now the Queens keep remarkably well, and are of excellent flavour. This is attributed to maintaining a steady and moderate bottom heat from the hot-water pipes, and ventilating the houses as freely as possible. We have had mealy bug on some of the plants as the fruit was ripening-off. This is not the first time it has appeared on our plants, and in every case the evil has arisen from surplus plants being brought in from the stove. The pest is not found upon the leaves, but on the fruit, and it can only be removed with great difficulty.

Vineries.—Until the Vines break in the early houses a repetition would be monotonous. In the late houses nearly all the leaves are down, and the Grapes will be expected to keep better. We were asked the other day which were the best keeping Grapes, and the unhesitating answer was Lady Downe's, and next to that sort we place Gros Guillaume, but the latter does not keep so well as Lady Downe's when cut from the Vine and hung up with the stalks inserted in bottles of water. The fruit will not take up the water; a bunch weighing 3 or 4 lbs. will not take up so much water as one of Lady Downe's weighing 1 lb. This we have proved with many bunches for two successive years. As a consequence, the berry-stalks soon shrivel, and then no water is taken up.

Lily of the Valley and Spirea japonica.—We placed some of these in the forcing house. Successive batches should be placed in a very gentle heat at first. The first, especially, will not stand much heat, which causes the flowers to be thrown-up without the leaves, which is objectionable. There is not so much danger of this if the pots are plunged in gentle bottom heat. The pots should be removed to a cooler house just as the first flowers open, for, if they expand in heat, they will not stand well after being cut, or when placed in the greenhouse. The Spirea (Hoteia japonica) is invaluable either for cutting or for decorative purposes. The pure white feathery sprays do well for mixing in all sorts of bouquets, especially for coat flowers, and for small glasses in the drawing-room. We have a nice stock of *S. pabnata*. This we shall not use for very early forcing,

but, from what we have seen of it, it will be as readily forced as the white-flowered species, and when it can be obtained in quantity will be equally valuable.

STOVE AND GREENHOUSE.

Phalenopsis grandiflora and *amabilis* are throwing-up flower-spikes freely, and a flower-spike will continue in beauty for months at this season; but care must be taken that the flowers are not spotted with water. An over-moist atmosphere will also cause them to become thickly dotted with black spots. On looking over a fine collection of these plants recently, we noticed that scarcely any of the flowers opened, although the plants were in good health; when half-expanded they became sickly and dropped off, and this notwithstanding every precaution being taken. Probably the form and aspect of the house had something to do with it. It was a lean-to and rather dark. The best plants we have ever seen have been in span-roofed houses, where they flower and grow freely at all seasons. They must not be placed where a current of air can reach them, and should be kept near the glass on the shady side of the house. We find they do equally well in baskets or pots; they also succeed best when clean potsherds and live sphagnum moss only are used.

In the greenhouse department we have been tying and training *Azaleas*. We noticed these at the flower shows during the past summer, and it was pleasing to notice that in many instances there was a considerable departure from the formal cone-shaped plants of recent years, and the mathematically-trained pyramids of 1866, which so sadly marred the natural effect of your beautiful engraving of the International Exhibition held at South Kensington that year. Most of our own specimens were bought as pyramids; some of them have been trained and allowed to grow out of that form. Whatever the shape may be, do not use too much tying material, but let the shoots hang loosely in a natural manner. All the tying necessary is to arrange the branches so that when the plants are in flower they may be evenly distributed. All decaying leaves are shaken off before tying.

Cuttings of *Chrysanthemums* are also being put in. One cutting is inserted in the centre of a 60-sized pot, and the pots placed on the shelves in pits, or near the glass in a greenhouse. They will be slow to strike root in this position, but are not so apt to run to flower early in the season as those which have been forced-on in heat. The cuttings put in now are intended to make specimen plants. Late in January, or early in February, is quite soon enough for those intended to produce cut blooms for exhibition.—J. DOUGLAS.

TRADE CATALOGUE RECEIVED.

James Carter & Co., 237 and 238, High Holborn, London.—*Carter's Collections of Bulbs.*

TO CORRESPONDENTS.

BOOKS (G. A.).—You can have the "Cottage Gardeners' Dictionary," free by post if you enclose 7s. 2d. with your address. The latest plants included are those of 1868. (Attc).—A supplement to the "Cottage Gardeners' Dictionary" was published in 1868. It can be had separately at our office for 1s. 6d., or post free 1s. 8d. A new edition of "Faxon's Botanical Dictionary" was published in the same year, price 15s.

CYCLAMENS (*A. Young Beginner*).—We cannot advise you unless you send us some of the grubs in a small box.

MESSRS. BUNYARD'S NURSERIES.—On the top of the third column of the report in our last number, the quantities of fruits there stated refer only to those kinds named. The firm grow eighty sorts of Apples, eighty of Pears, and about forty of Plums; and their stock of the whole is between eighty and ninety thousand.

PROPAGATING FRAME (F. J.).—South aspect, if a lean-to. A span-roof better, but dearer.

CAMPANELA BOURVARDIANA (M. C., Dublin).—We do not know the Campanula mentioned by "E. C. Oakham," at page 415. Perhaps he will furnish us with further information respecting it. Our subscriber is anxious to know its height when in flower.

PRIMULAS (A. B. P.).—Any of the leading florists who advertise in our columns.

HESSEA SPIRALIS (A. R.).—It is one of the plants that annoys from being differently named by different botanists. It has been called *Amaryllis*, *Carolyza*, *Cinnia*, *Hemanthus*, and *Strumarina*. You will find it under the last name in your "London's Hortus Britannicus."

EARLY-RIPENING POTATOES (J. P.).—We never grow any but Ross's Early and the Ash-leaved. There are many varieties of the latter. If you refer to Dean's catalogue you will find Alma Kidney, Early Lancashire Kidney, Myatt's Ashleaf, and Purple Ashleaf.

FLUE HEATING A GREENHOUSE, &c. (J. W. L.).—It is difficult, without being on the spot, to give all the details necessary to guide an alteration; but in reference to a length of stout fence-wire being left in a flue when built, if the flue wants cleaning, the removal of the cover at a few places will be sufficient, and by a string fastened to one end of the wire this can be drawn backwards and forwards, with a bunch of straw or something of that kind, fastened to it until the flue is clean. The wire can then be left for another occasion, as it takes-up little room. In your case we would recommend the flue being built brick on-edge with well-prepared mortar, but do not plaster it inside unless you have a doubt about the mortar, in which case use cow dung. When the covers are put on take care that no loose mortar falls down inside to harden into lumps and impede the draught of the flue, or its cleaning-out afterwards. For a short distance near the fireplace it ought to be a half-brick thick to

withstand the fire. The best places for taking off the covers for cleaning are the corners, and the more the flue is above the surface the better it heats, although it will heat when sunk; but in this case it is best to be cased-off from the adjacent ground by a wall and space of an inch or two to allow the heat from the sides to ascend. Other matters will suggest themselves to the builder. With regard to giving ventilation at the top, could that not be arranged by converging ropes to the front under the rafters? Allowing the whole space for plants, instead of having a tier of eight shelves, we would only have three or four. The upper one of 4 or 5 feet wide would be found very useful for arranging Fuchsias, Camellias, or any tall plants, and if its back next the wall were 4 feet deep or more from the under side of the glass, you would often have plants tall enough to occupy the space, and shorter ones in front of them. The whole upper shelf or platform could be filled with tall plants, and the lower shelves with dwarfier plants, and then about 8 inches rise would do very well for each shelf. The material must not be less than 1 inch thick; in fact, ought to be thicker unless the bearings are pretty close together. We have seen a good shelf of 1½-inch deal cut into widths of 3 inches and placed about half an inch apart, and the bearings about 2 feet from each other; for, be it remembered, the stage has to bear a person as well as the heavy pot he may be lifting at the time. Oak is the best wood, but deal answers very well. We hardly know what to say about painting.

ADIANTUMS NOT THRIVING (W. M. Y.).—*A. Capillus-Veneris*, though a British species, luxuriates in a stove, and so does *A. cucumatum*, but both will succeed well in a conservatory. *A. farleyense* requires a stove, and would thrive in the house not below 60° in winter. The soil you use is altogether unsuitable. They require sandy fibrous brown peat chopped up moderately fine and not sifted, with a fourth part of fibrous loam and a fifth of silver sand. *A. Capillus-Veneris* is the better of a sixth part of freestone or sandstone in pieces from a pea to a hazel nut mixed with the compost. Good drainage should be given and the plants potted in March, removing all the soil that comes away freely from the roots, and pot so that the creeping stems may be only just covered. Water moderately for a time, but keep the surfaces around and under the plants sprinkled with water three or four times a day, and when growing freely water abundantly. Sprinkling overhead twice daily when in active growth is very beneficial. Give shade from bright sun from March to October. The plants may be shifted into larger pots in June, if they have filled the pots with roots and are growing freely. *A. cucumatum* should be kept rather dry in winter. *A. farleyense* should be shifted into larger pots as it fills its present ones with roots, continuing to shift it as it advances. Keep it moist, avoid sudden changes of temperature; and in fumigating remove the plant from the house, as a slight fumigation is sufficient to cause the browning of its fronds.

PLANTS FOR CONSERVATORY HANGING BASKETS (A. Z.).—For your rather large baskets we advise plain and variegated Ivy-leaved Geraniums. The following plants are also good, and two or more kinds may be planted in a basket:—*Tradescantia zebrina argentea*, *Heliotropes*, *Convolvulus mauritanicus*, *Litbospermum prostratum*, *Nierembergia gracilis*, *Lysimachia Nummularia*, *Linnaria Cymbalaria* and its white variety, *Campaulna germanica*, *Alyssum variegatum*, *Petunia*, *Saxifraga Fortunei folios-variegatis*, *S. sarmentosa*, *Antirrhinum procumbens*, and *Manandraya Barclayana*. Some of the *Tropeoliums* are also pretty, and *Cereus splendens*, *C. tenuis*, and *Mesembryanthemum floribundum, australe, clavellatum, torquatum, rubro-cinctum*, and *repens*.

DIFFENBACHIA, CENTROSOLEMA BULLATA, and APHELANDRA LEOPOLDI CULTURE (O. N. S.).—The *Dieffenbachias* are propagated by cuttings both of the stem and growing point inserted in open soil, the base of the cutting resting on and surrounded by silver sand. Plunge in a brisk bottom heat, cover with a bell-glass, and keep close and moist, but not very wet. A compost of two parts fibrous sandy peat, half a part fibrous loam, and a quarter part each corks, charcoal, leaf soil, and silver sand will grow it well. Good drainage, liberal watering, and atmospheric moisture when growing, with comparative dryness when at rest. *Centrosolenia bullata* is propagated by cuttings in brisk bottom heat, keeping moist, but taking care to avoid damp. It should have an abundance of moisture and warmth in summer, and be sparingly watered in winter. It requires equal parts of sandy peat, fibrous loam, and leaf soil, with one-sixth of silver sand, and good drainage. *Aphelandra Leopoldi* is increased by cuttings of the side shoots taken off in April or May, inserted in sandy peat, loam, and silver sand, placed in brisk bottom heat, and covered with a bell-glass. For soil use fibrous loam, sandy peat equal parts, and a quarter part leaf soil, with a like proportion of silver sand. The compost should be used rather rough, with good drainage. The plant requires free watering and moisture during summer, with brisk heat, and to be kept rather dry and cool in winter.

DETZIA GRACILIS CULTURE (A. U.).—We presume the plants are in the cool greenhouse, and have been there all the summer, as you write of growth succeeding growth. Plunge them out of doors now in coal ashes up to the rim of the pots, and let them remain until the middle of January; then take them to the greenhouse, and after the soil in the pots is dried a little turn them out of the pots, remove all the soil coming away freely from the roots—in fact reduce the ball considerably, loosening its sides, and repot in the same sized, or in a larger pot if needed, the point being to give some fresh soil amongst and around the roots, and to pot moderately firm. Three parts fibrous loam, one part leaf soil, and a sixth of sand, with good drainage, will grow it well. Place in the greenhouse in a light airy position, watering moderately until the plants are growing freely, then abundantly. After flowering set them outside in a sheltered position, and if frosty protect with a covering at night for a short time, and finally stand the pots on ashes in a sheltered sunny spot. Keep the plants well watered throughout the summer, and until the leaves turn yellow in autumn. They may be taken into the greenhouse again in January.

CELERY STEM (X. B.).—The section of stem you sent us is perfectly healthy, and is woody as if the plant were running to seed. It may arise from the seed having been sown early in heat, and the plants not having been hardened-off properly, or from a check to growth, either in consequence of cold or want of water. Celery, to do well, requires to be grown without check, and to be liberally manured, and supplied with water and liquid manure. The chief cause of "holting," however, is too early sowing and starving the plants.

ADIANTUM FARLEYENSE FRONDS BROWNED (*A. Subscriber*).—The frond has the appearance of having been browned by fumigation with tobacco, which is very destructive to this Fern. It is much the best plan to remove it from the house when fumigation is practised. We have also experienced the browning of the fronds from the admission of air in bright weather succeeding a dull period, which evidently has caused too great evaporation and dry

ness of the atmosphere. A regularly moist atmosphere, and as few changes of temperature as possible, are necessary for the full development of the fronds of this, the handsomest of the Maiden-hair Ferns.

BRIAR STOCKS FOR ROSES (J. G.).—The club-like roots as large as the fist are not nearly so good as those which have stem-like roots. They will grow, however, and form fibres. We find most of our losses of standard Roses arise from the bad rooting of the Briars and the very old and large club roots. They seldom have fibres to begin with, these being formed by the first year's growth.

STRAWBERRIES FORCING IN SMALL POTS (T. Dodd).—The Strawberries in 3-inch pots, potted last spring and not since, will not force satisfactorily. They should have been shifted into 6-inch pots in July or early in August, and they would then have formed fine crowns. You may give them a trial, potting them firmly in 6-inch pots, and plunging in ashes or sawdust over a bed of leaves, which, by affording a slight warmth, will facilitate the formation of roots. The plants should not be covered with lights, except in very wet or frosty weather, and then there ought to be a thorough draught between the plants, the lights being supported by bricks placed on the bed. The temperature of the bed ought not to exceed 65°. They may be forced about February. Fowler's Insecticide has been in use many years, but we do not exactly know how long.

CHRISTMAS ROSE SLUG-EATEN (Christmas).—In the evening, or early in the morning, sprinkle quicklime all round and over the plants before the flowers expand, repeating the application once or twice a week in moist mild weather. When the plants come in flower sprinkle the lime on the crowns and under the leaves.

HEATING A GREENHOUSE (Hillsbro').—The best mode in your case would be with a boiler heated by gas, or a stove boiler if you have no gas supply. You would require four rows of 2-inch pipes along the front and one end, or two 3-inch pipes, which will be sufficient to keep out frost. The cheapest plan would be to have a flue along one end and front, with a stovehole outside. You would, however, be best served by a boiler inside the house, so as to utilise all the heat. For prices consult the makers advertising in our pages.

NERIUM SPLENDENS TO FLOWER IN SEPTEMBER (Oleander).—As this flowers naturally in a greenhouse in August you should have no difficulty in flowering it in September, but you must not cut-in the plant now and force it into growth. Keep it in a cool greenhouse, and rather dry at the roots during the winter. In spring you may repot, loosening the sides of the ball, and early in June set the plant out of doors in a sheltered and slightly shaded position, watering so as to keep the soil moist. About the middle of August you will know, by the forwardness of the buds, if it is likely to bloom at the time you wish. If too forward, place the plant under a north wall; or if it be, as we expect, swelling its buds, set it in a greenhouse, or, if not, in a house with brisk heat. You may, however, bloom it without this last by removing it to the greenhouse in time.

CLUB ROOT ON LIGHT SOIL (G. C.).—The heavy manuring you mention having given your garden is very likely the cause of the club you complain of; and as your soil is light, approaching what is called hungry, liberal manurings will be necessary to maintain vigorous growth. But it is, if practicable, to change the character of the manure, and if possible get some good mud or road or ditch scrapings in addition to the dung, and what is more important, give all the portions of your garden intended to grow anything (in the Cabbage way) a good dressing of either soot, or lime, or both. Lime at the rate of 12 tons per acre will not be too much, but it had better be put on at twice, a slight covering with soil being all that is wanted the second time if the land is in crop. It is more difficult to specify the quantity of soot necessary, but if it is put on the naked ground, about as much as will partly cover it very thinly may be used, repeating the dose when the crop has made some progress, but of course long before it arrives at maturity. We believe nitrate of soda is also a good antidote to the club, but we have not had much experience of it, and some speak well of common salt. As your land is light you might try all these remedies on different portions, and the issue will point out which is the best.

PLANT STAND (J. Atkinson).—We should have along the front the entire length of your house, a shelf 3 feet wide, and 2 feet 3 inches from the floor, which will give you about 2 feet 9 inches to the glass of the roof in front. This shelf may be of laths $1\frac{1}{2}$ inch wide by $1\frac{1}{4}$ inch thick, on cross pieces or bearers 3 inches by 2 inches, narrow edge upwards, the bearers 3 feet apart. Against the back wall we should have a stage, and with lattice shelves rising from the walk next the shelf in front, the first shelf level with that on the front, and 1 foot wide; the next shelf 1 foot 6 inches wide, and 9 inches above the first; the third shelf 2 feet wide, and 1 foot higher than the second shelf; and the fourth shelf 3 feet wide, and 1 foot above the third shelf, the shelves formed of laths similar to the front shelf. Your house will by this arrangement have a 3-feet shelf in front, a 2-feet-6-inch pathway, and staging 7 feet 6 inches wide at back, affording height for plants of varied sizes.

PEACHES FOR BACK WALL OF VINERY (Idem).—If your Vines are planted less than 4 feet apart they will so shade the back wall as to render it useless for Peaches. We do not advise them, especially as you give 40 to 50 as the minimum temperature in winter. If the Vines, however, are over rather than under 4 feet apart you may grow Peaches fairly on the back wall, and the kinds we advise are Royal George, Noblesse, and Grösse Mignonne. They should be dwarfs fan-trained. Our correspondent wishes to know where he can get a Rose named Jean d'Esprit.

CAMELLIA NOT GROWING (A. B. Y. Z.).—The plant must be in very bad health. We should turn it out of the pot in February, remove all the old soil carefully from the roots, wash them, then dust or sprinkle them with silver sand, and repot in a size of pot that will hold the roots nicely, using turf from a pasture where the soil is a light sandy loam, packed off not more than an inch thick, torn in pieces about an inch square. Of this use three parts, one part sandy fibrous peat, and a sixth part of silver sand. Drain the pot well, and in potting work the soil carefully amongst the roots, pot firm, and finish-off with the finer parts of the soil, keeping the neck of the plant high in the centre of the pots. Water moderately until the plant begins to grow, then abundantly until the growth is made and the buds set, afterwards water less freely.

FERN POTTING (Idem).—The frond of Fern is that of *Lastrea Filix-mas* in a young state. It is quite hardy. Place singly in small pots now, or better in March.

EUCALYPTUS GLOBULUS (G. E.).—You can procure plants from any of the chief nurserymen who advertise in our columns.

NAMES OF FRUITS (Ignoramus).—1, Forge Apple; 2, Autumn Pearmain; 3, Dutch Mignonne.

NAMES OF PLANTS (H. G.).—E, *Stellaria Holostea*; F, *Capsella bursa-pastoris*; G, *Sonchus oleraceus*; H, *Pellota nigra*; I, *Centauria nigra*. "Carmyle" is a misprint for "Carmyle" or "Carmyle," a northern name for *Oxobus tuberosus*. (W. B.).—1, *Pteris tremula*; 2, *Nepbrolepis tuberosa*; 3, *Centauria candidissima*? (B. B., No. 2).—1, *Davallia canariensis*; 2, *Pteris cretica*, var. *albo-lineata*; 3, *Adiantum ethiopicum*; 5, *A. hispidulum*; 4, *Asplenium laecidum*; 6, *Pteris serrulata*, var. *crispata*. (Fitz.).—1, *Asplenium bulbiferum*; 2, *Pellaea rotundifolia*; 3, *Nepbrolepis exaltata*; 4, *Aspidium clypeum*. (W. T. Burnett).—1, *Gratiola officinalis*? 2, *Dabaecia polifolia*. (Name mistaid).—*Eupleurum fruticosum* and *Eupatorium Weismannianum*.

POULTRY, BEE, AND PIGEON CHRONICLE.

BIRMINGHAM POULTRY SHOW.

THERE is a history in a condensed form on the cover of this year's catalogue—"the twenty-fifth annual Exhibition." A quarter of a century. Its infancy was not without its troubles and its struggles. Its manhood had its storms, and now in a green and prosperous old age, so far as we can judge, it has fallen on balcyon times and is in smooth water. It has become a need to the poultry world, and fills a space that would otherwise be a sad blank. The success is deserved. It is the result of much labour, much thought, and, above all, perseverance. If the merit of a show could be judged by the numbers of entries, and no pains had been taken to check them, the whole of Bingley Hall would be required now. The Council have shown themselves equal to their work. Years since the amateur who wanted a Dorking cock was compelled to buy a pen containing four birds in order to secure one. The Committee when appealed to at once met the difficulty by adding classes for single cocks. That was a popular change, and was then followed by classes for two hens or two pullets. This year even more has been done—four prizes have been given in each of two classes, one for single cocks the other for two hens or pullets; in the former case the price not to exceed thirty shillings, in the latter two guineas.

But amateurship is not the only light in which to view this question. The scarcity of food and the great increase of the price of it have caused more interest to be taken in everything that tends to add to the supply. It is not to be disposed of by saying poultry is a luxury. It is meat for the human being, and must be viewed as such. Much has been done in the last two years, and more is being done. Lectures on cookery open a new field, and when a more advanced knowledge of this science shall show that there is no part or description of poultry, not even the worn-out old cock or hen, Goose, Duck, or Turkey, that will not supply a succulent, nourishing, and delicious dish, it will give new vigour to the pursuit. It will then be seen that a substantial good was being done while amateurs were competing for the different breeds in which weight is one of the chief desiderata. From 4 to 6 lbs. have been added to every Goose, the same to Turkeys; a large addition to every fowl, and this by no sacrifice of quality. On the contrary, a knowledge of the fitness of some breeds for certain climates and localities has enabled those who keep them to ensure at once all the elements of success. The question has been how to get the largest amount of food in return for that consumed.

The *Dorkings* furnished very numerous and excellent entries, filling fourteen classes with birds of high merit. Ordinary birds were so much the exception that we are hardly called upon for any particular mention. We may, however, say that though there was no great increase, yet the heavy average weights of last year were well supported, while humble-feet and crooked breasts were rare exceptions. We may also remark that in these, as in most other breeds, there were many new names among the prizetakers, showing increased interest in the pursuit.

The *Cochin* classes were excellent with the exception of the Brown and Partridge feathered, which were not so good as usual. The White were very good. If we indulged in the habit of finding fault, which comes so readily on these occasions, we should say we looked in vain for the bright lemon-coloured chickens of some years back.

Brahma Pootras are among the most numerous classes at every show. They will never compete for delicacy and general quality with the Dorking as a table fowl, but for a good servant of all work, laying at an early age, hatching and rearing chickens in any weather, and furnishing a family joint at an early age, few can compete with this breed. Hundreds of birds in these classes bear us out in these remarks. Cocks of 12 lbs. and hens of 10 lbs. were common. The Light variety is comparatively of recent introduction, but it treads on the heels of its darker brethren, in proof of which we may mention upwards of forty pens figured in the prize list.

At last a breed that was in high favour many years ago has made a stride towards regaining its old position. We allude to the *Malays*. They brought thirty-four pens, many of them birds of a high class.

The numbers and quality of the *Crève-Coeurs* showed it wise to give them a class, while the improvement consequent on acclimatisation was manifest in their size and their startling

condition. This is another of the breeds that are indeed food-producers. The same may be said of the *Houlians*. These two breeds showed sixty-nine pens. The *La Flèche*, introduced at the same time, have proved themselves worthless, and they have returned whence they came, to the Any other variety class.

We were very glad to note an improvement in the *Spanish*. These old favourites have of late years seemed to lose merit and popularity. It would be a pity they should do so, as they are not only exceptionally good egg-producers, but they are hardy birds.

Hamburgs mustered strongly with good birds in every class. The Blacks were beautiful; the Golden-pencilled as good as we have ever seen; the Silver-pencilled much improved. The Spangled held their own, but, as we have often had occasion to remark, the Golden pleased us more than the Silver. These were among the most attractive classes in the Show.

There were thirty-eight pens of excellent *Polands*. We can note for this breed the continuance of high quality; we are sorry we cannot see an increase in their numbers. The Silvers and the Black with white crests were unusually good.

The Varieties mustered as usual useful and nondescript birds, but there was nothing to call for especial notice.

There were 296 pens of *Game*: and notwithstanding that now and then a stilty bird was seen, and here and there the evidences of a *mesalliance* were visible in the Malay characteristics, yet we do not know that we have ever seen so good a show. The cup bird was perfect, and so was the Duckwing that achieved the same distinction: indeed we thought the Duckwing classes showed a great improvement. The Blacks, Brassy-winged, Piles, and Whites hardly hold their own against the others.

The same may be said of the Sebright *Bantams*, poor in numbers and not remarkable in quality. The White were also badly represented. The Blacks were very good, and showed more numerously. There were some good Japanese, good Booted, and Cuckoo in the Varieties. The Game Bantams were a very large class, and many of the birds highly meritorious. Exhibitors have now learned that a Game Bantam should be a Game cock in miniature, and that both must be judged by the same rules. The increase in these birds is great, and they bid fair to swamp the other classes.

Ducks must have reached the extreme weight. Formerly the palm was always to the Aylesburys, now the Rouens take the lead in numbers, weight, and condition. There were many drakes in this class heavier than the Geese were some years ago; we mean, of course, in a country market—average birds. The new class in the Dorkings was repeated here, and prizes offered in a Selling class in which the pair of birds must not exceed two guineas in price. The Black East Indian were superb; their colours surpassed anything we ever saw, but some of them were rather large. The Mandarins and Carolinas were marvellously beautiful—so faultless it was difficult to decide between them. We were disappointed in the Call Ducks, not in quality but in numbers. The ornamental varieties were Bahamas, Kasarkas, and Whistling Ducks.

The *Geese* were very good and very heavy, but they do not increase in numbers. Wonderful *Turkeys*; and here again a transformation has taken place. The hens now weigh as much as the cocks did some time ago. They showed in good numbers.

JUSTICE NEEDED AT THE CRYSTAL PALACE.

Is 1871 the rules stated that birds must be in the Palace on the Monday night; but being wishful to have my birds as fresh as possible, I wrote to ask the Secretaries if they would be taken in on the Tuesday morning (the day of judging). The reply was they must be in on the Monday, otherwise they might be excluded. However, from information received, as the police reports say, I decided to take the risk, and presented myself with my birds along with a brother exhibitor on the Tuesday morning, and after a great deal of difficulty managed to get admitted with my birds, and found a London exhibitor, not on the Committee, busily sponging away at his birds and looking, I thought, rather surprised to find that some one else had been as wide-awake as himself. Last year I presented myself with my birds at the proper time according to rule, and was again refused admission; but happening to be accompanied by a poultry judge, who was also a Pigeon exhibitor, we sent in our names, and once more I managed to get in, probably through the influence of my companion. Again I found an exhibitor penning his own birds. This year I took the birds in on the Saturday according to rule, accompanied by Mr. Hodley, who had charge of Mr. Walker's birds. We were refused admission, and on appealing to Mr. Howard, who happened to be near, he politely but firmly declined to admit us, saying, "I have no authority to admit anybody." At the same moment I believe one exhibitor at least was inside penning his birds; at any rate I have it on what I believe to be good authority that certain birds were penned by their owners, and if this is not left-handed justice I do not know what is. I do not complain about the exhibitors getting inside; what I complain about is that there should not

be even-handed justice all round. And I put it now to the authorities whether it is fair to bring country exhibitors hundreds of miles from their homes and then say, "You can't come in," but to allow exhibitors who live on the ground, so to speak, the privilege denied to us?

If I am wrongly informed I shall be glad to be corrected, but, in any case this is a matter which demands a reply from the Secretaries, and if my facts are correct I want to be informed on what principle of justice they explain the difference of treatment.

I have been careful to avoid the needless mention of names, not wishing to hurt anybody's feelings.—J. FURN, *Webster Hill, Deansbury*.

POULTRY JUDGES.

WHILE poultry shows are increasing on every side—so much so, indeed, that almost every post brings a fresh schedule—the number of qualified judges seems to diminish, and fears appear to be entertained that a work of some importance and difficulty is likely to fall into the hands of incompetent men. Even as it is, the most experienced judges—if some of the criticisms we read have any foundation in fact—make mistakes, how much more those who are new to the work! There are many who are quite competent to decide the merits of one or two classes, and yet who could not be expected to form a judgment of any value upon the remainder; so that in the majority of shows, where one judge only can be engaged, their services would be of no avail. In short, the number of persons really capable of judging every class in a show of any pretensions must always be limited—so limited, indeed, that I shall not apologise for naming one person who, I am persuaded, would make an admirable judge.

My friend, and I might almost add my neighbour, Matthew Leno (who has given me permission to use his name) knows as much about poultry, I believe, as most of our judges. An enthusiast as a fancier from his youth, he has succeeded in one class of fowls so as to be absolutely unapproachable, while there is scarcely any kind or sort in which he has not had some experience and some success. Recommendations are proverbially dangerous; nevertheless, after some years' acquaintance, I venture to mention his name as one who, I believe, would make an upright, conscientious, and most competent judge.—E. BARTRUM, *Berkhamsted, Herts*.

CRYSTAL PALACE EXHIBITIONS IN 1874.

1. Grand Show of Pigeons by the members of the Peristeric Society 2nd Tuesday in Jan.
2. Cage Bird Show Feb. 14th to 19th.
3. Mule and Donkey Show April 28th to 30th.
4. Spring Flower Show May 16th.
5. Dog Show June 9th to 12th.
6. Great Rose Show June 20th.
7. Autumn Fruit and Flower Show Sept. 8th to 10th.
8. Cat Show Sept. 26th to 29th.
9. Poultry Show Nov. 16th to 19th.

Mr. F. W. Wilson is the Superintendent of the Shows, excepting that of dogs, of which the Secretary is Mr. W. Roué; and of poultry, of which the Secretaries are Messrs. Howard and Nicholls.

CLEVELAND POULTRY SHOW.

[The following remarks were omitted last week from want of space.]

Dorkings were a very good lot, and all of the Dark variety *Cochins* (Buff), also proved a grand lot, but the Whites were poor *Spanish* were of moderate quality. In *Brahmas* the winners were all Dark; the first, old birds, very large but not so good in colour as the second, which were young. *Game* (Reds), Brown Red chickens were first, and Black Reds second and third, the latter being somewhat lighter in bone than is desirable; while the Duckwings, though not so perfect in colour, were large and firm in flesh. *Hamburgs* were all fair classes; the first-prize Silver-spangles were a nice even pen, the Silver-pencils comprised a grand hen, while many others will improve with age. Of *Bantams* the Red Game were poor, if we except the second-prize cock, which was unfortunately mated to a hen with white earlobes. In the class for Any other variety of Game Bantams Duckwings were first and third, and Piles second. Any other variety contained some good Blacks and Gold-laced, although many poor pens were shown. In the Variety class were some very good birds, Black Hamburgs standing first, and Crève-Cours second.

Pigeons were heavy classes throughout, and there were some good birds in all. Pouters, Blue, stood first, the winners being all grand birds in both size, style, and colour. In the next class two Whites were first and second, and Red third, the first being one of the handsomest Pouters seen of late, closely pressed,

however, by the second, which was somewhat larger, but not in the same condition. In Carriers there were some fair birds, but these were not so good classes as the foregoing. In Barbs a grand Short-faced Yellow cock stood first, and Blacks of heavy quality second and third. In Jacobins, Red, were some good specimens, but many were foul-flighted. In Any other variety of Jacobins a nice Yellow cock was first, an excellent White being second. English Owls were an excellent class, there being little difference of opinion among the exhibitors here as to what an English Owl should be. The lot was almost uniform in style of head and beak; the first was a grand Silver hen, the second and third being Blue cocks. Foreign Owls were also a nice lot, the winners having the proper skulls for Owls, a Blue being first, and Whites second and third. In Black Magpies there were some very good birds, but the otherwise best bird in the class was left out on account of one flight feather being black. In Any other colour of Magpies, first was a grand little Yellow, second a good Red, and third a Yellow, but large. Swallows were not a good class, though a neat little Yellow was first. In Fantails all styles of birds were shown, but the prizes were awarded to small neat birds of good carriage and well-spread tails. Dragoons, Blue, were one of the best classes, scarcely one bad bird being shown, the winners combining all the grand points of head, beak, and colour. In the Any other variety class a good Brown-barred Silver was first, Red second, and White third. Almond Tumblers were scarcely up to our expectations, but the other Short-faced birds were very good, especially in head properties, a Kite being first, Yellow second, and Splash third. Antwerps were two good classes, the Short-faced containing some fine specimens, first being a Silver Dun, which was helped to its place principally by colour; second a Dark Blue Chequer, by far the best in head we have ever seen; and third a good old Red Dun, rather longer in face. In Long-faced a strong-headed Blue Chequer was first, and Red Chequers second and third. There were three classes for Long-faced Tumblers, and these mostly contained good birds, which, however, do not call for special notice. In the Variety class, which singularly was placed before some of the standard varieties, the prizes were awarded to a Hyacinth, Blondinette, and Ice. The Selling classes were very large, and many cheap birds were sold. There were two classes for Trumpeters, but as a rule they were a shaggy lot, many being good in rose but lost in feet-feathering. In Turbits, Red or Yellow, the first and third were Red and second Yellow; and in the next class Blues stood first and second, and Black third. Nuns, Black, were very good, the first being grand in crest and marking, but somewhat larger than the second and third. Three pens of Yellows were also shown, but these require improvement.

There were also classes for members' birds of this year, and among the poultry there were some very good birds, the Dorkings, Cochins, and Game being especially good; but in the Pigeons the quality was not up to what we expected.

Altogether the Show was a great success, and we hope it will prove to be the foundation of one on a more extensive scale.

KENT COUNTY POULTRY SHOW.

This was held at Maidstone on the 3rd and 4th inst. There were upwards of four hundred entries. Mr. R. Teebay made the awards in the absence of Messrs. Hewitt and Tegetmeier, who were unable to attend.

DORKINGS.—Coloured.—1, G. W. Greenhill, Ashford. 2, R. Cheeseman, Westwell, Ashford. 3, W. S. Marsh, Winkland, Ashes, Deal. *hc*, J. P. Austin, Horsenden. *Chickens*—1 and 2, R. Cheeseman. 3, G. W. Greenhill. *hc*, C. Ratcliffe, Womenswood, Canterbury (2); H. Martin, Ightham.

DORKINGS.—Silver-Gray.—1 and 2, F. Cheeseman. 3, C. Brown, Maidstone. *hc*, C. Brown; J. Boulding, Petham.

DORKINGS.—White.—1, 2, and 3, E. J. W. Stratford, Addington Park. *hc*, T. Goodwin, Thornhill, Maidstone.

COCHINS.—Buff or Cinnamon.—1 and 2, E. Goodwin, Wye. 2, C. M. Stickings, Maidstone.

COCHINS.—Any other colour.—1, B. S. S. Woodgate, Pembury, Tunbridge Wells. 2, Dr. G. A. Angier, Tonbridge. 3, W. C. H. D'Aeth, Watlingtonbury. *hc*, T. Goodwin.

SPANISH.—Black.—1, J. Francis, Hildenborough. *Chickens*—1, J. Francis. 2, J. Reeves, Maidstone. 3, E. J. W. Stratford.

BRAMMAS.—Dark.—1, J. Harvey, jun., Thannington. 2, F. Lake, Sittingbourne. 3, Mrs. J. G. Hepburn, Brompton. *hc*, W. E. White, Wilmington, Dartford. *hc*, H. A. Watchart, Brompton. Dr. G. A. Angier. *Chickens*—1, Mrs. J. G. Hepburn. 2 and 3, W. Jacob, Shepherdswell, Dover. *hc*, W. Jacob; Mrs. J. G. Hepburn. *hc*, E. Goodwin. *c*, K. Bowen, Rochester.

BRAMMAS.—Light.—1, F. McMorland, Chislehurst. 2, G. Dowker, Wingham. 3, Rev. F. T. Scott, Shepherdswell Vicarage. *hc*, Lady Oxenden, Barham, Canterbury. Mrs. Osborne, Gillingham; E. McMorland. *Chickens*—1, Capt. W. Saville, Withersden Hall. 2 and 3, Rev. F. T. Scott. *hc*, Capt. W. Saville; Lady Oxenden; A. Smith, Goudhurst; G. Dowker.

GAME.—Black-breasted and other Reds.—1 and 2, Capt. J. Jeken, Eltham. 2, F. Warde, West Farleigh. 3, J. A. Harms, Ashford. *hc*, W. Foster, Deal. *Chickens*—1, F. Warde. 2, J. Jeken. 3, G. H. Fitz-Herbert, Sevenoaks. *hc*, W. Foster (2); T. L. Elliott, Ashford.

GAME.—Any other variety.—1 and 2, E. Rice, Sandwich. 3, W. Foster. *Cocks*—1, J. Jeken. 2, G. H. Fitzherbert. 3, T. L. Elliott.

HAMBURGINS.—Gold-spangled.—1 and 2, C. Brown. 3, F. Cheeseman. *Silver-spangled*—1, 2, and 3, C. E. Lancaster, Luton. *Gold-pencilled*—1 and 2, J. Chapman, Ashford. *Silver-pencilled*—1, 2, and 3, B. Norton.

HOTDUNS.—1, Cup, and 2, W. Dring, Faversham. 3, M. Sandford, Martin, Dover. *hc*, W. Dring; Rev. H. H. Dombain. *hc*, E. J. W. Stratford.

ANY OTHER VARIETY.—1, W. Dring. 2, Rev. J. N. Vileland, Stalsfield. 3, R. S. S. Woodgate. *hc*, Mrs. E. Bacon, River, Dover; A. Kitchin, Dunsdale, Westerham; J. Long, Bromley Common.

BANTAMS.—Game.—1, W. S. Marsh. 2, J. Long. 3, Master M. V. Sandford, Martin, Dover. *hc*, W. C. Harree, Canterbury; Master M. V. Sandford; W. S. Marsh. *Not Game*—1, R. S. S. Woodgate. 2, Master G. Ramsden, Ashurst. 3, J. Ware, Faversham.

DORKINGS.—Aylesbury.—1 and 2, W. Jacobs. 3, F. E. Arter, Barham. *hc*, J. K. Patton, Maidstone. M. Sandford; Rev. T. R. Mayhew, Warehorne, Ashford. *Rouen*—1, J. Harvey, jun. 2, Mrs. Hall, Platt, Sevenoaks. 3, F. Cheeseman. *hc*, J. K. Patton; C. Ratcliffe.

DUCKS.—Aylesbury or Rouen.—1, J. Harvey, jun. 2, W. Jacob. 3, Mrs. Hall. *hc*, F. E. Arter. *Any other variety*—1, R. S. S. Woodgate. 2 and 3, L. D. Wigand, Maidstone.

GESE.—1, W. M. Lancaster, Maidstone. 2, Countess of Ayleford, Aylesford. *Chickens*—1, 2, 3, and *hc*, F. Warde.

SELLING CLASS.—Cocks.—1 and 2, F. Warde. 2, Mrs. J. G. Hepburn. *hc*, R. Cheeseman; C. Brown; W. Jacob; F. Cheeseman. *hc*, C. Brown (2); W. Dring; E. J. W. Stratford; Col. Hassard, G. B. S.

SELLING CLASS.—Hens.—1, M. Sandford. 2, F. Cheeseman. 3, Rev. F. T. Scott. *hc*, J. Chapman; T. Goodwin. *hc*, F. Lake (2); E. McMorland; J. Francis; E. J. W. Stratford; E. Goodwin.

SELLING CLASS.—Any number not exceeding four.—1, W. Dring. 2, F. Manwaring, Maidstone. 3, M. Stanford.

CARRIERS.—1, 2, and *hc*, M. H. Gill, Ramsgate. 3, Col. Hassard, Sheerness. **POULTERS.**—1 and 2, M. A. Gill. 3, H. W. Webb, Lower Sydenham. **FANTAILS.**—1, 2, and 3, G. M. H. 3, M. Sandford. **TUMBLERS.**—1 and 2, Mrs. M. H. Gill. 3, Col. Hassard. **ANY OTHER VARIETY.**—1, W. Bryant, Maidstone. 2, H. W. Webb. 3, C. W. Hammond, Ashford. **SELLING CLASS.**—1, T. Holmes, Lower Sydenham. 2, J. Nickols, Aaford. 3, E. Goodwin.

YORK POULTRY SHOW.

The Yorkshire Society's seventeenth annual Exhibition was held on the 2nd, 3rd, and 4th inst., in the Cattle Market, York. There were, collectively, upwards of five hundred entries of poultry, Pigeons, and Rabbits. The following are the awards:—

DORKINGS.—1, R. W. Richardson, Beverley. 2, J. T. Hingston, Clifton, York. 3, R. Smith, jun., Picaadilly, Norton Malton. 4, T. P. Carver, Langthorpe, Boroughbridge.

SPANISH.—1, H. Beldon, Goitstock, Bingley. 2, Burch & Boulter, Sheffield. *Chickens*—1, R. Neashitt, Epsworth. 2, H. Beldon.

COCHIN-CHINAS.—Yellow or Buff.—1, W. G. Urwin, Whithy. 2, D. Moulton, Bradford. 3, C. Sidwick, Keighley. 4, Mrs. E. Allsopp, Worcester. *Any other colour*—1, T. M. Derry, Gedyne. 2, J. Bell, Kirkgate, Thirsk. 3, 4, and 4, H. Crossley, Stillington, Easingwold.

BRAMA POOTRAS.—1, W. White, Clongh, Sheffield. 2, J. Walker, Birstwith, Ripley.

GAME.—Black-breasted or other Reds.—1, G. Sutton, Bootham, York. 2, J. Fortune, Morton Banks, Keighley. *Duckings*—1, J. Watson, Knareborough. 2, H. H. Staveley, Driffield. *Any other variety*—1, T. Petter, Fairfield, York. 2, E. Aykroyd, Ecdeshill, Leeds.

GAME.—Any variety.—Chickens.—1, W. Ormerod, Walsden, Todmorden. 2, J. Robshaw, Whitley, York.

HAMBURGINS.—Gold-pencilled.—1, H. Beldon. 2, W. Clayton, Keighley. 3, Burch & Boulter. *Silver-pencilled*—1 and 3, H. Beldon. 2, H. Smith. *Gold-spangled*—1, Ashton & Booth, Cartwright, Holmfirth. 3, J. Walker. *Silver-spangled*—1, Ashton & Booth, Bradford. 2, H. Beldon. 3, J. Brauley, Skelton Grange, York.

POLISH.—1, Mrs. Lloyd, Thirsk. 2, G. W. Boothby, Louth.

BANTAMS.—Game.—1, W. Adams, Beverley. 2, R. Butler, Bradford. 3, J. T. Hingston. *Any other variety*—1, H. Beldon. 2, W. Richardson, York. **ANY OTHER VARIETY.**—1, R. Loft, Woodmansey, Beverley. 2, Mrs. E. Wilkinson, Dringhouses, York.

CROSS.—1, T. Franklin, Castle Howard. 2, G. Pounder, Kirbymoorside.

TURKEYS.—1, T. M. Derry, Gedyne. 2, T. P. Carver. *Poultis*—1, J. Storry, Stokesley. 2, Mrs. Agar, Brockfield, York.

GESE.—1, Capt. Anon, Whittle- Woods, Chorley. 2, R. Garbutt, Watergate, Ampleforth.

DUCKS.—Aylesbury.—1, T. P. Carver. 2, W. Stonehouse, Whithy. *Rouen.*—1, J. Walker. 2, G. Fentress, Marton, Kirbymoorside. *Any other variety*—1 and 2, B. W. Richardson.

SELLING CLASS.—1, R. W. Richardson. 2, Hon. Mrs. E. Lascelles. 3, Burch and Boulter.

CARRIER.—Cocks.—1, J. Hawley, Gillington, Bradford. 2, J. Smithers, Sheffield. **POTES.—Cocks.**—1, W. Ridley, Hexham. 2, J. Hawley. *Hens*—1, W. Harvey. 2, W. Ridley.

TUMBLERS.—Almond.—1, J. Hawley. 2, G. Linfoot, York. *Any other variety, Short-faced*—1, G. Fletcher, York. 2, W. Adams, Beverley.

FANTAILS.—1, G. Fletcher, York. 2, J. F. Lovelandside, Newark. **TRUMPETERS.**—1 and 2, W. Harvey. 3, J. Hawley. **BARB.**—1, J. Hawley. 2, W. Steel, York. **JACOBINS.**—1, R. W. Richardson. 2, J. Hawley.

TURBITS.—1, J. Wharton. 2, W. Croft, Killingham, Ripley. **OWLS.**—1, H. Leetham, York. 2, J. Hawley. **NUNS.**—1 and 2, W. Croft.

DRAGOONS.—1, J. Stanley, Blackham. 2, J. Hawley. **ANTWERPS.**—1, J. Hawley. 2, G. H. Sharp, Heworth, York. **ANY OTHER VARIETY.**—1, W. C. Dawson, Oley. 2, W. Harvey. **SELLING CLASS.**—1, C. H. Sharp. 2, R. Scott, York. 3, J. Hawley.

LOP-EARED.—Self-coloured.—1 and 2, F. Banks, Doughty Street, London. *Yellow and White.*—1 and 2, G. S. Burton, Beeston Hill, Leeds. *Tortoiseshell.*—1 and 2, F. Banks. *Black and White.*—1 and 2, J. Cranch, St. John's Wood, London. 2, F. Banks. *Grey and White or Blue and White.*—1, C. Wardlaw, Bolton. 2, J. Boyle, jun., Blackburn.

HIMALAYAN.—1, H. Swetnam, Fulford, York. 2, J. Butterworth, Rochdale. **ANGORA.**—1, W. Bowes, Elmhurst, Darlington. 2, H. Swetnam. **DUTCH.**—1, T. Lund, Monk Bar, York. 2, F. Sabbage, Northampton. **SILVER-GRAY.**—1 and 2, J. Boyle, jun. **ANY OTHER VARIETY.**—1, W. J. Jackson, York. 2, F. W. Denison, Hull. **SELLING CLASS.**—1, H. Jackson. 2, W. Dickson.

JUDGES.—Poultry: Mr. T. Dodds, Mount Pleasant, Wakefield; and Mr. F. Ferguson, Risby Park, Cottingham. **Pigeons:** Mr. H. Brown, Washley, Sheffield; and Mr. J. Morton, Church Lane, Hull. **Rabbits:** Mr. M. Millington, Colliergate, York.

DELFEST ORNITHOLOGICAL SOCIETY.—Its first Exhibition will be held on January 8th, 9th, and 10th. Entries close on the 20th of the present month. There are eighteen silver cups in addition to very liberal prizes for poultry, Pigeons, and cage birds. We are informed that the hall where the Show will be

held is large, well lighted, and heated. Pens of the most approved forms will be used.

BATH AND WEST OF ENGLAND SOCIETY AND SOUTHERN COUNTIES ASSOCIATION.—At the usual Council meeting last month the principal matters discussed had reference to the Bristol meeting in 1871, the Croydon meeting in 1875, and the Society's centenary meeting at Bath in 1877. A communication was read from the Croydon Local Committee, inviting the Society to hold its meeting in that parish in 1875, and announcing that the necessary funds had been subscribed and suitable land for the show-yard and trial-fields provided. As the question at issue between the Council and the Local Committee was simply one of detail, a committee was appointed to visit Croydon on an early day, with power to complete the arrangements. For the Bristol meeting of 1871, which will commence on Monday, June 8th, the prize list was finally settled and confirmed. Prizes to the amount of £2070 are offered by the Society in the several departments of stock, poultry, arts, and Honiton lace, and the list will be augmented by the offer of £530 by the Bristol Local Committee, chiefly with the view to the encouragement of horse and cattle breeding, dairy produce, &c.

CARRON, STENHOUSEMUIR, AND LARBERT POULTRY SHOW.

This was held in the Drill Hall, Stenhousemuir, on the 2nd and 3rd inst. A first-class collection was exhibited, there being 290 pens of poultry, and ninety of Pigeons.

For *Spanish* the first prize went to a pen than which we have not seen a better for some time. This was sold to a gentleman from Oxford for £20. The second pen belonged to the same exhibitor. In old *Dorkings*, any colour, the first prize went to dark birds, the second to Silver-Greys. In the class for Silver-Grey chickens the first-prize was good in colour. There were some really good birds in all the *Brahma* classes. All the prize *Cochins* were good in shape and feather. *Hamburgs* might have been better. There were some good *Game*, particularly the first-prize Piles. *Scotch-Greys* formed a good class. There were some very neat birds among the *Bantams*. *Ducks* were not large. There were some really good birds in the Selling class.

The *Pigeons* formed a nice collection, and all the prize birds were good. There was a very nice display of *Canaries*. The feeding was good, and the management very good. There were about one hundred pens more than last year.

SPANISH.—1 and 2, D. McEath, Sunnylaw, Bridge of Allan. 3, J. Norval, Alloa Park, Alloa. *hc*, J. Walker, Kilmarnock. *c*, W. Armstrong, Plean Mill, Bannockburn; A. Walker (2).

DORKINGS.—1, P. Symon, Errol. 2, J. Malcolm, Langton, Falkirk. 3, J. Turnbull, Carnock Smithy. *hc*, W. Weir, Larbert (2). *c*, D. Draper, Falkirk.

DORKINGS.—Silver-Grey.—Chickens.—1, D. Draper, 2, J. Fotheringham. 3, J. Malcolm. *c*, S. Bell, Castleton, Plean. *Coloured, except Silver-Grey.—Chickens.*—1, Mrs. Morrison, Coneypark, Stirling. 2 and 3, J. Turnbull. *hc*, Mrs. Morrison, 3, J. Turnbull.

BRAHMAS.—Dark.—1, A. McDonald, Stirling. 2, P. Symon, Errol. 3, J. B. Cochrane, St. enhousemuir. *Chickens.*—1, J. B. Cochrane. 2, J. Young, Slaford, Edinburg. 3, W. Weir. *hc*, J. Wyse, Falkirk; Capt. Lyon, R.N.; Kirk-michael, Dumfries; W. Weir; J. B. Cochrane. *c*, D. Macfarlane, Denny; J. Carswell, Larbert; R. Barr, Burnfoot, Larbert; J. Crawford.

BRAHMAS.—Light.—1, Mrs. F. Chesbire, Acton, London. 2 and *hc*, J. B. Cochrane. 3, J. W. Campbell, Allan Park, Stirling. *c*, Capt. Lyon, R.N.; J. B. Cochrane.

COCHINS.—Buff and Cinnamon.—1, T. Bruce, Bushy, Glasgow. 2, J. Barron, Larbert. 3, D. McWhannell, Maryburgh, Blair Adam. *Any other variety.*—1, 2, and 3, J. Wyse. *hc*, Capt. Lyon, R.N. (2).

HAMBOURG.—Spangled.—1, J. M. Campbell, Bonnykelly. 2, J. Armour, Dunipace. 3, S. Bell. *c*, Miss Armstrong, Plean Mill; J. Young; E. Taylor, Stenhousemuir. *Pencilled.*—1, A. Hannan, Dunfermline. 2 and *c*, H. Russell, Clackmannan. 3, J. New, Pathhead.

GAME.—Black and Brown Hens.—1, J. W. Mitchell, Perth. 2, J. & A. Blair, Blairingone, Dollar. 3, W. H. Burn, Forfar. *hc*, G. B. Laird, Burnside, Birnau; C. Jamieson, Forfar; A. Stephen, Blairgowrie. *c*, W. Jamieson, Gargunnoch. *Any other colour.*—1, J. Jamieson. 2, Miss J. Frew, Kirkcaldy. 3, G. B. Laird. *c*, L. H. Heys, Barhead.

SCOTCH GREYS.—1, A. Mc'ara, Colles, Mathill. 2 and 3, T. Lawrie, Linlithgow. *hc*, D. Robertson, Grahamston, Falkirk; J. Mc'enzie, Parkhead, Falkirk; W. Weir; Simpson & Baillie, Barchate (2). *c*, W. Don, Arbroath, Falkirk.

BANTAMS.—Game.—1 and 3, W. E. Robertson, Dunfermline. 2, W. Fisher, Cherrifield, Dundee. *hc*, W. Hynd, Dunfermline; T. Small, Dunmore Quarry; H. Fairley, Larbert; Miss B. Frew; Miss R. Frew, Kirkcaldy; W. Miller, Falkirk. *c*, J. Graham; L. H. Heys. *Any other variety.*—1, R. H. Ashton, Mottram. 2, J. A. Dempster. 3, W. McGregor, Stenhousemuir. *hc*, J. Rutherford, Neocharnie. *c*, J. Norval.

SCOTCH GREYS.—Light.—1 and 2, J. Weir, Barhead. 2, J. W. Campbell, 3, Capt. Lyon, R.N. *hc*, J. A. Dempster, Stirling; A. Mc'ellan. *Any other variety.*—1, W. Gillespie, Larbert. 2, Capt. Lyon, R.N. 3, Miss Baillie, Larbert Station. *c*, R. Kennedy, Larbert; S. Bell.

ANY OTHER VARIETY.—1, A. Mc'ellan (Cree-Copara). 2, A. Wylie, Johnstone (Polands). 3, D. Draper (Polands). *hc*, J. A. Dempster (Polands); R. Taylor (Hondans); W. Carswell. *c*, J. W. Campbell (Hondans); Miss C. Bruce, Stenhouse.

SELLING CLASS.—Cocks.—1 J. Bunels, Springfield, Linlithgow. 2, J. B. Cochrane. 3, G. Meek, Dunipace. *hc*, G. B. Laird; D. Cooper, Dunipace; J. Brown; J. Fotheringham, Stirling (2); W. Weir; J. Waddell, Larbert; W. Bruce, Falkirk (2); W. Carswell; R. Barr; J. Crawford, Alloa; S. Bell. *c*, J. Young; T. Laurie; W. Weir.

SELLING CLASS.—Hens.—1, J. Fotheringham. 2, W. Weir. 3, W. Hughes. *hc*, J. Bane; J. Fotheringham; D. Draper; J. Weir; J. Turnbull; J. Waddell; J. Carswell.

PIGEONS.
POULTRY.—1 and 3, J. S. & A. Robb, Gabsstone, Alloa. 2, Miss Shanks, Headswood, Denny. *hc*, H. Wyse, Bishopbriggs; J. S. & A. Robb; J. Duncan,

Carron. *c*, H. Wyse (2); J. E. Spence, Broughty Ferry; H. Gibson, Alloa; C. J. Draper, Falkirk.

FANTAILS.—1, J. E. Spence, 2, R. Blair, 3, D. Cooper, Dunipace. *c*, A. Mc'Neil, Comar Angus; J. Mc'Leay, Perth; G. Meek, R. Barr.

TUMBLERS.—Common.—1 and 2, T. Mallion, Perth. 3, A. Dick, Larbert. *hc*, G. Meek (2).

ANY OTHER VARIETY.—1 and 2, S. D. Baldeley, Hereford. 3, P. Joyce, Clackmannan (Carriers). *hc*, T. Edton, Larbert (Barbs); J. F. Spence (Jacobins); A. C. Wright, St. Ninians (Jacobins); G. Meek (Dunipace); T. L. Johnston, Montrose (Turbits); Miss R. Frew, Sinclairtown, Kirkcaldy. *c*, F. Bolton (Baldhead Tumblers); P. Joyce (Jacobins); A. Morrison.

CANARIES.

YELLOW.—Cocks.—1, S. Brown, Glasgow. 2, D. Duncan, Carron. 3, J. Halley, Carron. *hc*, W. Munnoch, Bannockburn. *Hens.*—1, T. Mc'ellan, Wishaw. 2, A. Whitclaw, Edinburg. 3, J. Paterson, Rutherglen. *hc*, D. Duncan. *c*, W. Scotland, Kilsyth.

PIFBALD.—Yellow.—Cocks.—1, J. Kyle, Edinburg. 2, J. Fotheringham. 3, J. Dickson, Leith. *hc*, J. Miller, Stenhousemuir. *c*, D. Duncan. *Hens.*—1, J. Thomson, Edinburg. 2 and *c*, D. Duncan. 3, J. Morrison, Carron. *hc*, J. Miller.

PIFBALD.—Buff.—Cocks.—1, W. Scotland. 2, J. Ritchie, Selkirk. 3, J. Halley, Carron. *hc*, G. Park, Galashiels. *c*, G. Meek, Denny. *Hens.*—1, J. H. Sturley, 2, J. Sims, Arangeboth. 3, H. Russell, Clackmannan. *hc*, B. Lee, Corbridge. *c*, A. Riddell, Carron.

JUDGES.—Poultry and Pigeons: Mr. J. Martin, Worcester. *Canary Birds:* Mr. R. Calderwood, Kilmarnock; Mr. R. Paterson, Howwood, Paisley.

NOTES ON KILMARNOCK SHOW.

(From a Correspondent.)

The *Pigeons* were a sight in themselves, and we noticed the pens were sprinkled with rough seeds (*Anglice*, corn husks) instead of the usual hurtful sawdust. We confess we were a little curious to see the work of our first English Judge on *Pigeons*, more particularly in the Pouters. When we called on Mr. Esquilant the evening before in the "George," he confessed that he felt the above to be his weak point, and the result showed he was correct in his opinion of himself. We do not breed to his standard, and do not intend. The timepiece Blue cock ought not to have scored in such company as he had, in fact he could only be tolerated in the stud. Second was a Black, long in feather, flag-legged, and deficient in style. Pen 408 contained the best bird in the class, and next to him we would place 395 and 408. Cocks, any other colour, were a good class. The first prize went to a nice little bird, but completely eclipsed by Mr. Mitchell's Yellow, the best bird in the Show, which looked the timepiece all over, though only fourth in his class. A Red cock stood second in this class; he had simply nothing to recommend him. His back view strongly reminded us of a Green Parrot. Blue or Black hens only an average class. Mr. Mitchell's highly commended was best by a long way. The first-prize hen here was again not like it, being coarse, runtish, and foul in flights. Hens, any other colour, a good class. The second-prize hen was best, and next to her we would place an unnoticed Red hen in pen 411. The first-prize hen in this class was clearly a mistake, having nothing but colour to recommend her. In the other classes Mr. Esquilant was more at home.

Carriers, old birds, were a fair lot, but the young very promising. Mr. Horner's bird which secured first honours was allowed to be the best ever shown here.

Short-faces were an excellent class. Mr. Paton's cock, a splendid Almond, was reluctantly thrown by Mr. Esquilant for a speck in the eye, otherwise he would have led his class. The Kite cock placed first merited his position. Barbs an excellent class, and well judged.

Trumpeters contained some perfect specimens, which figured in the prize-list. Fantails a very large class. Mr. Loversidge failed to take a place here, so strong was the competition. Jacobins also a large class, but we think the cards could have been better hung. Turbits a large and beautiful class. The first-prize pen here lost the timepiece by non-entrance. English Owls were well judged, the mongrels standing no chance.

Tumblers were in great force. The first prize was awarded to a pair of indifferent Blacks, to whom was also awarded the time-piece, by an oversight we should think. In Nuns we preferred Mr. Imrie's pens. The first-prize, though entered at 20s., found no purchaser. The Variety class was good; the Selling class contained nothing special.

Of the poultry, *Spanish* were the best lot Mr. Teebay had seen this season. Many preferred the second pen to the first, being in better condition. *Brahmas* and *Cochins* were a primo lot, the winners meriting their position. Mr. Wise's pens were rather young, and Mr. Proctor's unnoticed pen was first-class in everything but colour. *Silver-Grey Dorkings* had a class to themselves, and were well represented; Coloured were an indifferent class. In *Game*, Brown Reds took the honours southwards; the undubbed class was bad. *Hamburgs* appeared to be considerably improved in all the classes. Mr. Teebay expressed high approval of the Golden cockerels in general, having seldom seen a better than Mr. Gilmour's Pencilled. The *French* and *Scotch* breeds were only fair. The show of *Bantams* was magnificent, and the prizes well merited. Better Blacks and Whites

were never seen here, while the Variety class, as usual, contained capital specimens of the pure-grounded Silver-lace.

The *Ducks* were excellent in all the classes; the Variety class, so interesting to visitors, however, was placed in a bad light. The entries in *Geese*, *Turkeys*, and *Rabbits* were not large, but in the Selling class much stock changed hands.

The *Canaries*, though not so numerous as last year, contained many birds of great merit. Large prices were given for the best specimens, for which there seemed to be a demand. We were pleased to observe that, as on former occasions, the utmost care was taken of the exhibitors' property in the matters of food, water, and cleanliness. This Show has earned a reputation in that respect which we hope it will long maintain.

NORTHERN COUNTIES COLUMBIAN SOCIETY.

This Society's annual Show was held at Belle Vue Gardens, Manchester, on the 6th instant. There never was a prettier show seen anywhere; there were upwards of four hundred entries, and in the friendly rivalry amongst the members not a single exhibitor had cause to complain. The Committee worked hard and, with the generous support of Messrs. Jennison, the Exhibition was a decided success. This Society will soon outnumber all other societies if it progress as it has done during the last two years. Neither Captain Heaton nor Mr. Ridpath exhibited this year, but in quality the birds were far superior to those seen at previous shows held by the Society.

CARRIERS.—*Black or Dun—Cock*.—1, G. J. Taylor, Huddersfield. 2, E. C. Stretch, Ormskirk. *Hen*.—1, W. Woolley, Burnbury. 2, R. Clay, Audenshaw. *Any colour—Young*.—1 and 2, Major J. H. Cryer, Southport.

POUTERS.—*Cock*.—1 and 2, G. J. Taylor. *Hen*.—1, G. J. Taylor. 2, Major J. H. Cryer.

OWLS.—*Foreign*.—1, T. W. Townson, Bowdon. 2, W. Lumb, Rochdale. **SHORT-FACED TUMBLERS.**—*Almond*.—1, C. E. Duckworth, Wavertree. *Mottled*.—1, C. E. Duckworth. *Beards or Bald*.—1, H. Verdon, Wavertree. *Any other variety*.—1, H. Verdon. 2, W. Lumb.

BAARDS.—*Black or Dun—Pair*.—1, G. J. Taylor. 2, A. Mangnall, Withington. *Any other colour*.—1, W. Justice, Salford. *Any colour—Young*.—1 and 2, Major J. H. Cryer. *Cock*.—1, T. W. Townson. *Hen*.—1 and 2, T. W. Townson.

JACOBIANS.—*Red—Pair*.—1, G. J. Taylor. 2, W. Hill, Handforth. *Yellow*.—1 and 2, E. E. M. Royds, Rochdale. *Black*.—1 and 2, E. E. M. Royds. *Any colour—Young*.—1, E. E. M. Royds. 2, W. Hill. *Cock*.—1, E. E. M. Royds. 2, E. C. Stretch. *Hen*.—1, W. Hill. 2, E. E. M. Royds.

TURBETS.—*Blue or Silver—Pair*.—1, A. Mangnall. 2, J. B. Pinder, Harpurhey. *Red, Yellow, or Black*.—1, J. B. Pinder. 2, G. J. Taylor. *Any colour—Young*.—1, J. B. Pinder. 2, A. Mangnall. *Cock*.—1, T. W. Townson. 2, J. B. Pinder. *Hen*.—1, B. Constidine, Littleborough. 2, W. Hill.

OWLS.—*English—Blue—Pair*.—1 and 2, R. Clay. *Silver*.—1 and 2, R. Clay. *Any colour—Young*.—1, J. B. Buckley, Ormskirk. 2, R. Clay. *Cock*.—1, R. Clay. 2, R. Unsworth. *Female*.—1 and 2, R. Clay.

FANTAILS.—*Pair*.—1, Q. T. Blum, Higher Broughton. 2, H. C. Bowman, Higher Broughton. *he, W. Hill* (2). *Cock or Hen*.—1, W. Hill. 2, T. W. Townson.

NUNS.—1 and 2, W. Hill. **TRUMPETERS.**—1, T. W. Townson. **DRAGONS.**—*Blue or Silver*.—1 and 2, W. Gamon, Chester. *Cock*.—1, W. Hill. 2, J. Holland, Chetham Hill. *Hen*.—1, E. C. Stretch. 2, R. Clay. *Any colour—Young*.—1 and 2, W. Hill. *Cock*.—1 and 2, W. Hill. *Any colour—Young*.—1, J. Holland. 2, W. Hill. *Hen*.—1, W. Hill. 2, J. Wright, Rochdale Road.

SHORT-FACED ANTWERPS.—*Red or Blue—Chequered*.—1 and 2, W. Justice. *Silver or Dun*.—1, W. Gamon. 2, W. Justice. *Any other colour*.—1, W. Gamon. 2, W. Justice. *Any colour—Young*.—1, W. Gamon. 2, W. Justice. *Cock*.—1, W. Justice. 2, J. Wright. *Hen*.—1, W. Gamon. 2, W. Justice.

LONG-FACED ANTWERPS.—*Red or Blue—Chequered*.—1, W. Justice. 2, J. Wright. *Silver or Dun*.—1, W. Justice. 2, R. Marshall, Lower Broughton. *Any other colour*.—1, W. Justice. 2, J. Wright. *Any colour—Young*.—1, W. Justice. 2, H. C. Bowman. *Cock*.—1, J. Wright. 2, E. A. Grundy, Kamsbottom. *Hen*.—1, W. Justice. 2, J. Wright.

LONG-FACED TRUMPETERS.—*Bald—Blue or Silver*.—1 and 2, R. Unsworth. *Red or Yellow*.—1, R. Unsworth. 2, W. R. Hayeratt, Lower Broughton. *Black*.—1 and 2, R. Unsworth. *Beards—Any colour*.—1, C. F. Duckworth. 2, W. R. Hayeratt. *Mottled*.—1, W. R. Hayeratt. 2, W. Hill. *Self-coloured*.—1, E. C. Stretch.

ANY OTHER VARIETY.—1, G. J. Taylor. 2, W. Hill. **SELLING CLASS.**—*Pair, price not to exceed 40s.*—1, J. B. Pinder. 2, W. Lumb. *Single bird, price not to exceed 3s.*—1, E. C. Stretch. 2, J. B. Pinder.

JUDGES.—Mr. W. Cannan, and Mr. T. J. Charlton, Bradford.

ULVERSTON BIRD SHOW.

This Exhibition of Canaries and British cage birds was held in the Victoria Concert Hall, Ulverston, on December 6th. In numbers and quality the birds shown (excepting among the Lizards) in the various classes were well represented. Of the *Belgians* many of the birds were remarkable for purity of race, beauty of plumage, and other standards of excellence. The silver cups offered by the Association were both carried off by local exhibitors. The *Norwich* classes were well forward, both in natural and unnatural colours, and the Committee found several specimens with supplied piner feathers, also with drawn feathers from the tail, and the exhibitors richly merited the disgrace of disqualified cards being affixed to the cages. The Judges, however, passed over them, and remarked that was the best way to stamp out such-like exhibitors. Surely the time will come when owners will think twice before risking detection. The Goldfinch *Males* were very fine, especially the Buff class. Years may pass by before so good a collection may again meet the public eye, the highest honours falling to a new exhibitor—Mr. J. Williams, Whitehaven, with three splendid specimens, beautifully developed in the markings of the plumage.

Mr. H. Pollett, Failsworth, Manchester, again officiated as

Judge, and his awards were highly approved of by the general public. To the Hon. Sec. (Mr. T. Cockerton) great credit is due for the good management of the Show, and for the admirable way in which the birds were staged, the numbers being 130 specimens.

[We wish our correspondent had mentioned the names and addresses of the fowl exhibitors, for we would have published them.—EDS.]

BELGIAN.—*Clear Yellow*.—1 and 2, W. Bradley, Ulverston. 3, W. Banks, Ulverston. *he, T. Cockerton, Ulverston. he, J. Steel, Ulverston. c, T. Parker, Ulverston.*

BELGIAN.—*Clear Buff*.—2, W. Crowdon, Ulverston. 3, J. Steel, Ulverston. *he, T. Crossdale, Carlisle. he, T. Cockerton. c, W. Bowdon, Ulverston.*

NORWICH.—*Clear Yellow*.—1, Holmes & Doyle, Nottingham. 3, G. & J. Mackley, Norwich. *he, R. Stables, Ulverston. he, J. Andley, Leicester. c, J. Moffat, Ulverston.*

NORWICH.—*Clear Buff*.—1, R. Baynes, Ulverston. 2, G. & J. Mackley, Norwich. 3, J. Hague, Barrow-in-Furness. *he, R. Stables, he, W. Stones, Dalton-in-Furness. c, Holmes & Doyle.*

NORWICH.—*Even-marked Yellow*.—1, J. Andley, Leicester. 2, Holmes and Doyle. 3, J. Moffat. *he, J. Kailton, Lancaster. he and c, Bemrose & Orme, Derby.*

NORWICH.—*Even-marked Buff*.—1 and 2, H. & D. Andley. 3 and *he, Bemrose & Orme. he, Holmes & Doyle. c, J. Moffat.*

GOLDFINCH.—1, W. Hutton, Leeds. 2, R. Hawman, Middlesbrough. 3, R. Hill, Grange-over-Sands. *he, J. Hague. he, J. Goode, Leicester. c, G. & J. Mackley.*

GOLDFINCH MALE.—*Clear or Variegated Yellow*.—1 and *he, W. Hutton. 2, J. Goode. 3 and he, R. Hawman. c, J. Williams, Whitehaven.*

GOLDFINCH MALE.—*Clear or Variegated Buff*.—1, 2, and *he, J. Williams. 3, T. Hipkins, Leicester. he, H. & D. Andley. c, G. & J. Mackley.*

SELLING CLASS.—1, T. Cockerton. 2, R. Hill. 3, H. & D. Andley. *he, J. Andley, Leicester. c, J. Goode.*

Cup, for the best Belgian Yellow, awarded to W. Bradley. Cup, for the best Belgian Buff, awarded to T. Crossdale.

ACTION AGAINST THE SECRETARY OF THE NORTHERN COLUMBIAN SOCIETY.

NALDER v. DUNN.—This was an action of libel before Mr. Justice Denman and a common jury.

The plaintiff, a brewer at Croydon, is a well-known breeder of Pigeons, and was at one time a member of the Northern Columbian Society. The defendant is the Secretary of that Society, and the alleged libel appeared in a programme of the Society's proceedings published by the defendant; and the part of the programme complained of stated that the plaintiff had been expelled from the Society for "trimming," by pulling out of birds intended to be exhibited, feathers from their thighs. The defendant pleaded that the plaintiff had been expelled; but it was proved that no meeting of the Society had been called, and the Judge justly vituperated the proceeding as irregular, and decided that the plaintiff had not been expelled, the whole proceeding being carried on by Mr. Dunn and a few others.

Eventually a verdict was taken by consent for the plaintiff for 40s., all imputations being withdrawn, his lordship certifying for costs.

AT LAST!

DARLINGTON has stultified itself. When I received this year's schedule a month or two ago I noticed that the promoters of the Show had thought it worth while to go to the expense of printing and enclosing an "extract from JOURNAL OF HORTICULTURE, November 21st, 1872," in which I had spoken of last year's Show and the management in terms of praise. I will repeat a portion of the extract: "A liberal prize list, and, above all, a management in which the public have confidence, are sure to command a large measure of support, while any shortcoming in either of these respects is as certainly followed by decline. A pretty accurate knowledge of the managers and management is soon arrived at by exhibitors who, ever willing to make a liberal discount for blunders avoidable and unavoidable, are always ready to support any committee whose antecedents insure care and attention to the valuable property entrusted to their charge, and an earnest desire to procure a clear stage and no favour for the combatants." And Darlington well deserved such a meed of praise.

But when Whitby opened the season with its Show, that show of shows, and the "Bemrose & Orme" collection of Canaries burst upon the bird-world like meteors, Darlington lost its head and quite forgot its "earnest desire to procure a clear stage and no favour" in supplementing its schedule with an addendum stating that no "unnatural colours" would be staged. Still I do not altogether blame Darlington. I am afraid it was badly advised. Jealousy and personal animosity are bad counsellors. I have observed in a series of articles elsewhere (in reading which, by the way, I was reminded of one of Esop's fables, in which a certain animal envelopes itself in the skin of a nohler brute, but is at once identified by his music), that the action of Darlington was approved of as "wise," and that another town also had become "wise" in its generation and preached virtue; of which virtue and its preachers more presently. But I think this action was most unwise, begun in haste to be repented of at leisure, starting from false premises and eventuating in absurd conclusion. Had Darlington adhered to its programme, however one-sided, less injustice would have been done than by violating

its covenant. It pledged itself, on little slips of blue paper and by public advertisement, that "no unnatural colours" should be staged, and on the faith of that pledge received the support of many exhibitors who would otherwise have stood aloof. But having taken its stand as the avowed opponent of progress, how does it reward its friends? Stupidly by altogether ignoring its promise and admitting the very class of birds it had pledged itself to exclude. I remember when I was a lad a village orator saying, at a parish meeting, "*magna est veritas et prelibit*," to which one of the other side replied, "Yes, great is the truth, and will not only prevail a bit but will prevail a great deal!" And so it is. Since Whitby, despite the opposition Bemrose and Orme have met with, in the face of organised attempts to damage their reputation and the intrinsic value of their high-bred birds, exhibitors, even unknown to their nearest intimates, have confessed to themselves how beautiful they are, and the Derby wizards have hardly been able to supply the many orders for these gorgeous gems which, for brilliancy of plumage, almost rival the dazzling beauties of southern climes; and in almost every fancier's stud throughout the country is to be found one or more of these birds which are destined to make the names of Bemrose & Orme famous, and the year 1873 a landmark in the history of cage-birds. But notwithstanding this, Darlington, listening to bad counsel, determined to put its heel on this onward movement, little dreaming, possibly, how many here and there had purchased from the Derby aviary; and the natural outcome of this was that it had either to decimate its Show or, breaking faith with its supporters, allow these obnoxious birds to compete. I have no doubt the alternative was disagreeable, and the awkward position in which it found itself was to its Committee a matter of regret; but it was nothing more than could have been expected from such a miserable time-serving policy and such a direct departure from its original programme "a clear stage and no favour!"

I had been courteously solicited to accept the office of judge conjointly with Mr. Barnesby, but, for reasons which will be understood without entering into them here, I declined. This, of course, was before the prize list was supplemented by the unfortunate addendum; for, apart from any other considerations, I think I could never so far forget my dignity as a judge as to consent to officiate as such after any committee had usurped to itself my functions.

The Darlington Show is, however (my howevers creep in as surely as Charles I. on Mr. Dick's kite), a great triumph. And here let me say, before adverting to that particular triumph, that the Show, as a show, was an immense success. I spent a few hours among the birds, and was delighted, and apart from the *contretemps* to which I have adverted, I can again endorse the opinion I formed last year. It is undoubtedly the winter show of the north. There are some discordant elements in it (and where are there not?) but give it its due—it is essentially a great show. I will just suggest to the Committee that it would be better to stage the birds so that the Evenly-marked and the Crested classes should be on a level with the eye, and not at such an elevation as entirely precludes the possibility of examining the specimens without lifting the cages, a thing I never set a bad example by doing, and so was prevented from arriving at a definite conclusion on some birds I went specially to see.

But I said the Show was a great triumph. It sets at rest for ever the "Bemrose & Orme" controversy, and in vindicating the character of their birds offers some prospective compensation for the annoyance they were subjected to at the Crystal Palace. There is no doubt that a well organised attempt was made to have them excluded from Darlington Show for reasons which must be manifest to everyone. The persistent way in which they have been elsewhere written down by Esop's happy creation; the scurrilous way in which the breeders' reputations have been assailed, in most wretched grammar, alike indicative of a low order of mind and defective education; the unmanly, unprincipled, wicked way in which they have been attacked from behind a flimsy transparent screen which it requires no expert to remove; the manifestation of jealousy and vexation; the line of conduct, at once unscrupulous and illustrative of the lowest type of character, which has lain scarcely concealed beneath the surface, cropping-up at every step in all its deformity; all this has had to succumb. I say that Darlington has set at rest the "Bemrose & Orme" difficulty; for Mr. G. J. Barnesby, who at the last Crystal Palace Show ignored the claims of the two pioneers of this phalanx of wonders, and not a month ago attempted to write them down, had at Darlington to award the highest honours to this identical class of bird.

Before I bring these notes on the deeds and misdeeds of 1873 to a close I would like to ask a question about a statement made in the report of the "Good Intent" Show, at Northampton, a week or two ago. The "Good Intent" was the show to which I referred just now when I said another town had become "wise" and preached the beauty of virtue. The resolution of this virtuous community appeared in the "Letter Box," and was to the effect that, "Should any suspected unnatural-coloured

specimens be sent to our forthcoming show, they will not be staged under any consideration, but will be immediately removed from the hall." I have not the circular by me from which this is an extract, but I shall not err greatly when I say it advertised the integrity of the Committee as a first-class article which had been before the public for about twenty years, and there is something very refreshing in the way in which determination to watch over the public morals is avowed. The resolution is signed, among other names, by T. Barwell, and I notice in the same issue of the publication in which the wisdom of the "Good Intent" was paraded, that the Judges of the Nottingham Show, Messrs. Tuckwood and Barwell, are spoken of as having "done honour to the cause by their previous judging and also victories as prizetakers." Now, may I ask whether the Barwell who undertakes the custody of public morality at the "Good Intent" Show and the Barwell who has done "honour to the cause" by "victories as prizetaker," is or is not a Barwell of "Barwell & Sons" who exhibited the *bona fide* painted birds at this very "Good Intent" Show where the genuine "Bemrose and Orme" birds were rejected?—W. A. BLAKSTON.

HOW TO OBTAIN HIGH-COLOURED CANARIES.

We intimated in a previous communication that on some future occasion we should make known the method of feeding adopted by us to obtain high colour in Canaries. Our reason for now departing from that resolution and at once informing fanciers of the so-called secret is, that having sometime ago communicated it to a fancier under the pledge of secrecy, we now learn that he is turning a dishonest penny by selling it to various parties. As this is a grave breach of confidence we have determined at once to make known the method referred to, and preserve fanciers from annoyance and save their money.

Those who have so persistently contested the genuineness of our birds will, we are sure, after a fair trial of the recipe have the candour to admit that we have been honest and truthful in both our actions and statements. To these committees who have acted without bias, uninfluenced by the threats of competing exhibitors, and have given us a fair stage and no favour, we tender our warm and hearty thanks. Those narrow and exclusive committees—Nottingham, Northampton, Darlington, Ulverston, to wit—who have endeavoured to burke our endeavours, who have been a stumbling block in the way of advancement, and who have shielded themselves behind a restriction they cannot define, have only to follow another year the course they have pursued in this to ensure their schedules being consigned to the oblivion of the waste-paper basket.—BEMROSE & ORME.

Recipe.—Egg, biscuit, and cayenne pepper. These are the whole of the ingredients used by us, which have proved so successful in producing the high colour so much admired.

DRONE COMB IN SUPERS.

As none of your correspondents has adverted to Mr. Pettigrew's mode of utilising drone combs in supers, I may be pardoned pointing out, for the benefit of the novice, that his procedure would be looked upon as bad practice with us here in the north. From the much coarser appearance of supers composed either wholly or in part of drone comb, they are rated at far less value, either on the competition-table or the counter of the honey merchant. Consequently, instead of inserting it as guide, or yet for filling in my apiary, as soon as it unfortunately appears at all in supers, or in excess in stocks, it is, if noticed in time, carefully excised, transferred to the melting-pot, passes through the embossed wax-sheet machine, and re-appears to do duty in correct worker form. The novice will also find that a thoroughly sealed-out super, as a rule, takes precedence with both the judge and the merchant, despite your correspondent's conception that "a few inches of cells half filled and open, give supers of glass an appearance more artistic and pleasing."—A RENFREWSHIRE BEE-KEEPER.

HONEY-SUPERS AT EXHIBITIONS.

Your readers have been entertained (or shocked, as the case may be) at the novel methods adopted by certain successful exhibitors this year to fill supers with honey, and so win the prizes offered. Certainly the ingenuity displayed by the several parties to attain their object has been as interesting to lookers-on as it has been clever. I presume that this was not exactly the object aimed at by those who offered the prizes, but as they were not very precise or definite in the wording of their advertisements, no real fault or deserved blame can attach to those gentlemen who simply did that which they were in a manner bribed or tempted to do. Nevertheless we should have felt somewhat "sold," and have gone home with our simple faces looking very blue, had we been among the less fortunate exhibitors who interpreted the advertisements according to their spirit rather than the letter, and exhibited supers, if any did so,

as the result of the honourable labour of their bees, assisted, it may be, by the skilled, but still equitable, aid of their scientific masters. In future, I presume, we shall be all agreed that such sharp practice should be most carefully guarded against, otherwise what possible encouragement will be given to legitimate improvement in bee-keeping? You will but offer prizes to the artful, and the rest will cease to trouble themselves with competition. We happen to know of a great deal of trickery at floral exhibitions, where prizes are frequently won quite out of all desert.

The question, however, remains—What precautions can be taken to secure that no super exhibited shall receive a prize, which is not the *bona-fide* produce of a stock of bees, unassisted at the cost of other stocks, although legitimately assisted by the skill of the master? And what are to be the limits of such assistance? And what is to be understood by legitimate assistance? I venture to suggest a few thoughts of my own, by way of helping to frame some rules that may help on our craft without affording premiums to the artful.

1. The honey exhibited shall be that collected by the bees of any given hive from flowers or honeydew during the actual season, without assistance by feeding of any kind within eight months of exhibition.

2. The supers, quite empty of comb, shall have been put on the hives not earlier than the 1st of May, nor shall any comb be added to the stocks in ekes or otherwise.

3. It shall be lawful to encourage the growth and development of the stocks by additions to its population the autumn previous, either by junction of condemned or weak hives, by careful feeding at that time, or by renewal of old or unsuitable combs; but there must be no robbing or weakening of other stocks by removal of brood or other addition to population in the year of exhibition, other than the regular and natural increase of the stock itself.

4. No super shall receive a prize whose exhibitor cannot produce a certificate signed by two or three respectable bee-keepers in his neighbourhood, testifying that he has to their knowledge complied strictly with the conditions of competition.

5. There shall be no restriction as to size or shape or material of hive, or as to age of stock.

I venture to throw out these suggestions for the consideration of managers of flower or other shows where honey is included in the schedule of prizes, so as to exclude in future all such doubtful modes of dealing as have occurred this year. Perhaps some of your correspondents may be able to suggest other rules, or to improve on those I have suggested above.—B. & W.

FOOD FOR BEES.

It is an axiom in bee-keeping that sugar, not the crystallised nor the coarse, but the best brown, should form the staple food for the winter use of our little friends. Different bee-keepers have different opinions as to the quantity and mode of preparation. Some give it dry, others boil it into a syrup with beer, and others with water. The following method of making food in my opinion surpasses either, and I find the bees like it quite as well.—To 2 lbs. of sugar put 1 lb. of oatmeal and a breakfast-cupful of skim milk, then boil it up into syrup to the consistence of honey. I should very much like the opinion of your correspondents on the above preparation. Perhaps "A RENFREWSHIRE BEE-KEEPER" could tell us something about the admixture of oatmeal.—A. T. W., *Kidwelly*.

OUR LETTER BOX.

POINTS IN WHITE COCHINS (*A Beginner*).—White Cochins should have the same points as the Buff. The only difference is one of colour. They should be very large, have well-defined and serrated single combs, sharp intelligent faces, short legs well feathered to the toes, wings well clipped into the body, large fluff behind, very little tail, no vulture hock. They should have yellow legs.

EGGS DROPPED FROM THE PERCH (*A. E.*).—It is a very annoying, but not a very uncommon, thing. If you can detect the culprit, confine her by herself. If you cannot, remove all your perches for a few nights. Place some laying-boxes, and put some straw in one corner of the house. She will take to regular habits. You say the flooring of your house is an inch deep in sawdust. It is a very bad thing. They are sure to pick up part of it. It is indigestible; it swells in the crop and gizzard; it distends the latter without answering any purpose. The gizzard is for the reception of stones, which act as millstones and grind the food. Sawdust acts as a buffer. Discard it and substitute gravel.

BIRMINGHAM POULTRY SHOW.—For White Call Ducks the first prize was awarded to Mrs. H. J. Bailey.

WRIGHT'S ILLUSTRATED BOOK OF POULTRY (*G. W. H.*).—It is quite true that complete volumes of this excellent book were exhibited at the Birmingham Show. It is the ordinary custom of the publishing trade, and whilst the work is issued in parts to suit the convenience of subscribers, a publisher always exercises his right to issue the work complete at any time. In fact, in many instances the work is published in complete form first, and issued in parts afterwards. Messrs. Cassell justly took advantage of one of the best attended shows of the year to bring the volume to the notice of the visitors.

BEES' BREEDING SEASON (*P. R.*).—In ordinary seasons bees begin to breed at the beginning of February. In the south of England bees generally begin to breed early in February; in later parts not quite so soon. In Scotland about the first week of March. As soon as bees begin to breed they may be seen carrying water into their hives.

REMOVING HIVES (*An Old Subscriber*).—You can move your hives and

bees to your neighbour's garden, three miles off, with perfect safety at any time during the winter. We prefer doing it after a frost if possible, when the weather becomes mild and sunny. Perhaps the best time is early in February, but it may be done now. No such precautions are necessary in this case as in the other about which you consulted us.

SIZE OF STRAW HIVE (*A Straw Hive*).—The size of your straw hives should depend on the character of your pasturage and the size of the swarm put into it, also on the time of year when it is peopled. But for May swarms in a good country, your hives (such as you ask for), may be dome-shaped, three-fifths of a circle, tightly bound together, and 20 inches in diameter at the centre every way. It would thus stand 12 inches high. We should prefer straight-sided hives with flat tops of wood. If you use supers the hive must have a convenient hole at top, and should, therefore, be flat. Supers may be smaller by one-third, but otherwise similar. On the whole we think you will obtain a greater quantity of honey by the use of ekes if you add all they require, but the quality in the supers will be far superior.

PRICE OF BEES (*O.*).—A very good hive of bees at the present time is worth from 30s. to 40s. Cottagers who keep the small old-fashioned hives sell them at about 20s. each. By purchasing small hives you could in time put their swarms into larger ones, and thus improve your stocks of bees. If you cannot find them in your own neighbourhood, write to Mr. Pettigrew, Sale, Manchester. No one can be quite sure of finding a healthy hive without brood later than the end of January.

ARTIFICIAL SWARMING (*Hem*).—In artificial swarming it is not necessary to remove bees to a distance of a mile. By placing the swarm where the old one stood, and the old one a few feet to the right or left of it, you will succeed admirably. By removing the old one 20 yards away, many of the bees would go to the old place and unite with the swarm.

SOFTENING SKINS (*A. K.*).—Soak the skins in a mixture of two quarts bran and one gallon of water for three days, take them out and rub them with a handful of salt; if they have hair or wool on, add powdered alum with the salt, and hang up to dry. Some skins which are as soft as kid were done in this manner.

METEOROLOGICAL OBSERVATIONS,

CAMDEN SQUARE, LONDON.

Lat. 51° 32' 40" N.; Long. 0° 8' 0" W.; Altitude 111 feet.

DATE.	9 A.M.					IN THE DAY.				RAIN.
	1873.	Baromet. at Sea Level.	Hygromet.		Temp. of Wind.	Sbade Tem- perature.		Radiation Temperature.		
			Dry.	Wet.		Max.	Min.	In sun.	On grass.	
Dec.	Baromet. at Sea Level.	Dry.	Wet.	Direction of Wind.	Temp. of Wind.	Max.	Min.	In sun.	On grass.	In.
We. 3	30.610	48.2	46.8	N.W.	46.0	45.0	47.0	56.3	45.6	—
Th. 4	30.634	41.0	40.0	N.W.	45.7	45.8	47.4	46.4	41.2	—
Fr. 5	30.469	42.1	41.0	W.	44.8	46.2	59.4	47.7	39.8	—
Sat. 6	30.415	43.7	43.9	N.	44.7	44.8	41.2	47.2	36.4	—
Sun. 7	30.569	44.2	41.9	E.	44.1	46.8	39.3	48.2	31.8	—
Mo. 8	30.615	43.8	41.3	W.	45.9	48.2	43.8	53.8	41.0	—
Tu. 9	30.693	29.8	29.8	N.	42.5	36.9	25.7	46.4	24.6	—
Means	30.558	41.8	40.2		44.5	45.6	38.9	49.5	37.1	0.009

REMARKS.

3rd.—Dark morning; fair but dull all day.
 4th.—Dark at 9 A.M.; a fine day for the time of year, but rather dull.
 5th.—Fair all day, but without sun; fine night.
 6th.—Another fair but sunless day, and rather less light than yesterday.
 7th.—Fair all day, but occasionally looking likely for rain.
 8th.—Still fair, but rather foggy and dark all day.
 9th.—White frost, foggy at 9 A.M., very much so and very dark from 10 to 11 A.M., then rather lighter, and between 1 and 2 P.M. brighter than at any time during the past week, the sun shining, and the fog cleared, but immediately after the fog became as thick as ever, and the day closed in with fog of unusual density.
 A week without rain, and almost without sun. Temperature at 9 A.M. 5° below that of last week, but the max. in sun, 13°, and the mean night min. 2° above. The baromet. unusually high and steady, the range being under a quarter of an inch, and the lowest pressure being 30.415.—G. J. SYMONS.
 Wednesday morning.—The fog continues, with sharp frost.

COVENT GARDEN MARKET.—DECEMBER 10.

Supplies moderate and business rather dull, with no alteration in prices.

FRUIT.

	s.	d.	s. d.		s.	d.	s. d.
Apples.....	1	0	1/6	Oranges.....	£	100	6 10/12 0
Chestnuts.....	1	0	2/0	Quinces.....	doz.	1	0 3/6
Grapes, hothouse.....	1	0	7/0	Pears, kitchen.....	doz.	1	0 2/0
Filberts.....	1	0	1/6	Dessert.....	doz.	2	0 3/0
Cobs.....	1	6	0/0	Pine Apples.....	lb.	3	0 6/0
Lemons.....	1	0	12/0	Walnuts.....	bushel	10	16 0/0
Melons.....	1	0	5/0	ditto.....	£	100	2 0 2/0

VEGETABLES.

	s.	d.	s. d.		s.	d.	s. d.
Artichokes.....	doz.	3	0 6/0	Mushrooms.....	potlle	1	0 2/0 9
Asparagus.....	£	100	0 0 0	Mustard & Cress.....	punnel	0	2 0 0
French.....	25	0	0 0	Onions.....	bushel	2	0 4 6
Beans, Kidney.....	£	100	2 0 0	Quart.....	0	6	0 9
Beet, Red.....	doz.	1	0 3/0	Parsley per doz. bunches	0	4	0 0
Broccoli.....	bundle	0	9 1/6	Parsnips.....	doz.	0	9 1/0
Cabbage.....	doz.	1	0 1/6	Peas.....	quart	0	0 0 0
Capsicums.....	£	100	1 6 0	Potatoes.....	bushel	3	0 4 6
Carrots.....	bunch	0	6 0 0	Kidney.....	do.	0	0 0 0
Cauliflower.....	doz.	3	0 6/0	Round.....	do.	0	0 0 0
Celery.....	bundle	1	6 2/0	Radishes.....	doz. bunches	1	0 4 6
Cucumbers.....	doz. bunches	2	6 4/0	Rhubarb.....	bundle	0	0 0 0
Cucumber.....	each	0	4 0	Salsify.....	bundle	0	0 0 0
Endive.....	doz.	0	0 0 0	Savoy.....	doz.	1	0 2/0
Fenick.....	doz.	2	0 0 0	Scorzoneria.....	bundle	1	0 0 0
Fennel.....	bunch	0	3 0 0	Sea-kale.....	basket	2	6 3/6
Garh.....	lb.	0	6 0 0	Shallots.....	lb.	0	3 0 0
Herbs.....	bunch	0	3 0 0	Spinach.....	bushel	2	0 3/0
Horseradish.....	bundle	3	0 4 0	Tomatoes.....	doz.	2	0 4 0
Leeks.....	bunch	0	3 0 0	Turnips.....	bunch	0	3 0 4
Lettuce.....	doz.	1	0 1/6	Vegetable Marrows.....	0	0	0 0

WEEKLY CALENDAR.

Day of Month		Day of Week		DECEMBER 18-24, 1873.			Average Temperature near London.			Rain in 43 years	Sun Rises	Sun Sets.	Moon Rises.	Moon Sets.	Moon's Age.	Clock after Sun.	Day of Year.			
					Day.	Night.	Mean.	Days.	m. h.	m. h.	m. h.	m. h.	Days.	m. s.						
18	TH	Meeting of Linnean Society, 8 P.M.			45.8	33.7	39.7	20	4	af	8	57	6	28	2	3	1	352		
19	F	Twilight ends 5.57 P.M.			45.4	32.5	39.5	16	5	8	50	3	10	8	7	3	2	32	353	
20	S				44.1	33.5	38.9	16	6	8	50	3	18	9	3	4	1	2	354	
21	SUN	4 SUNDAY IN ADVENT.			44.1	34.0	39.0	17	6	8	51	3	11	10	15	5	2	1	31	355
22	M				45.0	32.5	38.7	21	7	8	51	3	50	10	39	6	3	1	1	356
23	TU				44.1	31.7	37.9	21	7	8	52	3	17	11	7	8	4	0	31	357
24	W				44.0	31.3	37.6	17	8	8	52	3	37	11	34	9	5	0	1	358

From observations taken near London during forty-three years, the average day temperature of the week is 41.9; and its night temperature 32.7°. The greatest heat was 57°, on the 23rd, 1847, and 24th, 1839, and the lowest cold 4°, on the 24th, 1860. The greatest fall of rain was 1.13 inch.

BERRY-BEARING PLANTS.—No. 1.



FOR several months it has been my intention to offer some remarks upon plants worthy of more extended cultivation, on account of the great beauty of their berries: pressure of business, however, has from time to time driven it out of mind until the collections staged at Kensington, and duly chronicled by you, again revived the idea. I shall, therefore, address myself to the matter at once, as I believe a few words upon this subject will not be considered out of place in the pages of the Journal. The variety of this class of plants staged at Kensington was not great; but lookers-on must bear in mind that very many plants, which are objects of great beauty at home, will not bear the journey to an exhibition, and appear in a creditable condition when staged. In the few remarks, then, which I shall here offer, I intend noticing the plants entirely independently of their merits for exhibition, and shall simply introduce them to my readers as well deserving attention for their great beauty as home-decorators either in the stove, greenhouse, or dwelling house.

As a rule, plants remarkable for the beauty of their berries have very small flowers of no striking beauty; some would call them insignificant, but I do not like to hear the term employed in connection with any plant, for the veriest weed has its uses in the vegetable world, and small and unattractive as these flowers may be, their organs are as fully developed, and they are able to perform their various functions as surely as the largest and gaudiest of Nature's productions. To resume, however, the fact of their flowers being so unattractive appears to me one of the greatest causes of their neglect amongst amateurs, because as they look for the bloom to recompense them for their care and trouble, they throw them away in disgust when these small blooms appear, and thus the berries, which would have appeared in due time, are never seen or even dreamt of until they are found in all their glory in the garden of some neighbours, who, having made themselves better acquainted with the natural history of their plants, have "learned to labour and to wait." Some of our casual readers may observe that we have so many plants which produce beautiful flowers that it is scarcely worth while finding room for those having only berries to recommend them; but it must be borne in mind that these berries are beautifully coloured, and, moreover, usually display their greatest beauty at the very time there is the greatest paucity of flowers, and that they remain in perfection for a very long time. This then is my case in behalf of the berry-bearing plants; I shall now present the principal kinds before you in detail, and if any of their opponents have rebutting evidence to bring after their appearance I am sure that they will have a fair hearing, and that their statements will receive due consideration.

ARDISIA.

This genus contains an immense number of species,

I shall only enumerate one or two, however, in this place. They are robust-growing plants which should be potted in a compost consisting of loam and peat, with a liberal admixture of sharp sand; they strike readily from cuttings, and may be obtained from seed with great facility. Anyone having a stove should not fail to grow a few of these plants, for the effect they produce when well set with their ornamental berries is quite charming, and moreover when in fruit they may be used without injury either in the greenhouse or for room decoration, except what may arise from gas.

A. CRENULATA.—This is, perhaps, the best known of the genus, and, unfortunately, from being often badly managed, has fallen into bad repute with many, but it is very effective when well grown. The best system I have found is to raise them from seed the first year, and then cut-off the tops and strike them in a close frame. When struck they should be grown-on rapidly, when they will bloom profusely, and produce an abundance of deep red berries, which contrast admirably with the deep shining green of the leaves.

A. CRENULATA FRUCTU-ALBO.—A variety resembling the species in every respect, saving in the colour of the berries, which in this plant are pure white. It should be treated in the way previously named, in order to produce handsome plants.

RIVINA.

A genus of slender elegant plants, easily grown into good specimens; they may be kept in small pots, and then form beautiful objects for table decoration, as their racemes of berries have a splendid effect by artificial light. These plants, unfortunately, are very apt to cast their berries when moved any distance either by road or rail, and thus will never become favourites with exhibitors. They should be potted in loam, peat, and leaf mould in equal parts, adding a little sand to keep the whole open. Propagate either by seeds or cuttings.

R. HUMILIS.—This is an elegant, graceful little plant, growing erect, and producing both lateral and terminal racemes of bright scarlet berries, whilst the leaves are pale green. It flowers and seeds very freely, and thus soon forms a presentable object; it requires the heat of the stove. There is also a yellow-berried form of this.

R. TINCTORIA.—In most respects this species resembles the preceding; the berries, borne upon the long racemes, are, however, very different in colour; for whilst those of *R. humilis* are bright scarlet, those of this plant are deep maroon crimson. *R. tinctoria* is not nearly so much grown as *humilis*: why I cannot say, for, to my mind, this is as effective, if not even more beautiful. It should be grown in the stove.

CALLICARPA.

CALLICARPA PURPUREA.—This is another plant which is condemned by most amateurs, because it has been neglected until the time comes round when it is required, then, on account of its shabby appearance, it is voted useless; but I venture to assert, if well grown and cared for, as any plant should be which is expected to be ornamental at a given time, it will disappoint no one.

but will, on the contrary, give general satisfaction. The soil for its successful cultivation is loam and peat in equal parts, with about one-fourth of sand added. Cuttings taken off early in spring should be grown on in the stove, and in autumn the plants will be fit for any decorative purpose. The plant attains a height of some 2 or 3 feet, and is shrubby in habit, with serrated ovate leaves; the flowers are small, unattractive, and borne in the axils of the leaves, but are succeeded by large clusters of shining violet-coloured berries, rendering the plant very ornamental throughout the winter. When in fruit it may be used for either stove or greenhouse decoration.

PSYCHOTRIA.

A genus of Cinchonaceæ, the various members of which, as far as I am aware, have no claim upon the plant-grower for the beauty of their flowers; one species, however, of recent introduction must not be overlooked, on account of the beautiful berries with which it is adorned during the winter months. The soil should be composed of loam, leaf mould, peat, and sand in equal parts. It is best grown from cuttings.

P. CYANOCOCCA.—To the late Dr. Seemann we are indebted for the introduction of this species. It cannot be said to form a handsome plant if a seedling is allowed to take its own course, but I have proved it quite amenable to whatever training is required. For this purpose the top of a seedling should be cut off and struck; when rooted pot it in the above-named compost, and grow it in the stove. The leaves are ovate, with crenate edges, and dark green; the flowers are of no beauty, but are succeeded by axillary racemes of berries of the most vivid ultramarine, rendering the plant extremely beautiful.—**EXPERTO CREDE.**

CLEMATISES.

THE Clematis, or "Vine-branch" plant, named from its known habit of climbing as Vines do—though it uses its leaves as tendrils or natural holdfasts, being unlike the Vine in this essential—has, almost suddenly, become one of the finest and deservedly most popular plants we possess. Those who, like the writer, can remember the old Clematis Hendersoni and its rosy purplish variety; the old Clematis Flammula in variety; and the lovely wild *C. Vitalba*, so intimately associated with some of our finest British scenery, and who can also recall to their memory the pleasure with which the improvements of 1831 in the forms of *C. odorata* and *C. montana* were hailed, will have been more than surprised with the rapid strides which have been made within the last five years. Nor should we to-day endeavour to dispense with the old *C. montana*, as it is a beautiful, showy, "starry" plant, growing amazingly, and blooming with a freedom not to be surpassed. The writer has a solitary plant against a wall planted there only two years ago, and it is already producing its thousands of blooms.

Not only are Clematises grown and treated as climbing wall plants, or "pole" and tree climbers, they are also cultivated at this time extensively, in their several varieties, both as bedding plants, and especially as pot plants, for the decoration of our conservatories and show-houses. The way in which they are best grown for a display in beds is to plant them out in a richly prepared border, and subsequently place some kind of trelliswork slightly elevated conically above the soil, training and tying them out thereon subsequently.

To grow them in pots for flowering there, the pots should be plunged out of doors, and they may be trained into any shape that fancy may devise; or they may be simply allowed to attach themselves perpendicularly to strings or rustic trellises, &c., from which they are readily removed and trained into a more suitable skeleton form, so as to become the foundation of a bushy plant affording an abundance of bloom. The original batch of seedlings, represented by the form of *C. Jackmanni*, are exceedingly brittle while the growth is young; indeed this is in some degree a natural characteristic. The training and tying-out of the young shoots should be done methodically and by anticipation, if the whole are to be retained for future blooming. So many and distinct are the named varieties placed in commerce by the chief growers, each of whom possesses some distinctly claimed characteristics in their especial batches of hybrid-seedling plants, and so constantly are seedlings being produced, that I think it would occupy too much space to give a list of them. I may refer all who wish to enter into their cultivation to two prominent raisers—viz., Messrs. Noble, of Bagshot, and Messrs. Jackman, of Woking.

There is one variety I would wish to draw attention to, how-

ever; not alone because it is a fine-bloomed variety, but more especially because it is a perpetual bloomer, commencing if anything earlier than the early *C. Jackmanni*, and carrying blooms till December, or beyond if the frost do not come too severe. It is, moreover, a somewhat original introduction, with very little hybrid or mixed blood in it. I refer to *Clematis lanuginosa nivea*. Note the *nivea* attached to the name, as there is a separate form of *C. lanuginosa* which is not nearly so good. The especial merit of this variety consists, however, in its perpetual-blooming capacity, as it opens its first blooms as early as *C. montana*, and thence, as intimated, continuing to bloom onward until December, should the season prove open and no actual frost come to cut off the late growths.

We have, then, here the finest of blooming plants, showy and free, as they are varied in colour, fitting for almost every conceivable situation and aspect—whether as growing lowly, to afford showy beds, to train against walls or on spaces upon bare palings, to twine round the holes of naked upright trees, for training on the various faces of artificial rockwork or old blocks of wood, such as are not alone used to advantage upon lawns or dressed grounds, but which are a necessary addition to wilderness walks; to train on bower-like entrances, whether of iron or of rustic wood, to grow between semi-detached gardens, and especially to afford a front or roof-garniture to rustic and other forms of summer-houses. Indeed there are few situations, and still fewer aspects, where this delightful class of plants may not be grown with every prospect of their doing well. They succeed, besides, in a great variety of soils.—**WILLIAM EARLEY, Valentines.**

THE KITCHEN GARDEN.—No. 3.

I DEVOTE this paper to the subjects of shelter and soil, and in choosing a site for a garden where one of these conditions occurs in a suitable degree it is difficult to say which should have the preference, as both are of the utmost importance. Shelter is necessary, not only because it renders the garden warmer by retaining the heat concentrated there by the sun's rays, but also by protecting against cold and cutting winds which prevail at different times of the year. It is therefore a valuable safeguard against those sudden fluctuations of temperature so injurious to garden productions.

A garden surrounded by a wall is to some extent sheltered, but not sufficiently so, for the heat accumulated within the walls being continually rising is soon dispersed into the atmosphere by the wind, which, of course, in time reduces the temperature of the enclosure and places the produce or crops at the mercy of inclement weather. To obviate this a plantation of trees and shrubs is the remedy most likely to meet most cases, and if a spot can be selected where such a thing exists naturally considerable sacrifice ought to be made in order to secure it, because both time and money will thereby be saved. An amateur, however, may sometimes place his garden where the necessary shelter can be borrowed, as it were, from his neighbour's plantations, and others may have the chance, from the natural position, to make a garden where the most particular points are sheltered by adjacent residences, so that very little planting will be necessary; but as these things depend so much upon the situation, locality, size of garden to be made, and other circumstances, I can safely leave them to the judgment of those on the spot. Some situations require much more shelter than others: a high one, for instance, from its exposure, necessarily requires more shelter than a low one. My opinion is that a garden should be sheltered little or much from all points except the south; there is no fear of injury from cutting winds from the latter quarter; and the refreshing showers should have no obstruction, neither should anything in the shape of a tree be placed so near as to hinder the sun's rays from having full play upon the garden. It is on the north and east sides that the most shelter is needed, because the very coldest winds are from those quarters. Then on the west an effectual shelter is needed, because from this point some of the most violent winds blow, and if not sheltered much harm is done to fruit trees and vegetable crops. I think an effectual shelter would be one that would take a course from the extreme west round to the extreme east corner of the garden. Assuming that the aspect is due south, this would enclose all sides but the south.

I will now say a few words about the arrangement of this shelter. In the first place it ought to consist of evergreen and deciduous trees arranged in a belt or plantation, with mostly evergreen shrubs planted as an undergrowth. The whole, if

not enclosed within a fence, should have a hedge instead, the trees to be planted thickly at first, paying due regard to the placing of those trees that are likely to permanently remain. These may consist of Elm, Beech, Oak, and perhaps Chestnut, with a fair quantity of Spruce Fir intermixed for effect. It will also be as well to plant a few fast-growing trees, such as Larch, Sycamore, and Poplar. The undergrowth may be composed of common and Portugal Laurels, Evergreen Oaks, common Yews, Hollies, and Aucubas; and if required to be made more ornamental, add a few flowering deciduous shrubs, Laurustinus, and Rhododendrons. As time goes on some of the trees must be cut out to allow of the proper development of others more valuable. At every thinning, however, take care of those trees most promising for permanent shelter, and let none of the others interfere with their growth. If there is room none of these trees should be planted too closely to the garden, on account of the roots travelling through to the garden proper and robbing the soil, and especially the trees on the walls, which are generally planted on both sides. A border marked off a certain width for the growth of vegetables would also be much shaded and reduced in productive value if the plantation came too close to it. On the north side the trees may approach nearer, but on the east they ought not to come so closely as to shade any part of the garden from the morning sun; on the west the plantation may come somewhat nearer and the trees be allowed to grow higher, as from this quarter violent winds come at times. The undergrowth spoken of will afford an excellent shelter for the crops growing on the outside border.

Before planting, the ground should be well trenched to the depth of 2 feet, and 6 inches deeper if the soil will allow of it. This may appear expensive at first, but it is the only way to give a good start to a plantation of this kind. I may mention that in some places where scope of ground is limited, yet leaving room for a plantation, it is as well to plant a hedge on the garden side of the plantation, and then cut-out a deep ditch by the side of it, which will to a great extent prevent the roots from extending further than that; then, in this case, the plantation may be somewhat nearer the garden; again, others would find a remedy by surrounding the garden by a ha-ha wall, which would be more effectual than the former method, and likewise prevent the possibility of stock intruding upon the garden.

Having now said sufficient to convince anyone of the necessity of sheltering the gardens, I will proceed to the subject of soil. I believe it is generally considered that a suitable soil for a garden is a rather rich, friable, or mellow loam, situated moderately dry, and if the loam is inclined to a sandy nature so that it can be wrought at nearly all seasons of the year, and from 2 to 4 feet in depth, so much the better; but I should consider that individual a fortunate person who can make such a choice; it is both time and money saved at once, and I should be inclined to treat the object of shelter as subordinate to this excellent qualification. In some localities where there are two or three totally different soils to be met with in a space of a few acres it is not so difficult to choose a good soil or improve an inferior one; but, generally speaking, the amateur has very little chance of a choice of soil, and is thereby forcibly directed to the improvement of such a soil as he meets with, and nearly all soils are capable of being improved. After a selection is made, the operation which should precede all others, and which is a sound and commendable basis upon which to effect further improvements, is complete drainage, a subject on which I shall make some remarks in a future paper.

I have before stated that all soils are capable of being more or less improved, but it would be well to consider the means of effecting improvement before finally deciding upon its adoption, as it is often a question of £ s. d. with the amateur, and if the necessary materials for the improvement of one sort of soil cannot be readily obtained, those required for a soil of different texture may, perhaps, be had more easily, and by making choice of such a soil unnecessary expenditure in labour may be avoided. It is not objectionable, but rather an advantage, to have two or three different sorts of soil in a garden.

The depth of a soil, if good, should have an influence over the selection; but if the subsoil is bad, the surface soil shallow and poor, and if there are no reasonable means of adding to its fertility, it should be abandoned; but generally there is that opportunity, and in such a case earth should be carted-in to increase the depth of surface soil before any of the subsoil is turned up. A heavy clay soil is, perhaps, one of the most

expensive to improve, and the process is long; such a soil will be improved by the addition of chalk, lime rubbish, ashes, roadside sand, gravel, rotten leaves, and manure, and by trenching and exposure to the atmosphere. Again, a very light sandy soil is bad, because it is poor and liable to be parched with heat in summer. Fruit trees, as well as vegetables, generally exhibit a stunted appearance in a hot sandy soil, and the produce seldom possesses a natural flavour; but by the addition of good loam, and in some cases a little clay, as well as manure, a good staple soil is made up. Next we come to gravelly soils, which generally show a want of fertility. They also suffer much from drought, as they are incapable of retaining sufficient moisture for a crop's sustenance; they are, however, capable of improvement, not so much by the use of strong manure at first, but by the addition of strong turfy loam or any good soil; but, remember, in a gravelly soil, as well as that of a sandy nature, all these additions must be made in sufficient quantities to form a body capable of sustaining any crop that is put into it, and also the better to retain moisture when it is applied. Sandy as well as gravelly soils are generally somewhat warmer than those which are heavy, and therefore earlier, though not, perhaps, so productive; nevertheless, they are not to be rejected if there is a chance of improving them. Plants in sandy or dry soils are much more capable of resisting frost than those in heavy or wet soils, and this is no small recommendation. Light or loose soils can be materially improved by the addition of substances of an opposite character; and even soils of a good or medium quality are much improved by the addition of good loam, or any fresh workable soil that has not been previously exhausted by cropping.

Chalk, when it can be procured, is a good renovator of soils, and should be put on in the autumn or winter, so that the weather may pulverise it. From the excavations and digging for foundations, and other things connected with the erection of a mansion, forming a garden and other things, all the best soil should be utilised for garden purposes. The top spit, however, should be kept separate from the other; it is generally the most productive, and suitable also for fruit-tree borders. In most cases, if the natural soil is not suitable, it is possible to obtain—if not all at once, by degrees—enough of the surface soil of a pasture, or any other soil that has not been much cropped, for the growth of wall trees and Vines. All soils that have been dug from a greater depth than 1 foot, if not previously moved, ought to be exposed to the atmosphere for some time before use, as they are deficient of many of the properties contained in a surface soil.—THOMAS RECORD.

TYING AND TRAINING PEACH TREES.

How frequently in walking through Peach houses in the autumn, especially where galvanised wire is used for training-to, will an observant eye fall on shoots nearly cut through by the tie, and gum oozing from the wound. And how often do we hear of the wire being blunted for the gumming, when the fault could in a great many cases be traced to the shoots being too tightly bound-in from the first. As the tying season has again arrived, I think it might be of use to say a few words on the subject to those about commencing the operation.

First, then, for tying with. Never use anything but strips of matting from a common garden mat, and if that has been in use for a time and is half worn out so much the better, as it will break and give way as the branch thickens, sooner than cut into it. I find Japan flax and other strong material very unsuitable for the purpose, as the least pressure will at once cut into, rather than give way to the shoot.

Secondly, Always give the matting a twist once round the wire before tying. This not only keeps the shoot in its proper place, but also prevents its receiving any injury from pressure against the wire, and, above all, be particular never to tie-in too tightly, but always to leave plenty of room for the shoot to thicken considerably, without a chance of being cut.

Lastly, Keep a careful watch over the trees during their growth in the summer, and adopt the same precaution with the tying-in of the young shoots, as they are very tender at that season. By strictly adhering to these simple rules I have always found cutting-in, or gumming, reduced to a minimum.—H. HARRIS, *Naseby Woolleys.*

POLYANTHUSES.—Mr. Horner (page 465), has rightly divined the sort of Polyanthus, which from thrum-eyed became pin-eyed. I pul-out a number of seedlings, raised from purchased

seed, in a shrubbery much too dry for their favourable growth. Among the plants there was one which I thought good enough to be transplanted into the flower garden. It soon felt the difference, grew vigorously, and gave pin-eyed flowers, for which offence it was forthwith remitted to prison diet in the shrubbery. My impression is, though after this lapse of time I do not feel positive on the subject, that the discarded flowers again showed the thrum.—G. S.

ABOUT LEAVES AND LEAF SOIL.

MR. PEARSON has recently related his experience of the use of leaf soil in your pages, and has expressed an opinion adverse to its value as an ingredient in composts for potting, and thinks very little of it as a fertilising agent applied to laud. Advancing his views in regard to this material with characteristic candour, he is still unwilling to dogmatise, knowing pretty well that in horticultural matters instances of failure or success restricted to one locality must be more or less inconclusive, and therefore he invites your correspondents to follow his example, and give a full and fair opinion of the utility of decomposed leaves and leaf soil applied to garden soils and composts for plant-culture. I am quite of opinion with your correspondent, that a discussion that will expose the objectionable qualities belonging to it under certain circumstances, and show in what way it may be most advantageously employed, is calculated to establish facts in relation to its use that will relieve the doubts of many of your amateur readers, and help to warn all who incautiously employ it.

In suggesting the possibility that the leaves of certain trees, notably the Oak, owing to certain undefined properties, do not produce by their decomposition a soil so congenial to plants as others, like the Lime or Poplar, Mr. Pearson opens up an interesting question, which I do not remember to have seen fairly worked-out. Leaves, undoubtedly, possess something of the character and qualities of the trees that produce them. The hardness, toughness, and durability of Oak leaves are thoroughly characteristic of the tree. The astringent character of the bark of the tree is well known, and this is shared in a certain degree by the leaves. Oak leaves are especially liable to the attacks of the gall flies, and the resulting galls, particularly the common form of spangle, in some seasons completely cover the under side of the leaves, and secreting tannic acid may produce a definite effect, when they are largely mixed-up with the fallen leaves. The durability of Oak leaves when thrown together may give fungi an opportunity of spreading through the mass; the mycelium of several kinds of fungi find suitable pabulum in rotting wood and leaves, and leave it like an exhausted Mushroom bed with little that is fertilising in it.

These are possible causes which may help to explain the negative value of decayed Oak leaves or the injurious effects resulting from their use; but as some of the instances adduced are of partial and irregular occurrence, they may be regarded as insufficient to base a general conclusion upon. The suggestion of their existence may be of use. I am disposed to give much more importance to the manner and condition in which the leaves are stacked than is generally assigned to the operation; if in a wet state, bruised, or intermixed with snow when thrown together, putrefactive decomposition goes slowly on, rottenness ultimately ensues, and the result is a sour unwholesome soil, in which it would be dangerous to place any plant but a nettle. But leaves collected in a comparatively dry state, as they may have been this year, and placed together in a considerable body, undergo a wholesome fermentative action, which promotes the decay of the fibre of the leaves, and in two years a mass thus treated, after being turned over and exposed to atmospheric action, may be employed in almost any potting compost.

It may be remarked that the character of leaf soil is influenced in some degree by the soil on which the leaves fall, and from which they are collected. In raking them together there is always more or less adhering soil after the leaves have rested for awhile on the ground, and when rolled down this will be seen. Leaf mould from clay soil always shows a residuum of strong soil, and calcareous soil has a similar influence. Ferruginous land again marks its leaves even more particularly. Leaf soil for American plants is best prepared by spreading leaves on the surface of the ground about a foot in thickness, but not in a mass sufficient to induce fermentation. The decay of Lime, Horse Chestnut, and Poplar leaves is much more rapid than in the case of the harder leaves of Oak,

Beech, or Spanish Chestnut, and I am disposed to think that the softer leaves produce the best soil for garden purposes. I do not value or employ leaf soil as a dressing for any kitchen-garden crop, except Asparagus; in fact, with the exception I have named, I rather avoid its use in vegetable and fruit-culture. As an ingredient in a compost for trees, shrubs, and herbaceous plants it is often eminently useful, and it is an excellent thing to apply to newly-planted shrubs. Properly prepared and sweetened, I have found it useful in nearly all mixtures prepared for softwooded plants. The leaves I use are of Oak, Beech, Lime, Elm, and Spanish Chestnut, and a mingled mass of leaves makes the best soil, though not so enduring a hotbed as Oak leaves exclusively.—W. INGRAM, *Belvoir*.

"ROSES WILL BLOOM, NOR WANT BEHOLDERS."

"I GRANT indeed it hath not appeared, and your suspicion is not without wit and judgment."

To Mr. George F. Barrell's accusation (see page 417), I plead guilty; and when I read it I felt

"That in mine ear I durst not stick a Rose,
Lest men should say, Look where three-farthings goes."

I did enter to show at Spalding, fully intending to show; but He Who rules the storm willed it otherwise, for on the eve of the Show

"Loud roared the dreadful thunder,
The rain in deluge showers;"

and down, down to the bottom of my boots went all my heart's hopes for the morrow! Yet, in spite of all, I was up in the "grey of dawn" next morning, and cut part of a stand of blooms. The dark Roses would have passed muster, but where were my light Roses? Echo, in the shape of spirits damped and hopes deferred, answered, "There they are!" But heart, and body, and soul alive! what a plight they were in!—bruised, stained, streaked, and utterly spoiled!—the sight of which sent me to bed again in a state of mind not to be envied. Who was to blame? Surely not I. True, I might have telegraphed, as the letter I wrote no doubt reached its destination too late to be of service; but I always thought it was an understood thing, that when one made an entry it was with the provision that weather and other uncontrollable matters should be considerations and exceptions. I have entered thus fully into the matter, in hopes that we may get some sort of understanding as to how we stand in regard to obligations when we make an entry to show on a certain day; and I am yet inclined to think it must stand as it is, with the proviso "If I can," for who can tell what the morrow may bring forth?

Now there are but two things I don't quite like when showing. One is, that although I don't mind paying—mark you well—parcels rate for the carriage of my boxes of blooms when going to a show, it "kinder raises my bile" when I am charged the same rate for my empty boxes on my return home. When I am so charged I grant it is an exception, and "my don't likes" in my previous letter are, I am proud to say, exceptions; and although we cannot possibly do away with exceptions, yet let us do what we can to alleviate the evil thereof. My other and last grumble is, that the tickets of admission given us at flower shows as, I presume, a sort of encouragement to come and come again, are almost always of no use! Take the Rose Show at the Palace for instance, although it is the same with the other large shows. On showing for such a prize one is entitled to and receives so many tickets; and unless one is quite certain (impossible) of showing-up and taking one's friends with one, the tickets are of no use. I have posted tickets at 8 A.M. at the Palace, and they have reached their destination in London on the evening of the same day.

Now, if it could be done, I would suggest that when an exhibitor enters to show, that he be allowed, if he wish, to have the tickets he is entitled to some time before the day of the Show, on depositing the money value of such tickets with the Secretary of the Society, such money to be returned if the exhibitor keep his engagement or do not use the tickets—easily arranged, I think, and much benefit and convenience ensured. Please do not conceive that I regard present arrangements as evils—no such thing. I merely wish to draw the attention of committees of management to things that might be made better and more agreeable to all parties. I should be sorry indeed to hurt the feelings of anyone; and should I in this or my previous letter have trodden on the tender part of

any individual I beg his pardon, although there is a little secret feeling in my heart that says—

“Why, let the stricken deer go weep,
The hart ungalled play;
For some must watch while some must sleep,
So runs the world away.”

And now I should like to say just a few words on the “needless fasting,” as “P.” puts it, at the Palace and elsewhere. I see “P.” used to fast, although in his latter days he got eggs and bacon, &c. I wish once and for all to say I, nor any one that I know, desires a breakfast on the free-ticket system, and I am glad to find others bear me out in regard to the want of so substantial and necessary a part of the day’s pleasures. Here is a suggestion: Cannot we exhibitors and friends generally have a jolly breakfast all together? There’s visions of a glorious union for you! See, we should by that means get to know each other when the ordinary course of introduction fails! How I should have liked to have known Mr. R. N. G. Baker—(I feel almost glad that he, too, could get no breakfast; it will help to realise my suggestion)—when he clean beat everybody in the amateur classes last June at the Palace. I had a sort of introduction by taking second rank to him for the forty-eight. I am sure the management will gladly meet our wishes if we but ask them to provide breakfast for a certain number. The few times I have shown at the Palace I have always received the very greatest courtesy from all and everyone I have ever had occasion to ask a favour of, be it ever so small. I know nothing, except to take first for 48’s, that I should look forward to with so much pleasure as the rosarian breakfast at the Palace once a-year. As for the Horticultural at Kensington, why, you have to walk a mile there before you can get water to wash with or bread to eat. At the Royal Botanic it is better, although a little rough.

In the all-absorbing cause (Tieborne be blowed) of Manetti and Briar I say, Go it Manetti, even though you have so strong and staunch a pleader on the other side as the Rev. S. Reynolds Hole; and right pleased am I to see so many good men and true on our side, whoever wins.

“Dear Rose, thy joy’s undimmed;
Thy cup is ruby-rimmed,
Thy cup’s heart nectar-brimmed.”

—W. FARREN, *Cambridge*.

P.S.—I and some Rose-loving friends are anxiously desirous of getting-up an association of Rose-growers and showers in this county or district—I care not whether it be “The Cambridgeshire and Isle of Ely Rose Society,” or “The Eastern Counties Rose Association”—to embrace, say, Cambridge, Norfolk, and Suffolk. Names and suggestions to give it a start will oblige.—W. FARREN, *Cambridge*.

THE PATENT GLASS-CUTTER.

MESSES. DICK RADCLYFFE & Co. have sent us an implement for cutting glass, of which the annexed woodcut is a representation. It “consists of a stem or handle, in which is mounted a small revolving steel cutter, especially prepared and hardened, which cuts or fractures the glass as it rolls over



its surface.” We have used the patent glass-cutter, and have found it to work well. It cuts the glass most thoroughly—quite as well as a diamond, and the only question about it is as to its durability. It appears it can be “made equal to new for the small charge of 6d.”

THE MANETTI STOCK.

I HAVE budded on the seedling Briar for seven years. I quite agree with Mr. Baker that the best stock for Hybrid Perpetual Roses is the Manetti. The Briar is a bad mover, and very subject to mildew. Manettis are at home on any soil, and if treated kindly after being well established they will then do their duty. I find Roses on their own roots do well with me. I put-in my cuttings in the open ground in September, and a good average take root, and they make fine plants for pot-culture in the following season.—J. MAYO, *Oxford*.

RED-SKIN FLOURBALL POTATO.—I tried it during 1872 in heavy soil, in which it grew tubers to a very large size, but they

were very bad—in fact quite uneatable. This year I put them into light sandy loam—they of course did not grow to so large a size—but without any better result, for, no matter how they are boiled, they remain the same. I think the word “flour” might be omitted, and soap substituted.—J. ATKINSON, *Co. Connaught*

THE OXLIP.

I HAVE read with great interest the papers upon Primroses, and especially admire the figures of the Polyanthuses. As to the Oxlip, there is a little misapprehension as to what is intended under that name. Two very distinct sets of plants at least are included under it; the first set embracing the various hybrids between the Cowslip and the Primrose, and also the caulescent varieties of the last-named species; and the second containing the true Primula elatior of Jacquin, which used to be known among botanists as the “Bardfield Oxlip.” Many of the so-called hybrids are simply Primroses, in which the umbel is elevated upon a scape instead of being hidden among the leaves, as is usually the case, for the Primrose is always truly umbellate, though not obviously so. My object, however, in writing this note is not to enter upon a botanical disquisition, but to draw the attention of horticulturists to the true or Bardfield Oxlip, which is scarcely ever seen in cultivation. I have introduced it to one or two of my friends, who speak very highly of its value. One of these has now had it for four or five years in his garden in Cheshire, where it forms large and handsome clumps, and flowers and seeds freely.

It is not easy to define the differences between the true and the hybrid Oxlip, although no one who has seen the two growing would ever confuse them. My Cheshire friend is firmly convinced of the distinctness of the Bardfield plant, although before he had it in cultivation he was inclined to look on it as a hybrid. The more villous calyx, paler flowers, and the absence of folds at the mouth of the corolla are the technical characters given in separating the true Oxlip from the hybrid, and to these may be added many more obvious, if less describable, characteristics, such as the peculiar and rather disagreeable odour, resembling that of the Starh Hyacinth, the comparative uprightness of the leaves, the greater height of the scapes (which I have seen nearly 2 feet high in cultivation), the more compact form of the umbel, and the more drooping flowers. It remains in blossom for a much longer period than other Oxlips, and begins to flower later. This species is found in meadows and copses in Suffolk, Cambridgeshire, and Essex, especially in the north of the last-named county; it takes its English name from Bardfield in this county. The botanical interest of this Oxlip is very great, but need not be gone into here, my desire being merely to draw attention to the plant, and to advocate its cultivation.—J. B. Q.

ARRANGING FLOWERS FOR BOUQUETS.

It is an art requiring no small degree of taste and skill to arrange cut flowers so as to form an attractive bouquet for the vase or basket. It is something, too, which comes to one intuitively, and it can hardly be described in words. However, it may be said in general that the more loosely and unconfused flowers are arranged the better. Crowding is especially to be avoided, and to accomplish this a good base of green of different varieties is needed to keep the flowers apart. This filling-up is a very important part in bouquet-making, and the neglect of it is the greatest stumbling-block to the uninitiated. Spikes and drooping flowers, with branches and sprays of delicate green, are of absolute necessity in giving grace and beauty to a vase bouquet. Flowers of similar size, form, and colour ought never to be placed together. Small flowers should never be massed together. Large flowers, with green leaves or branches, may be used to advantage alone, but a judicious contrast of forms is most effective.

Avoid anything like formality or stiffness. A bright tendril or spray of Vine can be used with good effect if allowed to wander over and around the vase as it will. Certain flowers assort well only in families, and are injured by mixing. Of these are Balsams, Hollyhocks, Sweet Peas, &c. The former produce a very pretty effect if placed upon a shallow oval dish upon the centre table. No ornament is so appropriate for the dinner-table or mantelpiece as a vase of flowers; and if you expect visitors, by all means cut the finest bouquet your garden will produce, and place it in the room they are to occupy. It will tell of your regard and affectionate thought-

fulness in a more forcible and appropriate manner than you could find words to express. If a small quantity of spirits of camphor is placed in the water contained in the vase, the colour and freshness of the flowers will remain for a much longer period. Thus prepared, we have had flowers keep a week, and at the end look quite fresh and bright.—(Maine Farmer.)

NEGLECTED BEDDING PLANTS.—No. 2.

Polemonium caeruleum variegatum.—It is to be regretted that this fine-looking plant cannot be depended on to do well everywhere, for although it has been known a dozen years or more, it is far from plentiful yet. The positions suited to its growth are few, and in the south of England, especially, are somewhat capriciously placed. My own experience with it has not been satisfactory, for with the treatment given to similar plants I have on more than one occasion lost my whole stock, and I find others have been likewise unfortunate. It appears to me that the plant requires more moisture than it receives in a natural way in the south of England; but even apart from that it has some peculiarities which I am unable to understand. The original form of the plant is hardy enough—in fact, it is found wild in some places, as in the north of England, but not very plentiful, and, to the best of my recollection, on a rather stiff soil; I therefore cannot account for the variegated form succeeding so well in certain soils of a widely different character. Where it is found in good condition no variegated plant whatever excels it in appearance. I remember seeing it many years ago at Archerfield in the best possible condition, likewise thriving in other places in the north, also in Derbyshire and the western counties, where rain falls more frequently than in the south-eastern districts. It is much to be regretted that so ornamental a plant should not grow everywhere, for its Fern-like neatly-pinnated foliage and compact habit make it a general favourite. I am no advocate for any plant requiring special treatment, for as most plants used for ornamental purposes are grown along with others, the treatment one receives must in a great measure be the same as that given to the rest.

Sabzia splendens.—This fine plant can hardly be classed as a bedder, for no skill that has hitherto been directed to its cultivation has been able to make it flower early enough in the season to afford anything like the display that is wanted at the present day; but for a late-blooming plant I know of nothing handsomer, and as its flowers endure any amount of rain without injury, it is well worth a place in the mixed border, especially where there is a likelihood of its escaping the early autumn frosts, for no plant is more tender than this. We usually plant a number out of doors in May, and take them up in September for use in-doors. I know of no plant that bears transplanting better; but as a bedding plant it ought not to have a place, except as an adjunct to *Chrysanthemums*, which it, however, precedes by a fortnight or more.

Aubrietia purpurea variegata.—This neat, dwarf, variegated plant is not so much grown as it deserves to be; for, like the *Polemonium*, it is quite hardy—in fact, more so than it, and more ornamental in midwinter. At all times it has a neat and compact appearance, and but seldom runs into the green condition. It is an excellent winter plant, and also deserves notice as a summer-growing one, especially in the mixed border or as a permanent edging, in which case it contrasts well with the turf by which it may be surrounded, and in every other sense is a highly deserving plant. It is equally good in a dry season as in a wet one, and a hard winter makes no impression on it.

Golden Feather Pyrethrum.—It is needless to say a word in favour of this highly popular and useful plant, unless it be to pay the introducer of it a justly merited compliment for supplying one of the easiest cultivated, as well as one of the most ornamental, plants that have been added to the flower garden of late years. A plant that does duty all the year round carries its own recommendation with it. I only wish we had some other plants equally accommodating, with foliage of a different hue, as its form, in my opinion, far exceeds that of the much-vaunted *Colerus*.

Verbena venosa.—This old species thirty years ago was tolerably plentiful and much grown until the more showy varieties, which claims *V. Melindres* as a parent, came into vogue, but *venosa* promises to see the latter out, as there never was a time at which it was so popular as it is just now. To grow *Verbena venosa* well it ought to have a good-sized bed or space to itself, for it cannot so well be pegged down as the other kind, neither does it look so well when submitted to this

ordeal. We have several beds of it here, some of them more than half-a-dozen years old, and the centres of two of our largest ribbon borders were planted with this *Verbena* in 1870 and have flowered well ever since, forming a mass from 2 to 3 feet wide every year and quite 2 feet high by the end of the season. We usually plant a row of *Calceolarias* or other light-looking plants in a line by the side of it, and it invariably looks well. This *Verbena* is easily obtained from seed, which, however, is long in vegetating, but the plants flower quickly when once up. It may also be propagated by cuttings of the roots, but I like seedlings better.

Verbena pulchella.—Like *V. venosa* this is also much neglected, but it is likely to be called upon more hereafter as the more showy *Verbenas* are so uncertain whilst this is always to be depended on. I would give something for a good scarlet variety of this species; a dull yellow or sulphur-coloured one was common some years ago, now and then a sort of creamy white is to be seen, and we all know the variegated form named *Impératrice Elizabeth*. May I ask if anyone has been able to make anything of *Verbena miniata*, a species related to *V. pulchella* but more robust? There is also another *Verbena* of still more robust growth but resembling the once popular class having large deeply-cut leaves; it is *V. tenerioides*, white, easily raised from seed, somewhat coarse in its habit, but of rapid and robust growth, and not so liable to mildew as the florists' varieties.

Fuchsia Riccartoni.—This, perhaps, is of too robust growth to be retained in the list of bedding plants, but it may take its place in the shrubby border, and is well deserving of notice for its neat foliage, abundance of bloom, and general hardiness. Plants here that are fully exposed have stood several years without their stems being killed in winter, but there is not so much advantage in this as might be expected, for they do not flower earlier, or but very little earlier, than those that have been cut down by the winter's frost and have grown again. We have several bushes quite 6 feet high and about 8 feet through, which look the picture of health and whose tips afford quantities of cut twigs for bouquet making.

It would be easy to extend this list by taking in some plants that are now no longer retained on the lists of bedding plants. The double white *Pyrethrum Parthenium* is pretty in its way and for a time looks well, and a bed of the blue *Anagallis* is also sometimes very good. It was a popular bedding plant at one time, but like the *Petunia* not so easy to retain through the winter from cuttings as it used to be. *Cuphea platycentra* and *C. strigillosa* seem also to be neglected now, the former as hardly showy enough, and the latter too late to meet the requirements of the time. Other old-fashioned plants have likewise fallen into neglect, some deservedly so, but some may still have a place assigned them, as no ornamental garden is complete without its mixed border, and in such a place there are a great many useful plants that ought to find a home that is denied them in the parterre.—J. ROBSON.

LEAF MOULD.

It may be interesting to some of your readers to know that I have grown Ferns in a compost of nothing but leaf soil and silver sand, and have always been able to cut good fronds from very good plants, especially *Adiantum cuneatum*, which I have always found succeeded admirably. I have also grown *Azaleas* in the same compost, and, with few exceptions, they have succeeded very well, making good firm wood well set with buds. I do not, as a rule, recommend it for *Azaleas*, but some of your readers may be placed, as I have been, where no peat was to be had without going to the expense of bringing it a long way by rail.

I am not particular about keeping Oak leaves separate for the purpose of making leaf mould; all the rakings of the pleasure grounds and lawns are barrowed together and used in the same manner, as mentioned in your number of December 4th by Mr. Meacock. I also find leaf soil very useful in the spring as a compost for cuttings and seed-sowing.

I may also mention here that I quite agree with Mr. Meacock regarding the value of manure from old Mushroom beds, I always have it saved for use in potting *Pelargoniums*, likewise for many plants in the stove.—G. M. B.

HESSEA SPIRALIS.—Under the name of *Hessea spiralis* I received *Carpolyza spiralis* (Salisbury Parad. Lond. and Herber). The name of *Hessea* was given by some authors to this plant, but is now applied to an allied genus. It is a rather pretty

little bulb, umbellate, with from two to three white starry flowers tipped with green and rosy outside; leaves filiform and spiral. The flowers open in succession, and last a long while. *Strumaria*, *Hessea*, and *Luhodia* are allied genera. These names are to be found every now and then in the nurserymen's catalogues. One of the smaller *Nerines*, *undulata* or *flexuosa*, however, does duty for them in their absence, and comes regularly to hand when any of them are ordered.—**R. TREVOR CLARKE.**

ROYAL HORTICULTURAL SOCIETY.

Would you be good enough to print the enclosed note which I have received from my namesake, though no relation, at Leeds? It may have the effect of causing his excellent suggestions to be acted upon in other parts of the country. Mr. Thomas Wilson when sanctioning his note being printed added, "I take in two gardening papers. It was from letters and leading articles in them that I became aware of what was in agitation for the formation of a real horticultural society. I cannot think that if the attention of the public is called to the question, there can be any difficulty in finding five or six thousand subscribers of a guinea each, to support a society whose sole object shall be the promotion of horticulture in all its branches." A lady Fellow writes me, "I feel it is a disgrace that wealthy England, full of people priding themselves on their parks, arboretums, and gardens with acres of glass, cannot support a Royal Horticultural Society, and nobly. I, myself, know several of such like, who do not belong to it, and when I have expressed surprise, say they do not care for it, quite indifferent." We have hopes of many lady subscribers to the renovated Society; the garden is their province. Is there in Nature a more beautiful object than a fair woman with taste arranging her garden, or showing the flowers she has carefully watched over? Even the thought just now is refreshing, as it takes back to a time when horticulture was carried on without squabbling.

I believe the reason why "wealthy England" does not join the Royal Horticultural Society is, that it looks upon it as a part of South Kensington, and not a horticultural society representing the whole nation. As even wealthy England likes paying a guinea better than two or four guineas and an admission fee, we may hope for some of it joining, as another of our most eminent horticulturists, the Rev. Harpur Crewe, has to-day shown in one of our contemporaries. He says, "Most cordially do I sympathise with the remarks of Mr. Ellacombe, and Mr. Elwes, on the proposals with respect to the re-organisation of the Royal Horticultural Society, and most thoroughly glad shall I be to become a member if they are carried out. I have repeatedly been solicited to allow my name to be proposed as a Fellow, but have always refused, because I could see no corresponding advantage," &c. I have only to add that competent horticulturists in London, are engaged in the work of reconstruction, and that in proportion to the degree in which the country continues to make its voice heard, will their task be easy or difficult.

I shall be happy for the present to receive communications, and to see that any likely suggestions are considered by the proper authorities; but having already much correspondence, any answer must probably be in print. It will be understood that any communication may be printed, unless the contrary is stated.—**GEORGE F. WILSON.**

"3, Hilary Place, Leeds. 5th Dec., 1873.

"Sir,—As one who would be glad to see a purely horticultural society worthy of England formed in London, I shall be happy to become a subscriber to your proposed scheme, and to canvass others in this neighbourhood to join it. I think if local committees were formed there would be no difficulty in getting a sufficient number of persons to join, who, though they might not, on account of their distance from London, be able personally to attend the meetings of the Society, would be glad to assist in establishing a real central Society of horticulture. May I suggest, if the movement goes forward, the formation of local committees to canvass for subscribers?—Yours faithfully,
"G. F. Wilson, Esq." (Signed) "THOMAS WILSON."

Is justice to those Fellows of the Royal Horticultural Society who have been obliged to search out for themselves the inaccuracies in Sir D. Cooper's circular, Mr. George Wilson should make known the name of the person who is responsible for that specimen of "special pleading." By special pleading we usually understand suppressing that which is true, and suggesting that which is false. From the first moment that

I read the circular I felt convinced that the persons who signed after the first three intended only to support the sixth paragraph—*i.e.*, the general proposition that it would be better for both parties if the connection between the Royal Horticultural Society and the Commissioners of 1851 should cease. The Council denies the assertions of the circular, the Horticultural Defence Committee ignores it, the Horticultural Club knows it not, Dr. Denny repudiates it, Mr. Turner is sorry he signed it, and Mr. George Wilson believes in it. Who, then, wrote it? Mr. George Wilson forgets to inform your readers that the Royal Horticultural Society has spent over £80,000 upon the gardens. This at 5 per cent. represents a rental of £4000 per annum; or, taking the value of the lease of thirty-one years and allowing for the £15,000 debentures for which the Commissioners would be responsible, it would, according to the usual mode of computation, represent a rental of nearly £6000 per annum. To this must be added the sum of £500 per annum which the Royal Horticultural Society is bound to pay to the Commissioners.

The public always understood that the Commissioners of 1851 were established for the improvement of science (horticultural included) and art, and not for building speculations; but Mr. Wilson may be right. If the Royal Horticultural Society is moved from South Kensington on the strength of Mr. Wilson's argument, how will it fare with the Royal Botanic and Zoological, and other learned Societies? As a four-guinea Fellow who for more than six years resided entirely in the country, I would point out to those who support the one-guinea fellowship that many country Fellows will naturally take advantage of the change and pay one guinea instead of two, as at present. The proposed power of voting by proxy would be not only inconsistent with the present Charter, but might, and probably would, be used to render the Council of the Royal Horticultural Society a self-elected body. For that reason the horticulturists should most strongly oppose it.—**A LIFE FELLOW, R.H.S.**

You must permit me to reply to Mr. Wilson's letter in your Journal of the 11th inst., recording my repudiation of the appeal contained in the circular issued by Mr. Wilson, and Sir Daniel Cooper. Mr. Wilson states, "that he thought I read through the circular before signing it," ignoring the fact of my distinctly stating at the meeting on the 3rd December, that I did not do so. Mr. Wilson further says, "that I most certainly signed it with the utmost willingness," which is perfectly correct, for when requested by Mr. Veitch to sign it, who in reply to my questions, informed me that its purport was simply an appeal to the Fellows to express their opinions upon the desirableness of the Society giving up the lease of the South Kensington gardens to Her Majesty's Commissioners, provided they would take upon themselves the Society's debenture debt, and come to satisfactory arrangements with us for holding our Shows and Committee Meetings there, as well as an assurance from Mr. Veitch (who as Honorary Secretary to the Defence Committee, I considered its organ), that the circular had been discussed and approved of by the Defence Committee—I did upon the good faith of all this most willingly sign it. But to my surprise when I read in print the text of the circular in question, I found it to contain in addition to that which I understood it simply embodied, several statements which appeared to me to reflect upon the present Council, statements, too, that if not directly false, certainly implied by insinuation what was palpably incorrect, for the present Council cannot be answerable for a state of things therein portrayed, due to acts of former Councils, of which Mr. Wilson was a member. Mr. Wilson's kind consideration for Mr. Turner being in the same penitent state of mind as myself, should have been extended to Mr. Cuthash, and others, also, who have expressed their regret at having been induced to sign it. Mr. Wilson, moreover, suggests as the reason for my withdrawal, "that I appear to have changed my mind." I beg to assure Mr. Wilson that such is not the case, I am still of opinion that if some such arrangement could be come to with Her Majesty's Commissioners as was intimated to me by Mr. Veitch, it would be most desirable.—**JOHN DENNY, Stoke Newington.**

PHAJUS GRANDIFOLIUS.

MR. THOMAS MEEHAN exhibited a flower of *Bletia Tankervillei* (*Phajus grandifolius* of some authors), in which the dorsal sepal, or, as some authors contend, petal, had united with the column, and had been much retarded in its develop-

ment accordingly. He said that he had several dozen of flowers produced in this way this winter, all however confined to separate spikes from those which bore the perfect flowers. In some cases flowers were produced which had two of the exterior petals united together perfectly, in which case they formed a hood over the apex of the column. As changes of a similar character were not uncommon in orchidaceous plants, it was likely this form of changed structure had been seen before, though not falling within his own observation. It was usual to pass over these appearances as "monstrosities," but in truth the whole Orchid structure was little less than a monstrosity. If we except the character of the position of the seeds in the capsule, there was little to divide an Orchid from an Iris, beyond the power of combining organs which are free in the Iris—the power which produced the "monstrosity" we see. The stamens were entirely coherent with the pistil in orchidaceous plants, and free in the iridaceous. He had seen in a "monstrous" *Habenaria* the lip so transformed, that the whole flower had as regular an appearance as a *Sisyrinchium* in the Iridaceæ.

He did not think as much had been made out of the changes of structure in Orchids in the study of evolution as might be, in consequence of the impression that these abnormal forms, as they were termed, were monstrosities, or the result of cultivation. There had been already on record accounts of changes in wild Orchids more remarkable than many much dwell on by modern writers on development. Sir R. Schomburgk described and figured forty years ago in the "Linnæan Transactions" (15th vol.), three distinct genera—*Catasetum*, *Macranthus*, and *Myranthus*—all growing out of one plant in Demerara; and seed which he took from one of these, and scattered on a piece of rotten wood, produced plants with flowers of one of the other genera. All these facts showed that the power of cohesion of one organ with another was one of the leading forces at work in forming the orchidaceous structure; and, as we saw in the specimen exhibited, this power could be readily obstructed, so as to produce many variations, it could hardly be said that genera were founded on any absolute law.

He further remarked that, in examining closely the flowers of *Pletia Tankervilleæ* early in the morning, he found on the outside, at the base of the three exterior petals, a liquid exudation from a small gland. It was highly probable that these glands were rudimentary spurs, and that, if the course of nutrition which sustained the cohering power of an Orchid could in any way be diverted before the final direction of form, each of these outer petals might take on some of the labellate character with its attendant spur, which gave such a peculiar appearance to so many orchidaceous plants.

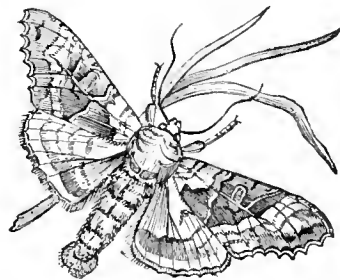
At a subsequent meeting Mr. Meehan observed that, by the mere cohesion of one of the dorsal petals with the column, a flower differing very much from the general condition was the result; and that it was evidently the direction of nutrition towards the production of a spur, which resulted in the formation of the labellate petal which gave such a distinguishing character to the general Orchidææ flower. At that time he had observed that very early in the morning a very small secretion, from what appeared to be incipient glands, might be seen at the exterior base of the outer petals, and that there was no improbability that in time an Orchid would be produced which would have, from these glands, three spurs and their petals, giving the flower the appearance of an *Aquilegia*. Since that time Dr. Maxwell T. Masters, in the April 12th issue of the *Gardeners' Chronicle*, notices the receipt of a *Phajus Walliechii* in which there had been produced three spurs and regular petals, looking, Dr. Masters says, rather like those of a *Gladiolus* than of an Orchid. This confirmation of the views, suggested in the observations referred to, indicate that we were on the right track as regards idea of the floral structure.—(*Proceedings of the Philadelphia Academy of Sciences.*)

THE BEAUTIFUL AND USEFUL INSECTS OF OUR GARDENS.—No. 12.

Many persons strongly object to having Ivy growing upon a dwelling-house, resting their dislike to the plant mainly upon the assertion that it harbours insects, which cannot well be denied, though there is not much evidence that from the Ivy on the wall these insects transfer themselves to the interior of the domicile. Others will add the dictum that "the smell is unwholesome," which one rather inclines to meet with a flat denial. Gardeners share, in some cases, with those indivi-

duals this dislike to a plant which, in several of its varieties, is an ornamental, and may be at times even a useful inmate of the garden. Certainly no one admires what is not unfrequently to be seen in suburban gardens, a wall skirting a flower bed, the said wall being raggedly clothed with Ivy, with occasional tendrils drooping in a languishing manner on the soil, or grasping some shrub in an awkward embrace.

Flowering late, the Ivy serves to sustain life in many creatures of the insect race, for its green and rather peculiar blossoms are rich in honey. The swarms of bees and flies besetting it on sunny days are particularly noticeable, and this fact possibly leads some to look upon the Ivy as a great producer of insects, whereas it is simply a source of food to insects bred elsewhere. And a very slight amount of observation would show anyone that few of the insects resorting to Ivy bloom in October and November are enemies to the gardener. Such moths, it is true, as the Gamma (*Plusia Gamma*) and the Angle-shades (*Phlogophora metiuclesæ*) are to be seen at it now and then. The eagerness with which some species of insects resort to this is to be explained by the supposition that it is often their last resort ere they go in the state of hibernation. Certain species, especially of the Hymenopterous order, will at times be observed actually biting the not yet expanded blossoms in their search for food. The berries of the Yew have a like fascination in autumn.



Phlogophora metiuclesæ.

Many of the autumn moths die-off under the influence of a frost in November or December, though some reappear in the spring. Gardens and outbuildings afford shelter in the winter months to a proportion of these, and it by no means follows of necessity that all the moths the horticulturist in his "clearing-up times" dislodges from various nooks and corners, must all be next year the parents of broods of caterpillars that will work him injury.

The Green-brindled Crescent (*M. Oxyacanthæ*) is a moth common about our London suburbs, occurring in some seasons late in the autumn. Though not, perhaps, often observed by gardeners in its preparatory stages, the species is found throughout these islands, often passing its whole existence about or in cultivated ground, as the chief, if not the only, food of the caterpillar is the Hawthorn. But it has never yet been so far abundant in our Hawthorn hedges as to be deemed a hurtful insect. This is a handsome moth, though not of large dimensions, the wings only about $1\frac{1}{2}$ inch. The general colour of the forewings is reddish brown, but over the surface there are diffused a number of scales of a metallic green, there are several black streaks and dashes, and parallel with the hind margin a broad pale band, and at the extremity of this, near the inner margin, there is a white crescent. A variety is sometimes taken in which nearly the whole of the wings are of a dull brown. Some old entomologist was so charmed with this moth that he designated it the "Ealing Glory," probably from the locality in which he took some; but as this name was open to question, and might apply to some splendid young lady of that district, an appellation taken from the peculiarity of the markings has been substituted by modern writers. The Latin name is, appropriately enough, taken from the food-plant.

The larva exhibits nothing striking; unlike most of the Noctuae, it is a day-feeder. Its body is humped slightly on the twelfth segment, and dotted with white, the general colour being a dark brown, the legs and claspers contrasting with this, as they are green. The eggs are in all probability invariably deposited on the twigs of the Hawthorn in autumn, the young caterpillars hatching-out in April, and feeding during that month and the following. Descending to the surface of the

earth, they there spin cocoons of silk, interwoven with fragments of leaves and particles of mould, and the moth emerges about four months after. *M. Oxyacantha* may be seen at evening, not only on Ivy, but hovering about flower-beds and greenhouses; and should a by-passer shake the bush in which it is reposing by day, the moth comes tardily forth and flies a short distance to enter some covert again.

A yet more beautiful moth (also autumnal) belongs to the same family as the preceding, and it is one of our few green Lepidoptera. The *Merville-du-Jour*, as it is called, bearing French words as its vernacular title, also known as *Agriopis Aprilina*, has the head, thorax, and forewings pale green, the latter also ornamented with black and white markings that sometimes gather themselves into an indistinct band; the hindwings are smoky black, with marginal white spots, and the abdomen is of the same dark hue. This moth has a partiality for sweets, that draws it from the fields and woods towards the flower garden, and it forms one of the troop that seek Ivy bloom on mild evenings in November. We have records of its capture in nearly every county in England or Scotland, though now, to appearance, uncommon in the vicinity of the metropolis. No doubt, when extensive Oak forests surrounded London, *A. Aprilina* was more plentiful than it will ever be again in these suburban districts. The caterpillar of the species is stout and very smooth, remarkable for having a dark mark like the letter X on the head, which is greenish; the body is a little deeper in colour, with lozenge-shaped markings along the back, and having a pale stripe, or sometimes a series of white spots, above the feet. During the day this caterpillar conceals itself, when it can, in crevices of the bark of trees; it is, I believe, rarely found upon saplings, and sometimes ascends the Oak to a good height, thus escaping the eye of the entomologist. In June the insect is prepared to undergo its transformation to the chrysalis state, for which purpose the caterpillar goes deeply into the earth, making, however, only a slight cocoon. The specific name, *Aprilina*, points to a spring emergence, as well as an autumn one, at least when the insect was first recognised by naturalists; and it is a notable and rather a curious fact that some species have changed their habits, more or less, in the course of the last fifty years consequent upon alterations in our climate, or through their having taken to a different food-plant than they formerly resorted to. It might also be noticed, *en passant*, that the diminution of our woods has forced some insects to take up their abodes in our gardens.

The pretty little moth, the Sallow (*Xanthia cerago*), may be knocked-out of garden hedges in the autumn when there are scarcely any leaves left. I have not observed it at sugar or Ivy bloom, but others have so taken it. If a bush is shaken in which an individual of the species is resting, the moth generally falls with legs folded, as if dead. The forewings are of a delicate yellow, the two estomary spots known as the discoidal spots are brown, and there are other brown markings slightly purplish in most individuals. The thorax is bright yellow and crested. The hindwings are silvery white. On the Continent specimens are taken occasionally with all the surface of the forewings yellow, save one central spot. It is only of late years that the transformations of the species have been observed in England, the caterpillar lurking in the buds of the Sallow during spring. This is dull brown and striped, sharpened towards the head. After it is about half-grown it generally quits the tree, and betakes itself to low plants, not being particular as to species.

The Gem (*Campptogramma fluviana*) is a near relative of the excessively abundant moth (*C. bilineata*), of which every hedgerow in June and July furnishes its scores. In size *C. fluviana* is inferior; it occurs later in the year, even in mild seasons, towards the close of autumn. It is a fact in the history of this species (which seems to be more common near London than elsewhere), that the two sexes present such differences that they were once supposed to be distinct. The female insect is the more handsome, having forewings of a purplish brown, with a very clearly-defined white spot, and grey hindwings marked with wavy lines. In the male the forewings are clay-coloured or brown, with a darker band, in which is enclosed a light spot similar to that seen in the female. There are also a few white lines in some individuals of both sexes. What is also not so easily explained is that there are two varieties of the caterpillar of *C. fluviana*, but these do not develop respectively into males and females, as might be supposed. One of these is yellowish green, and the other rather greyish; both have been taken feeding on the

common *Persicaria* and the Groundsel, yet not, we may suppose, limited to these. I have found the perfect insect sitting on garden walls; it is also addicted to immolating itself at gas-lamps. From its rather retired habits in general we may conjecture that in some counties its being unknown arises from its being overlooked, and not actually absent.—J. R. S. C.

KEEPING GRAPES IN WINTER.

We have recently received letters from various localities, stating that Grapes that should have hung in good condition on the Vines for a long time have moulded and dropped from their stalks. In one case, the whole crop of Muscats was literally lost. Considering the general dampness and want of sunshine which characterised the Grape-ripening months of August and September, and the heavy rainfall, it is not by any means surprising that Grapes should, in many instances, not keep well. There cannot be a doubt that the successful keeping of Grapes throughout the winter depends very much on the circumstances under which they are ripened. At the same time, very much depends on the way in which they are managed after they are ripe, especially from the middle of October up to the time that the Vines shed their leaves and become comparatively inactive. We know, from the loss that has occurred to several, that this is a subject that may be discussed with profit to some of our readers; and, after opening the subject with a few remarks, we shall be very glad to have the experience and ideas of our correspondents.

Glancing first at the difference which certain treatment in the ripening of Grapes makes to their hanging for a length of time after they are ripe, with the greatest possible freshness and the least possible loss from damping and decay, we consider it of great importance that they should be grown and ripened under the influence of as much light as possible, and freely subjected to a circulation of dry warm air. The character of Grapes grown under the influence of a moist, steamy atmosphere, with a less amount of ventilation, is very different to those managed on the drier and more airy system. There is not only a flabbiness and dropsical character produced in the whole growth of Vines under close moist treatment, but the fruit, as all experienced Grape-growers know, partakes of this characteristic. The berries may perhaps be larger, but they will be less fleshy and more tender-skinned. In short, a predisposition to ferment and rot when the trying season comes is imparted to them. On the other hand, when cultivated on the dry and airy system, the berries are firmer, and the whole system of the Vine gets into a more matured or ripened state. We consider it of much importance that Grape crops—especially those in the northern parts of our kingdom—should be completely ripe by the first week of October, and finished, too, under the influence of a circulation of dry warm air, produced, if the season render it necessary, by fire heat. Unless Grapes are thoroughly ripened, and the sugary matter in them well developed, they are much more likely to ferment under the influence of too much moisture at the roots of the Vines or in the air of the vinery. Grapes ripened in a light and large airy vinery are much more likely to be ripened off in that condition which not only constitutes them better Grapes, but also much easier of keeping well after they are ripe.

Turning now to the leading points of management in keeping Grapes after they are quite ripe: there can be no doubt that the most disastrous failures have occurred from the want of studying the laws of heat and moisture in their relation to the Grapes. If water stagnates about the roots of Vines in winter, that alone is enough to cause the Grapes to mould and decay. But the more general cause of failure arises from moisture settling on the bunches. The drainage of the border should be thorough. Not only so, but, in wet localities especially, it will be an advantage to throw heavy rains off the border by means of wooden shutters or tarpauling, after the middle of October at the latest. Still, and although this precaution of protection from rains is desirable, we could point to many cases of the most perfect success where such protection was never adopted, but where the borders were well drained.

The chief secret of success lies in the ventilation and firing of the vinery; and when these points are judiciously carried out, Grapes often keep well, while other matters may only be second-rate. First, it is necessary that the berries be more severely thinned than for summer Grapes, so that the air can circulate about the whole of the berries; for it is damp settling on the berries that produces the mischief, and, as a consequence, this is the thing by all means to avoid: hence the too

common practice of ventilating freely on damp foggy days is a great mistake. This is simply drawing a volume of air surcharged with moisture through the vinery, to be condensed on the bunches and Vines. Fire heat in conjunction with ventilation on such days does not mend the matter; it rather increases it, by causing a more rapid current of damp air to pass through the vinery. The thing to do is to keep the house close, especially at the front, during foggy damp weather; to keep the temperature about 45°, and just a chink of air at the top, but, if possible, in such a manner that damp does not fall into the house: hence the value of wet-weather ventilation, as it is called. The time to fire and ventilate Vines freely is on bright dry days, when it is certain that in the circulation more damp can be expelled than there is admitted, and always dropping the heat to the minimum of 45° to 50° before night. All inside surfaces should be dry after the 1st of October, and never moistened, and a low stagnant temperature should be avoided. The result of having the air and Grapes inside the vinery as cold as the external atmosphere, or nearly so, is, that the moisture that is admitted with the air from the outside condenses immediately on the surface of the berries; whereas, when they are warmer than the external air, they do not act as condensers. This law of heat and moisture is very strikingly exemplified by walking into a moist stove with a piece of smooth cold wood or slate, or, in fact, any cold, hard, smooth substance. The result is, that it is immediately covered with dewdrops. The cold substance has condensed the particles of moisture in the warm air—and just so the Grapes act to their own destruction. The temperature should therefore be kept steadily above that of the external air, to prevent this destructive result. We know of a whole vinery full of Grapes being lost last year by an amateur, simply by his keeping the front and top ventilation always open in the dampest weather, and so subjecting the Grapes to a cold vapour bath.

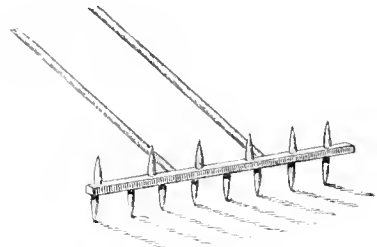
There is one particularly ticklish time or stage when Grapes are the most difficult to keep, and that is, just as the foliage begins to change to the "sere and yellow leaf." Some varieties of Grapes are then very subject to go wrong under the best treatment. Small white stars of decay, cutting into the skins and radiating from a centre like a star, first appear, and soon the whole berry goes wrong. The first signs of this should incite to more vigilance. The affected berries should be at once removed, and all the laterals where there are any; and where there are not, a portion of the foliage should be removed, so as to let light and air play more freely about the bunches. We have known the progress of decay arrested by removing part of the leaves while they were comparatively fresh. No doubt the removal of part of the foliage helps to paralyse the roots, and prevent their pumping up a superabundant supply of sap to the Grapes in a crude state; at all events, it admits a freer circulation of air, and a stagnant atmosphere is an evil. We have kept Grapes this season till very lately in a low sunk pit under obscured glass, and, we may say, under a constant downpour of rain, by simply keeping the pipes constantly warm, and surfaces perfectly dry, so that the Grapes were always too warm to condense moisture. Out of three hundred bunches under such conditions, not 2 lb. were lost by decay; while if the fire heat had not been constant, and a cold stagnant air allowed, we are certain the result would have been the very reverse.—(*The Gardener.*)

SOWING.

We certainly were surprised to receive a letter from "A. F., Somerset," asking "whether seed might not be sown very deep so as to avoid the need for earthing-up?" In reply we will quote what we wrote "long, long ago." "Every kind of seed has a particular depth below the surface at which it germinates most vigorously, as securing to it the most appropriate degree of moisture, of oxygen gas, and of warmth. From a quarter of an inch to 2 inches beneath the surface, appear to be the limits for the seeds of plants usually the objects of cultivation; these, however, must vary for the same seeds in different grounds and countries. It must be the least in aluminous soils and dry climates. In general, sowing should be performed in dry weather, especially on heavy soils, not only because of the greater saving of labour, but because it prevents the seed being enveloped with a coat of earth impermeable by the air, 'which,' says Sir H. Davy, 'is one cause of the unproductiveness of cold clayey soils.' Perhaps the time at which any ground may be raked with the greatest facility is as good a

practical criterion as any to judge when it is most fit for sowing. In general, if clay does not predominate in its constitution, a soil rakes best just after it has been turned up with the spade. If clay does predominate, it usually rakes with most facility after it has been dug two or three days, and then immediately after a gentle rain. But it is certain that the sooner seed is sown after the soil is dug for its reception, the earlier it germinates. In the droughts of summer water is often required to newly-sown beds. Such application must not be very limited or transitory: for if the soil is only moistened at the immediate time of sowing it induces the projection of the rootlet, which, in very parching weather and in clayey caking soil, we have known wither away, and the crop consequently lost from the want of a continued supply of moisture."

But "A. F., Somerset," goes on to observe, "I prefer broadcast sowing, because I can sow thinly or thickly as I think desirable." To which we reply we always sow in drills, not only because it enables us to sow thickly or thinly, but because it enables the plants to be thinned and kept free from weeds most readily. We were pleased, therefore, to see the following in the *Canada Farmer*—"The usual method of sowing seeds is to scatter them in shallow drills. We give an engraving showing the most convenient form of an implement for making these marks or drills. There are two sets of teeth, one on each side of the main bar, one set 12 inches apart, the other set 9 inches apart. It is used by first stretching a line tightly across the bed, then set the outer tooth against the line and



draw the marker steadily along the line. Having drawn it once across the bed, the outside mark will now receive the outer tooth, and the instrument be drawn back to the opposite side of the bed. It will be at once seen that with such an instrument seeds may be sown in drills either 9, or 12, or 18, or 24 inches apart, as circumstances require."

CHRISTMAS ROSE.

I ENCLOSE a variety of Christmas Rose which I received some years ago from a nurseryman in Brittany. Its peculiarity is having a bud as well as a bloom on each stalk (the common Christmas Rose, *Helleborus niger*, having only the single bloom), as well as the length of the stalk, and the magnificent leaf, so different also from the common variety. I have several clumps of them in borders round and adjoining the house, and the effect is most beautiful, the buds all having a rosy tinge outside; and for ladies' hair they, the large blooms, are exquisite, looking like Water Lilies.—*CENTURION.*

[It is *Helleborus niger* var. *major*. It is very fine and not common.—*EDS.*]

ENTOMOLOGICAL SOCIETY'S MEETINGS.

THE first meeting of this Society for the present season was held on the 17th November at Burlington House, Piccadilly, in the new rooms of the Linnean Society, to whom a vote of thanks was proposed by the President, Professor Westwood, for their kind permission to occupy their apartments during the present term. An extensive series of entomological publications received during the past vacation were laid upon the table of the meeting-room, and thanks ordered to be given to the various donors, including most of the Natural History Societies of England and abroad.

Mr. Higgins exhibited some splendid specimens of the Spurge and Pine Hawk Moths, *Sphinx Euphorbiæ* and *Pinastri*, reared from larvae dug near Harwich in June, 1872. Mr. Champion exhibited *Pachnobia alpina* and species of *Anisotoma*, *Leiosoma*, and *Harpalus*, new to this country, taken near Breemar. Mr. Boyd exhibited living specimens of the larva of *Brachycentrus subnubilus* (a species of Trichoptera), residing in curiously formed quadrangular cases amongst Pondweeds, &c., which had been reared from the egg state. Mr. Albert Müller exhibited

specimens of the Wingless Gall-fly, *Cynips aptera*, ordinarily bred from galls at the roots of the Oak, but which Mr. Masters had, obtained from galls of the Deodar, being an interesting instance of acquired diversity of habit. Mr. Smith stated that he had also obtained it from Horse Chestnut root-galls. Mr. George W. Bird exhibited reared specimens of the rare Moth *Chilo gigantellus* from Horning Fen, and Mr. Vaughan specimens of *Pempelia Davisella* reared from the common *Ulex* in the Isle of Wight. Mr. S. Stevens exhibited some rare Lepidoptera recently captured on the south coast, including a singular variety of *Hipparchia Galathea*, *Leucania L-album*, *Cerastis erythrocephala*, *Acontia solaris*, &c.

A paper by Mr. J. P. Weales was read, entitled "Notes on the habits of *Papilio Merope*, with a description of its larva and pupa;" also a paper entitled "Observations on *Papilio Merope*, with an account of the various known forms of that Butterfly," by Mr. Trimen. This is a swallow-tailed Butterfly common in Africa and Madagascar; the females in the latter island resembled the tailed males; but on the African continent the females are tail-less and quite unlike the males, as they also differ from each other, having been described under several names and regarded as several quite distinct species. Mr. Miskin also sent some notes on *Mynes Guerinii* of Wallace, from Queensland, which he considered to be identical with the type species, *M. Geoffroyi*. He also described the curious habits of the chrysalids, which are suspended close together in little groups of three or four individuals united at the tails.

The December meeting of the Society was held on the 1st of the present month, N. T. Stainton, Esq., being in the chair.

Mr. Bond exhibited a hybrid specimen between *Closteria curcula* and *C. reclusa*. Mr. Weir exhibited a number of specimens of a minute Hymenopterous insect which he had observed in the month of June last on a Pear leaf in his garden. They were congregated together on the leaf like a swarm of bees, though the object of their so congregating did not appear.

Mr. Dunning read some portion of a letter which he had received from a Mr. Thomas Nettidge, enclosing the eighth annual report of the Canterbury (New Zealand) Acclimatisation Society, and stating that the Red Clover had been introduced into the colony, but that they had no humble bees to fertilise the plant; also that certain Lepidopterous insects had been accidentally imported into the island, but that the corresponding Ichneumons were wanted to keep down their numbers. He would be glad of any suggestions as to the best mode of introducing both humble bees and Ichneumons into the colony as might be requisite.

Mr. Baly communicated a paper on the Phytophagous Coleoptera of Japan, being a continuation of the paper contained in the Transactions of this Society for 1873, page 69.

Mr. Bates communicated a paper on the Longicorn Beetles recently brought home by Mr. Thomas Belt from Chontales, Nicaragua, being supplementary to that published in the Transactions for 1872, page 161. The additional species amounted to thirty-seven, which, with those enumerated in the former paper, brought up the total number to 399. Mr. Bates remarked that a work by Mr. Belt would shortly be published on Nicaragua, which he thought would be of great interest to entomologists.

A paper was communicated by Mr. W. H. Miskin, of Queensland, containing strictures on a catalogue of the described species of diurnal Lepidoptera of Australia by Mr. George Masters, of the Sydney Museum. Mr. Miskin made observations on the synonymy adopted by Mr. Masters, showing that in his opinion important errors existed, and also that many species known to inhabit Australia, as well as other reputed species, were entirely omitted in the catalogue.

A fourth portion of the "Catalogue of British Insects," published by the Society, was on the table. It contained the Hymenoptera (*Oxyura*), compiled by Rev. T. A. Marshall, M.A., F.L.S., &c.

NOTES AND GLEANINGS.

At a recent meeting of the Edinburgh Botanical Society the Curator of the Royal Botanic Gardens delivered an address ON THE CHANGE OF CLIMATE north of the Tweed. It appears that "Caledonia stern and wild" has witnessed much diminution of the summer heat during the last fifty years. From this cause, fruits of the Plum tribe cannot be ripened in the open air to the same perfection as formerly, while Tomatoes, Asparagus, and Mushrooms are gradually disappearing. The Rock Rose and the common Myrtle are now rarely seen, and the Almond, which formerly flowered freely, will not set its flower buds. The Larch, in spite of vast quantities of seed imported, is declining in vigour, and there is a talk of substituting for it the Wellingtonia as a nursery-tree. Forty years ago the Esperan Grape, the Mulberry, and the Fig ripened on the southern exposure in Edinburgh as well as in London, but now flue fires are an essential condition to

their attaining maturity. With this modification of climate, alterations have been noted in the types of disease, but authenticated data are lacking as to the extent to which this has taken place. Mr. McNab's proposal that a committee should be appointed to investigate the whole subject of the change of climate in Scotland, will, it is hoped, be carried into effect.—(*English Mechanic*.)

— GARDENERS' ROYAL BENEVOLENT INSTITUTION.—In the *Times* of the 5th inst. there is an announcement that the late Mr. Andrew Barnett, of Maeclesfield, has left to the Gardeners' Benevolent Institution £1000, payable on the death of his widow. The deceased gentleman was not a subscriber.—
EDW. R. CUTLER.

DRAYCOT,

THE SEAT OF EARL COWLEY.

SOME four miles from Chippenham, a quiet old borough and a market town greatly resorted to for cheese and cattle, is Draycot, which forms the subject of our present notice. Of its history before the Conquest we can give no outline, but from then to the present time it has always formed part of the possessions of a family of importance.

When Domesday Book was compiled the manor was held by the warlike Bishop Geoffroy, of Coutances, who, "by his advice, prayers, and arms," aided William the Conqueror, who in return gave him this and more than four hundred other English manors. It passed to the family of Cerne, and from them the village was distinguished from other villages of the same name by being called Braycot Cerne. It was held by them of the Crown by Petit Serjeantie, their service being acting as marshal at the coronation.

From the Cernes it passed, by marriage, to the Longs, of Wraxhall. We will mention but few of this family. Sir Walter Long, in the reign of James I., was the intimate friend of Sir Walter Raleigh, and through him obtained tobacco and introduced it into North Wiltshire. "In those days," says Aubrey, the antiquarian, who, it is believed, was buried at Draycot, "the gentry had silver pipes. The ordinary sort used a walnut-shell and a straw. I have heard my grandfather Lyte say one pipe was handed from man to man round the table. It was sold then for its weight in silver. I have heard some of our old yeomen neighbours say that when they went to Malmesbury or Chippenham they culled their biggest shillings to put in the scale against the tobacco."

In 1735 one of the Longs married the eldest daughter of Child, Earl Tilney. The family then became known as the Tilney Longs, and the estates devolving to a female, Catherine Tilney Long, she married, in 1812, William Wellesley Pole, who changed his name to William Pole Tilney Long Wellesley, from whom it passed to the present branch of the Wellesleys, Earl Cowley.

The mansion, of which the accompanying illustration gives a faithful view of the east front, is of Bath stone; part of it is three hundred years old, but the rest is more modern, a portion having been added a hundred years ago, and some of it is of quite recent date. Nestled close beside it is the church, dating from the beginning of the thirteenth century, and in which is the tomb of the founder, Sir Edward Cerne, besides other interesting memorials of the past, including many of the Long family, whose descendants have held the estates about four hundred years, and one of whom, in the Civil War, raised a regiment of horse in support of the royal cause.

Standing on the terrace at the east front, with the church on our right, the graceful sweep of the approach road is singularly pleasing, and in approaching the mansion there is nothing to distract the eye from the building and the green turf save two circular beds of *Rhododendrons*, a remarkably fine *Larch* and *Alder*, and large *Beech* trees. The south front overlooks a lake crossed by a bridge, and the west a small flower garden of simple design in two panels sunk in grass, each having a large raised circular bed for its centre, surrounded by four corner beds of less size, with their inner sides curved so as to correspond with the circumference of the circle. This flower garden, however, is of very limited extent compared to the importance of the mansion, and we believe it is intended ultimately to extend it by clearing away to the level the terrace which forms its western boundary, and which at present is studded with standard *Rhododendrons* and *Portugal Laurels*. Passing round the house to the north, on that side we find a noble *Cedar of Lebanon*, 100 feet or more high, but, unlike the grand trees at Stratfieldsaye, not forming a

single stem but branching near the ground, and these branches again subdividing.

Altogether the pleasure grounds cover fourteen or fifteen acres, and though, as will be seen from this statement, not nearly so extensive as those at some other places which we have had occasion to notice, they are agreeably and not pretentiously laid out, and at various parts present us with fine Poplars, Planes, Copper Beech, old Yews, and there are, besides, numerous promising Conifers, but these are mostly very young. The beds at the sides of a walk leading eastward near the boundary of the pleasure grounds are planted as a winter garden, and a number of Thujas, Deodars, Picea Pinsapo, &c., are also here introduced. A slice has likewise been taken out of the park, and planted with shrubs, but

these are of no considerable size at present. We may also mention that the old kitchen garden has been done away with and turned into pleasure ground, and a new one formed, connected by winding walks passing over rustic bridges across the lake, at the head of which the waste water is carried away to the Avon by waterfalls, one of which looks very pretty when the water is dancing in the sunlight over its rubbly bed.

In close connection with the pleasure grounds is the park; this is between two and three hundred acres in extent, and has an undulating surface well clothed with trees, chiefly Oaks and Elms, with some Spruce and Scotch Firs, and Chestnuts. From a spring in one part of it the mansion can be abundantly supplied, in case of need, with water carried through pipes by gravitation, but the ordinary source of supply is from two



DRAYCOT.

springs in the pleasure grounds whence the water is elevated by an hydraulic ram.

The kitchen garden, as already remarked, is entirely new, having been formed only three years ago; accordingly the 12-foot walls enclosing it, with one exception stone faced with brick, and provided with a broad stone coping, are as yet far from covered. The total extent, including the outside slips, is about four acres. There are two defects in its arrangement: the one that there is a less extent of wall with a south aspect than of any other exposure; the other that the glass structures run across the middle of the garden, and present their backs to the visitor entering from the pleasure grounds. This could be altered by erecting an entirely new range, which is much wanted; but the other defect could only be remedied by extending the garden from east to west, or by introducing a cross wall running in the same direction. The soil is a light hazel loam on a gravelly subsoil, which naturally is at no great distance from the surface, but its depth has been increased to between 2 and 2½ feet; all kitchen garden crops do well in it, but Pears on the Quince stock, we are informed, do not thrive, and from what we saw of it in another place we should conclude that neither Apples nor Pears would reach any great size, or prove very productive. The walls are edged with a double row of rough pieces of stone, stuck in edgewise, and it is intended to plant Irish Ivy between so as to form a neat evergreen edging.

The glass houses are neither numerous nor large. The first we entered was a vinery 35 feet long by 16 feet wide, the Vines that had borne their crop laid down outside, and the brick bed in the middle devoted to forcing Roses, especially the Tea-

scented kinds as Safrano and Souvenir d'un Ami. Among the larger plants were several excellent specimens. Dracenas, which are required in great numbers for the decoration of the house and other purposes, sweet-scented Geraniums, and Gardenias were the principal of the other occupants. In the stove, which is of about the same dimensions as the preceding house, two plants of *Stephanotis floribunda* are the most noticeable feature, covering the whole roof, too densely indeed, and as many as 1600 flowers have been cut from them in one day. Beneath were *Alceasias*, *Dieffenbachias*, *Begonias*, both ornamental-leaved and those cultivated for their flowers, *Euphorbia jaquiniflora* and *splendens* two of the most ornamental of winter-blooming plants, Palms, and some Ferns. In the greenhouse again were two plants of *Stephanotis*, one of which was in flower and in fruit as well, but they cause too much shade for the success of many plants. Chinese *Primulas*, *Cyclamons*, *hoantophyllum minutum*, *Justicia purpurea*, and some other subjects, however, contributed to keep up a gay appearance. The Mosaic house is flue-heated and that, it would appear, not sufficiently for the proper setting of that variety. There is likewise a conservative house for *Camellias* and *Orange trees*. In pits we noticed *Neapolitan Violets* in quantity (and *Violets* are also grown by the thousand out of doors), *Roses*, *Azaleas*, *Stephanotis*, *Lily of the Valley*, and *Gardenias*. The last are special favourites, and a whole range of pits is devoted to them alone. *G. florida* is the species preferred, but *G. Fortunei*, *radicans*, and *radicans major* are also favourites. Blooms are cut all the year round, and in what numbers may be judged from the following register of the numbers cut in the present year, which Mr. Green, the

obliging gardener, has kindly placed at our disposal:—January, 15; February, 36; March, 315; April, 2512; May, 3331; June, 1290; July, 2842; August, 2502; September, 1688; October, 811; November, 531; December 117—total, 15,396.

In concluding this notice we have to tender our thanks to Mr. Green for his pains in pointing out all that was noteworthy, and to the Rev. C. R. Awlry for much information relative to the history of the church, but which would be of more interest to the antiquarian than to the gardening reader.

WORK FOR THE WEEK.

KITCHEN GARDEN.

While frost continues wheeling may be more expeditiously and cheaply carried on than when the surface of the ground is soft. Cover *Celery* with dry litter to protect it from frost; and *Cauliflowers* planted under hand-lights or in frames should be guarded from damp by admitting air on every favourable opportunity, and a slight protection from frost will be necessary, particularly where the plants have not been properly hardened. *Endive* and *Lettuce* in cold pits will require protection from frost, and air to dispel damp whenever coverings have been used. Continue to pay attention to *Cucumbers* in houses, and above all things keep them free from insects, as on this depends in a great measure their well-doing. At this season take care that they are not over watered, if they have a good body of soil to grow in they will want but very little. *Herbs* may be taken-up and planted in boxes or pots, and introduced into a forcing house as wanted for use. Horse droppings should now be saved for spring Mushroom beds. This is the best season for saving them, as horses usually have more dry food than during the summer. Also see to the keeping-up a supply of *Herbs*, *Kidney Beans* by making frequent sowings under favourable circumstances. These are generally grown in pots placed in vineries or plant houses, but their liability to the attacks of red spider renders them dangerous inmates of such structures, and where it can possibly be done they should be planted in lines in the bed of a pit devoted to their culture. Attend to keeping-up a supply of *Sea-kale*, *Rhubarb*, *Asparagus*, &c., according to the demand and convenience by introducing quantities of the roots into heat at intervals of about a fortnight.

FRUIT GARDEN.

Wheel dung upon vacant ground, remove old decayed borders, and drive good fresh loam to form new ones. Mulch all fresh-planted fruit trees, protect with fern branches, &c., the tops of those the wood of which is properly ripened. Clean old shreds not too much wasted for use by boiling them, and cut plenty of fresh ones. Deprive nails that have been used of adhering mortar, &c., by putting them red hot in an iron vessel, and to prevent them from rusting immerse them in oil before they cool. Anoint all wall trees and bushes that are pruned with a mixture of equal parts cow dung, clay, soot, and lime made to the consistency of paint with strong soapsuds, urine, or the rich drainings of the dunghill, and if you prune at all in such weather let the wound be immediately daubed-up with a thick composition of the same.

FLOWER GARDEN.

Take advantage of the present state of the weather to wheel fresh soils or manures upon the flower beds and borders. Shrubberies may also be thinned, where this involves only the cutting-out of overgrown plants, or lopping deciduous trees, but where evergreens generally require pruning, that is best done in March, for although when the winter proves mild, such work may safely be performed at any time, it is never safe to depend upon this. When the hands cannot be profitably employed at out-door work, get a good stock of pears, Dahlia stakes, tallies, brooms, and such-like things prepared and stored away in an orderly manner, so as to be ready for use when wanted. Should the weather continue frosty little can be done amongst florists' flowers, still there is always full employment even in unpropitious weather like the present. I last week stated that Carnation compost, or turf, as the case may be, should be frequently turned. When the outside of the heap is frozen it may be removed so that another layer of soil may be exposed to the action of the frost. Should the hard weather continue, this in like manner may be repeated, and each successive crust turned evenly till the whole heap has been frozen. This has a highly beneficial effect on the soil, and is the means of destroying the eggs and larvae of many noxious insects. Auriculas when healthy will bear frost with impunity. I have known the soil in Auricula pots to be frozen as hard as marble without any apparent injurious effect on the plant.

GREENHOUSE AND CONSERVATORY.

While frosty weather continues be satisfied with as low a night temperature in all plant houses as it will be safe to keep, taking advantage of bright days to increase the heat, and using a little fire heat in order to be able to admit fresh air to dispel damp. The proper night temperature for conservatories very much depends upon the kind of plants they contain.

Where Camellias, Epacrises, Heaths, and other winter-blooming plants form the principal inmates 40° will be sufficiently high, and with a dry atmosphere it may safely be allowed to sink a few degrees on clear nights, but in cases where the hardier kinds of winter-flowering stove plants are brought in while in bloom 45° should be considered the proper night temperature. Let whatever watering may be required be done early in the day so as to allow advantage to be taken of sunshine, whenever such may occur, to give air for the purpose of drying the foliage, &c. Many persons appear to entertain an opinion that very little attention is needed to supply plants with water at this season, and they only look over their stock at intervals of several days. We would, however, caution young gardeners against this mistake and advise them to examine every plant at least every other day, deferring the application of water until it is really required, and then giving a liberal soaking. Attend daily to the removal of dead and decaying leaves, and directly any of the flowering specimens become shabby remove them to some of the out-way places, taking care that they are put in proper circumstances as to temperature, &c., according to their wants, and supplying their places with others in full beauty. Where necessary, the leaves of plants should be sponged over and thoroughly cleaned, and twines pruned, trimmed, and put into proper order for the spring. Soils, crocks, and charcoal, and whatever else may be necessary for potting should be got into readiness for use when wanted.

COLD PITS.

Where the stock of hedging plants has to be wintered in structures of this description the present will be found a trying time, and the utmost vigilance and care will be required to preserve the plants from harm. Apply sufficient covering to the glass and also to the walls of the pits or frames to ward-off the effects of the most severe frosts, and take advantage of every chance of admitting fresh air and removing decaying leaves, in order to prevent damp and mould. Too little water can hardly be given at present to plants in cold pits, and when it becomes necessary to give any let it be done in the morning, freely admitting air afterwards in order to dry-up all superabundant moisture before evening. Plants when covered-up for several days should not be suddenly exposed to bright sunshine, but should be partially shaded for a few hours, admitting air in the meantime if the state of the external atmosphere will admit of it; this will dispel damp, &c.—W. KEANE.

DOINGS OF THE LAST WEEK.

FRUIT AND KITCHEN GARDEN.

We take advantage of suitable weather to forward pruning and nailing fruit trees. In some districts it is desirable not to prune the smaller fruit trees, such as Gooseberry bushes, before the buds are considerably advanced, as the birds are very destructive to them. We do not suffer from their attacks, and can prune any time during the winter.

In many gardens *Gooseberry* and *Currant bushes* are treated with neglect, and very little attention is bestowed upon them at the time of pruning. We prefer the bush form for both, each bush to have a clear stem of about 6 inches; the wood should be well thinned-out in the centre, otherwise if this is allowed to become crowded very little fruit will be produced on that part, and it will be of inferior quality. Both sorts of fruit should be grown on moderately rich soil, or fruit of the best quality will not be produced; but with some sorts of Gooseberries this causes an over-abundance of young wood; all that is not required of this must be cut close back to the old wood, the shoots that are allowed to remain being shortened a little. Cutting close back would only cause another thicket of wood to be produced the following season. Branches that are trailing on the ground should also be cut-off. Red Currants require rather different treatment; nearly all the fruit is produced from old spurs, so that if the bushes are as large as it is desirable they should be, nearly all the young wood may be cut back, and any leading growths which may be required shortened to 3 or 4 inches. Black Currants do not require much pruning, but it is necessary to look over the bushes once a-year, and to thin-out any where they are crowded.

Owing to frosts, accompanied by the densest fogs we have had for many years, little has been done amongst hardy vegetables. Before the frosts set-in we planted *Jerusalem Artichokes*. Where this vegetable is esteemed a change of soil, well working the ground, and manuring heavily are desirable. In our case but very few dishes are required in the course of the year, and the same out-of-the-way corner grows our supply year after year. The ground, of course, is deeply worked and manured. When the tubers are dug-up the best are selected and stored for cooking, those that remain being used for sets, and a plentiful supply is always obtained.

A mulching of moderately-dry decayed manure was placed round the hand-light, in which the *Cauliflowers* are planted; this keeps the frost out of the ground and protects the plants. The ground was getting too hard to be trampled, but some

littery manure placed on the surface prevented any more frost from getting to it, so that the work was not stopped.

FRUIT AND FORKING HOUSES.

Cucumbers now require careful management; it is easy enough to maintain a sufficiently high temperature to keep the plants growing, but this cannot make up for the want of sun; indeed too much excitement now is injurious to the plants and weakens the growths. In very cold nights it is better for the health of the plants to let the temperature fall below 60° than to have it up to 70 by overheating the pipes. No insect pests should be allowed in the house, and the plants being free from red spider, it is better not to use the syringe.

Strawberries in pots are throwing-up strong trusses of flowers. The variety we use for early work is Black Prince; no other is so certain, and the fruit produced though only medium-sized is always of a good colour. The plants are thoroughly syringed every forenoon, which keeps red spider in check. They are in 5-inch pots, and these are packed quite full of roots, so that copious supplies of water are necessary to maintain a vigorous growth, and every alternate watering should be of weak liquid manure. The composition of this is of some importance; the best we have tried is of cow and horse manure in equal proportions steeped in water, two good handfuls of soot to be added to each bushel of the manure. The whole is soaked in a cask that holds thirty-six gallons of water, and after it has stood twenty-four hours it is ready for use, and will be strong enough if diluted with three times the quantity of rain water. The manure water should be used as soon as the flower trusses appear.

COOL STOVE AND GREENHOUSE.

In the cool stove, where the temperature is kept at from 50° to 55° as a minimum, many of the choice Palms, Orchids, Ferns, &c., thrive better than they do in the warmer house. Amongst *Orchids* *Odontoglossum crispum* (Alexandra), blooms continuously throughout the winter months. In our small collection quite a dozen spikes are in various stages of development. Slugs and green fly are very troublesome to them, and must both be destroyed as soon as any trace of them is observed. We have fumigated for the fly, but have sometimes found the cure more disastrous to the plants than the fly would have been. The best and safest way to destroy it is to wash the plants with a sponge dipped in water in which soft soap has been dissolved. This must be done very carefully, and no water should be allowed to run into the hearts of the plants. Slugs must be watched for at night with a light. We have found most of them about ten o'clock. East Indian and Brazilian Orchids will not long continue in good health, such as Vandas, Aerides, Cattleyas, &c., if they have not a season of rest; but the New Grenadian *Odontoglossum*, *Masdevallias*, &c., seem never to be at rest. If the pots are allowed to become dry the plants suffer, and in all our experience with Orchids requiring copious supplies of water, they certainly do best in small pots. The treatment required is of the simplest description, fill the pots three-parts full of clean peatshells, over this place a layer of sphagnum, then pot the plants in a compost of equal parts fibrous peat, sphagnum, and broken crocks. A dressing of fresh sphagnum is then placed over the surface. This is dewed over as often as it is necessary to do so with a fine syringe, using rain water that has been standing for some time near the hot-water pipes. If surrounding circumstances are favourable, the plants will very soon after being potted throw-out thick fleshy roots amongst the moist, growing sphagnum. The house should be ventilated every day, but extreme caution is necessary; the plants must on no account be in a draught, which is very injurious; the top ventilators only should be opened.

GREENHOUSE.

Tying and training specimen plants has occupied our time. If on looking over hardwooded specimens mildew can be detected, dusting with flowers of sulphur is a safe and effectual remedy. During such dull cold weather as we have had recently flowers have not opened well, and it has been necessary to remove a few plants of tree Carnations, Cyclamens, &c., into a house where they could have a higher temperature. This ought not to exceed 55°, otherwise the flowers are inferior in quality and wanting in colour. Chinese Primulas also make a good show, and well repay us for the little attention they require during the summer months. They require an open compost moderately rich, one part of well-rotted leaf mould to three parts of good turfy loam, with a little rotted manure and sand, grows them well; and until the flower-trusses have considerably advanced the plants must be kept near the glass, and the house in which they are grown freely ventilated. At the present time they are very liable to become mouldy round the neck, especially where old leaves have been removed, causing a wound; this, if not attended to in time, will very soon destroy the plant. If a little dry lime is applied to the wound it will prevent the mould from appearing, or will check its progress and save the plant if it has not gone too far.

Bonvardias come in useful as a variety in the greenhouse, but it is best to grow the plants to the flowering stage in a tempera-

ture of 55°; they will remain in bloom a long time in the greenhouse, and the flowers will continue to open. *B. Vreelandii* is the most useful. *B. longiflora* is pretty as a plant, but the flowers will not stand so well after being cut. Cuttings struck in the previous spring or early summer throw-up the best trusses.

FLOWER GARDEN.

Little can be done here except to keep the grass and borders tidy. We make it a rule to brush-up, and, if there is time, to roll the grass once a-week, but not if the grass is frozen. Flower roots, such as *Gladiolus* and *Dahlias*, must be noticed in severe weather. We have seen bulbs of the former and tubers of the latter much injured through not being stored in a proper place. A dry room from which frost is excluded is the best place. If there is too much heat they are excited into growth before the proper time. The *Gladiolus* are best packed away in a box after being wrapped-up in paper, each sort by itself.—J. DOUGLAS.

TRADE CATALOGUE RECEIVED.

Dickson & Robertson, 23, Market Place, Manchester.—*Catalogue of Select Stove and Greenhouse Plants, Ferns, Orchids, Palms, &c.*—*Catalogue of Select Roses.*

TO CORRESPONDENTS.

* * We request that no one will write privately to any of the correspondents of the "Journal of Horticulture, Cottage Gardener, and Country Gentleman." By so doing they are subjected to unjustifiable trouble and expense. All communications should therefore be addressed solely to *The Editors of the Journal of Horticulture, &c.*, 171, Fleet Street, London, E.C.

N.B.—Many questions must remain unanswered until next week.

BANK OF ROSES (*Name Lost*).—There is no Rose of a pale pink colour that would do as a match against your house with *Gloire de Dijon*, except it is *Apolline* (Bourbon), which is only a shy bloomer. We advise you to try a good plant of *Maréchal Niel* added on the *Manetti* stock, and planted 3 inches below the junction of the scion and bud. The aspect ought to suit it, and in very severe weather it might be protected with a few spruce branches fastened over the plant. It does not matter about getting your Roses from nurserymen who have the same kind of soil as yours. Yours being a sand is as bad for Roses as anything can be. There are not four different kinds of China—white, pale pink, deep pink, and red. The nearest approach would be—*White and Light Blush*, *Madame Bosanquet*; *Pink*, *Common China*; *Salmon Pink*, *La France*; *Red*, *Cramoisis Supérieure*. Plant 2 feet 6 inches apart. *Chara Sylvain* is a pure white but a weak grower, and has no substance of petal.

POTATO BLIGHT AND CREOSOTE.—It is very important to ascertain all the particulars respecting the experiments that have been made for the destruction of the spores of the fungus causing the Potato blight. Perhaps the Rev. J. Crawford could inform us at what period of the growth of the eye of the seed Potato he applied the creosote; probably the safest time would be before the eye began to be developed, as when dormant it would be most likely to resist the effects of the creosote, if used undiluted. I have heard of its being used with water at the rate of only five per cent. of creosote, but then the seed Potatoes were steeped in the mixture. What creosote did Mr. Crawford use, and did he grow his crop on infected soil, or on fresh ground?—OSBERVEN.

BEST EARLY AND LATE POTATOES (*J. Elliott*).—*Kidney-shaped*: *Ross's Early* and *Fluke*. *Round*: *Fenn's* *Onwards* and *Beetor* of *Woodstock*.

RATING NURSERYMAN'S GREENHOUSES (*John Carter*).—In our opinion they are not rateable, but if you refer to our No. 622, page 183, you will see a lengthened notice.

ROSES IN POTS (*D. Murray*).—If you enclose five postage stamps with your address, and order "Florists' Flowers" to be sent you by post, you will in that little pamphlet find fuller details than we can spare room for.

PEACH TREES ON WALL AND IN LEAN-TO (*Finn*).—Those on the wall will continue to have blistered leaves, and rarely bear unless a glass shelter be put over them. Those in the house would be injured by burning charcoal in a brazier. The leaves would turn yellow.

NET-MAKING MACHINE.—I saw some time ago a question asked if there were any netting machines. We have seventeen at work making herring-nets, weaving on an average 20 yards per day, of fifteen and eighteen score meshes broad. This rather beats your subscriber, whose winter work was only 10 yards, and I suppose perhaps only forty meshes deep. Old herring-nets are most desirable for Strawberries or for fruit trees of every description. I shall be glad to have an order either for such or new pieces.—D. MURRAY, *Collyridge, N.B.*

EARLY GRAPES FOR GROUND VINERIES (*Spence*).—The best early Grapes you can have for a ground viney are *Madeleine Royale*, *Early White Malvasia*, and *Early Asot Prontignan*. All of these will ripen early and well.

ASPHALT FLOORING (*B. H. H.*).—The asphalt cemented over as you propose doing will not injure the plants.

LEAF CATALOGUE (*Wandering Willie*).—Write to two or three of the chief florists who advertise in our columns, and ask each to send a catalogue.

FRUIT-BORDER MANAGEMENT (*F. J.*).—We only hoe our fruit borders when it is necessary to destroy weeds. All sorts of stone fruits, Apples, Peaches, and Vines like a hard surface. If the surface of the borders is cracked, we would also run the hoe over them.

PROPAGATING CHRYSANTHEMUMS (*T. M. H.*).—The best mode of propagation is by short stiff cuttings about 3 inches in length, inserted singly in small pots, and kept in a house or frame safe from frost during the winter. Suckers taken off with "a little root" are also good, the main point being to have them stiff and short-jointed.

PROPAGATING PRIMULAS, CINERARIAS, AND CALCEOLARIAS (*Idem*).—Except the double and a few other kinds of Primulas, we have given up the propaga-

tion of the Primula, Cineraria, and Calcicolaria otherwise than by seed, as the flowers of seedlings are now so much improved, and so uniformly good, and the plants are of so much better constitution than those from suckers or cuttings. As soon as the plants have flowered they are discarded, and fresh ones are raised from seed annually. Our Primulas this year are almost all double, and the seedling Cinerarias completely eclipsed our named kinds both in size and form of flower, as well as in brightness of colour.

FRUIT-TREE PLANTING. (*An Irish Subscriber*).—We have often seen considerable expense incurred to excavate borders for fruit trees, to be filled up with prepared soil, when it would have been better to have trusted to the natural soil of the garden. We advise you to trench your border 2 feet deep, adding a little manure; rotted frame manure is good for the purpose, but too much of it causes a gross growth. If you have rotted turfy loam, place a barrowload to the roots of each tree. This will cause a mass of fibrous roots to be formed, which will give the trees a good start the following season.

DESTROYING RED SPIDER. (*Inxious Inquirer*).—There were live red spiders on the leaves of the Strawberries you sent us, and a great many dead ones. Placing sulphur upon a hot plate and so burning it would prove more or less injurious to Azaleas, according as the fumes were weak or strong; if the latter, it is likely the plants will be killed, though they may be only experiencing the annual fall of their leaves, but quite as likely these have fallen from the fumes of the sulphur. We do not think the Peach trees have suffered, as they were leafless, but we do not advise your continuing the burning of sulphur in the house. It will not do the trees any good, and the red spider may be destroyed by dipping the leaves of the Strawberries in a soft-soap solution, 1 ozs. to the gallon.

COMBRETUM GRANDBLOEMUM NOT FLOWERING. (*A Constant Reader*).—Probably the plant does not flower, owing to the position being shaded, so that the wood is not thoroughly ripened. The wood of the previous year should be well ripened, growth being encouraged at the early part of the year, and when this is complete apply less water—in fact, keep the plant dry, so as not to cause the leaves to flag, and in winter it begins to be dry at the roots, but not dust dry. In February, or when the buds start to swell, it should be pruned; we cut-in the side shoots to two eyes, and shorten those required for extension to the extent of one or two-thirds of their length, according to the strength and ripeness of the wood. The plant is encouraged to break by keeping it moist, sprinkling overhead twice daily, but only keeping the soil moist; and when the young shoots are an inch or two long repeat, removing the soil coming away freely from the roots, and giving a moderate shift. A 10-inch pot is much too small for a plant six years old. Place it in spring in an 11 or 12-inch pot, using equal parts of fibrous loam and sandy peat, with a fourth of leaf soil, and a fifth part, in equal proportions, of pieces of charcoal, from the size of a pea to that of a hazel nut, crocks broken up rather small, and silver sand. It will not flower against the back wall if it be shaded by plants in front or climbers on the roof. It requires light.

DIGGING-IN A CROP. (*An Old Subscriber*).—Your ground would, especially if it has been under garden crops some years, be improved by taking-off a grass crop, and this we advise, sowing Italian fescue-grass in April, at the rate of three or four bushels per acre. The grass should be dug under before it seeds, or from the middle to the end of June, which will be as soon as you will need the ground for the Broccoli, &c. It will need to be well dug under. We should have liked it better had you sown the grass in September. It would have made better roots, but as it must be now sown in April it will be a fertiliser, and a good rotation for the Cabbage tribe. A crop of this kind is much wanted in gardens. If they were oftener cropped in this way, we think club would not be so prevalent as it is.

HEATING-UP RETURN PIPES. (*Ilem*).—We apprehend you have no valves on the return as well as the flow pipes, and when this is the case the water heats-up the return pipe, and often as far round as the valve on the flow pipe, but the heat is not nearly so great as when the flow-pipe valve is open. The water in the return pipes, when the valve in the flow pipe is shut, is liable to be heated to the same temperature as the water in the boiler where the return pipe joins, the whole water in time being heated, as in a kettle, to a uniform temperature. The valves may not shut the water off completely, but, as you say, the heated water backs-up the return pipe, and is as hot as in pipes that have the valves open, we think they do. Your remedy will be to have valves on the return as well as the flow pipes, in which case the heated water can only flow to the valve on the flow, and not back-up farther than the valve on the return pipe. We have screw valves in the flow as in the return pipes of every house, and so can admit or dispense with the heat at will.

CLIMATISER FOR SOUTH VERANDAH. (*W.*).—Lucie Lemoine, Jackmanni, Standishi, Mrs. James Bateman, Star of India, and Henryi.

STRAWBERRIES NOT SWELLING. (*A. D.*).—The forced Strawberries which set the fruit well, but do not swell to their full size, are probably not sufficiently watered, as, after they begin to swell, if a proper supply of water is neglected, and the plants are exposed to fierce sun, the surface of the soil is dried, and the berries do not swell afterwards. Never allow the plants to want water. Standling the pots on a cool bottom, and keeping-up a suitable amount of moisture in the house, will, we think, cause the fruit to swell fully.

LIFTING VINES. (*Ilem*).—Having materials to cover the border with, both for warding-off heavy rains and frosts, we consider that just as the leaves have fallen, or say in November, is as good a time as any other to lift Vines, quite as good as in spring, though the latter time is to be preferred when the border must remain all the winter exposed to wet and cold. To lift the roots in autumn in the latter case is only to bring them more surely to feel the effects of the cold and wet. The soil you mixed with the border will answer well.

CLIMBERS FOR VERANDAH AND WALL. (*F. L. S.*).—Of the plants you name, the two best are: *Periploca* and *Amadis*, *Clematis montana*, *Flammula*, *Standishi*, *Jackmanni*, *Prince of Wales*, *langue-a-*, and *rubro-violeacea*; *Lonicera brachyloba*, *flexuosa*, and *grata*, will be suitable for the east verandah and for the west wall as well, on which you may have the *Wistaria sinensis*, but it would be better of a south wall, and so would *Bignonia radicans major*.

SHIPPERS FOR ANTI-BLE SEASON.—**SHIPPERS FOR SCREEN.** (*W. D.*).—It is a capital idea to procure the trees and shrubs you intend planting in their final quarters next autumn, and plant them in squares in the kitchen garden, lifting them with balls next year. They would be acclimatized, and in the meantime the ground could be thoroughly prepared for their reception. Considering that your wall is only 7 feet high, we should not have the Austrian Fines; the Portulac and common Laurel, *Police*, and *Laurustinae*,

Ac., would be sufficient. If you wish to shut out the view beyond the wall, then by all means have the Austrian and Corsican Fines at back. Unless the old forest trees are thin on the ground Rhododendrons will not succeed, as they grow up long and spindling, and have the leaves perforated by the caterpillars of some insect. *Aucuba* do well; common Laurel good, also tree Box. The best kind of Rhododendron for planting under trees is *R. ponticum*.

GAS-HEATING GREENHOUSE. (*R.*).—By all means heat with gas; but though admiring your ingenuity, we do not approve of the boiler and pipes being of tin or zinc, which, although answering well, only endure a short time, those materials being soon corroded through, and having to be replaced by a more enduring metal. We advise you to have a gas hot-water boiler and 2-inch iron pipes, one of which, up two sides and across one end, will be sufficient to exclude frost. Whilst you are building, would it not be advisable to have your house wider? Five-feet in width would almost all be swallowed-up by the path, leaving you very little room for plants. We should have at least as great a breadth of staging or shelves for plants on each side of the path as the path is wide; in fact, say a 2-feet-6-inch pathway, and stages or shelves 2 feet 6 inches, or better 3 feet wide. This would give you a very much better house, and whilst you are about it, it would not cost very much more. In this case you would need two 2-inch pipes along two sides and one end—*i.e.*, a flow and return. Write to the manufacturers of gas-heated hot-water boilers who advertise in our pages, stating what you require, and asking for an estimate.

MANKING RHODODENDRONS. (*Edward E.*).—Cow dung is the best manure for Rhododendrons, and it should be applied as a top-dressing; but as your land is very stiff, wet, and clayey, and with a clay subsoil, we fear the plants will not grow satisfactorily. In moist ground Rhododendrons will thrive, providing water does not lodge, but they like an open surface soil, with the subsoil free of stagnant water. Drain the ground, therefore, efficiently, and top-dress with cow dung, sandy turf, and even sand, not disturbing the surface, only it would be well to do so now, as the surface may be close and firm.

BRAILSFORD'S VERMIN TRAPS. (*F. P.*).—Write to Mr. Brailford, Prescott, Lancashire.

NAMES OF FRUITS. (*W. Sandy*).—Fondante de Malines, given as a synonym of Winter Nelis in the "Fruit Manual," is incorrect. It is a perfectly distinct fruit, and yours is correct. The *Cassagne d'Eliver* of Brunau is also correct, but it is a worthless variety, and that is the reason it is not in the "Fruit Manual." (*T. F.*).—1, *Bienhoir Pippin*; 2, *Dutch Magnonne*; 3, *Boston Russet*. (*A. T. Escher*).—4, *Alfriston*. (*W. B. B.*).—5, *Nonsuch*. (*J. P. Cottam*).—No. 2, *Kentish Fillbasket*; 3, *Winter Greening*. (*S.*). 1, *Royal Russet*; 3, *Pile's Russet*; 4, *Hall Door*; 5, *Golden Reinette*; 6, *Marq.*

NAMES OF PLANTS. (*W. B. B.*).—We cannot name plants from such specimens. (*A Constant Subscriber*).—*Cuphea strigilosa*. It is a native of Mexico, found there by Hartweg.

POULTRY, BEE, AND PIGEON CHRONICLE.

COMMENDATIONS AT POULTRY SHOWS.

I do not advocate the awarding of a greater number of highly commended and commended. From my own observation I think judges are much too lavish of those cheap distinctions, and that, in fact, they would benefit the poultry fancy by withholding prizes where there is insufficient merit, for you frequently see birds unnoticed at Birmingham that have been awarded prizes and even cups at small shows. I know these highly commendeds flatter the vanity of some exhibitors, and luring them on bring "grist to the mill," and also that it is with that object that the judges are sometimes requested to affix them, but it is an unworthy, not to say dishonest motive.

I have made a calculation of the probable amount paid for entry fees, and I find that it exceeds the amount offered in prizes and cups by about £200. Under these circumstances I think the Council might be more liberal to the Malays, who have, at least, on this occasion paid their way well, and will, in point of numbers, compare favourably with some other classes that have received more encouragement. Surely from an economic point of view, they are as well worthy of encouragement as Bantams, and more worthy of it than ornamental waterfowl.—O. P. H. Z.

LIGHT BRAHMAS.

HAVING paid a visit to the late Birmingham Show, I was pleased to see such a display of Light Brahmans. No doubt this is a noble breed if kept-up to the proper standard of merit, but one finds breeders going-in for points which bring Light Brahmans too near the Cochins. It is my opinion that some of the prize birds at this Show have been crossed with the White Cochins. I think they ought to be judged by a higher Brahma standard than mere size and heavy-feathering of legs, the latter point one finds carried too far, many birds shown being vulture-hocked; another fault is that many prize birds are very yellow and exhibit the Cochins tail. I would insist on having prize birds as follows:—Blue whiteness of feathers, proper pencilling of hackle, white side stripe in the two top feathers of the tail of both cock and hen, plenty of fluff, cushion, and size, a perfect pea comb, symmetry of frame, heavy feathering of the legs, but clear hocks. These points, I think, with the exception of a striped saddle, which I do not care to see, are generally understood by all Light Brahma breeders to constitute perfection. If this is not insisted upon it makes it a very easy matter for breeders to put a pair of large, heavy-feathered, or vulture-

hocked birds together and breed a number of birds, and then pick out the best and advertise the others by the hundred. It makes the art of breeding a matter of chance with no honour attending it, and disgusts buyers who have a taste for poultry breeding. Ancestral likeness is one of the strangest freaks of reproduction, and often the young birds bear a greater likeness to their grandfather or grandmother than to their immediate progenitors: so that where a cross with the Cochin is seen in this breed the birds ought to be disqualified, to protect the amateur and uphold the purity of the breed.—WILLIAM FORD.

LEEDS SMITHFIELD POULTRY SHOW.

This Show was held on the 9th and three following days. Under the able management of Mr. Swales, the Secretary, and the staff of attendants carried out all the arrangements well, and the birds were efficiently attended to. Although the system of showing a cock and two hens in one pen is still carried out, the entries were very good, and if this were abandoned, and the light and ornamental pens of Turner, of Sheffield, were used, there is every reason to believe Leeds Show would prove the largest north of Birmingham. In single Game cocks the first prize and cup went to a fine Brown Red, good in style and haul, and a Brown Red also coming to the front in cockerels, the same, we believe, that took the first prize at Birmingham. Game pullets were a fine lot, the first prize being taken by a nice pair of Brown Reds. For a cock and hen, Black-breasted Reds, first came a very stylish pair; second good; third middling. The chickens were only moderate. In adult Brown Reds we thought the prizes well placed. In chickens the cockerel was a splendid bird, except that his head was after the Malay type. Second and third were fair samples. Old Duck-wings were only a moderate lot, and we preferred the second to the first. The Pile classes mustered well in both old and young, and there were some grandly moulded birds among them. Old Dorkings had five entries, the first being a grand pen, although the gems of this section were the first-prize chickens. Spanish, both old and young, were, as classes, only moderate, although we noticed some fine birds among the winners. Cochins were very good, especially the old Buffs and first-prize Buff chickens; but in old Brahms only one pen was of high quality. The prize chickens were very good. The Hamburgs were extraordinary classes, and among them were some as good as we have ever seen, the cup being awarded to capital Silver-spangled, while the young Gold-spangled and Pencilled and Blacks were among the most noteworthy, but the light was so bad during the judging that birds were left out that would have stood differently had it been good. Poland were good, Gold being first, Silvers second, and Blacks third. In Bantams the entries were very large, all the classes containing good specimens, there being thirty birds in the single game cock class. The first prize went to an old bird, hard and gamey in appearance; the second to a bird a little short-legged, but otherwise good; and the third to an old but very good cock. A small even pen of Black Red chickens won the cup for this section, one pullet being about perfect. Blacks were good, and the first-prize Whites were one of the best pens ever seen. In the Any other variety class good Silver Sebrights were first and third, and Gold second.

The Geese and Turkeys were very good classes. Aylesbury Ducks were good, as also Rouen; and in the Variety class the prizes were all carried off by one exhibitor with Mandarin, Carolina, and Kasarkas.

In Pigeons only two prizes were given in each class, but the entries were pretty good, although of Carriers there were but three entries, the first-prize Blacks being a well-developed pair, the second being only young. All the Pouters were good, and the winners Blue, the first-prize pair, which were most perfect in all the grand characteristics of the breed, winning the cup for the best pair in the Show. Tamblers, Short-faced, were very poor, while the Long-faces were a very good lot, Red Mottles being first and Blue Balds second. Only the first in Owls were what are required, and these were Silver English, while a fair pair of Foreign Blues were second. Fantails were very good, but the pens too small for a proper display, and Bars such as are rarely seen. Tarbites were a good lot, and numerous; Blues took first, and Silvers second. In Jacobins only the winners were of high merit, but these were very fine, the first being an exquisite pair of Reds, and the second Yellows Trumpeters were good, and Nuns a good honest lot, while the Dragons contained some perfect specimens, the first being Yellows, second Blues, which varied a little in colour on the thighs. In Antwerps a nice pair of Short-faced Duns were first, and a good useful pair of Red Chequers of the long-distance variety second. In Magpies, Yellows were first, and Red second; and in the Variety class a pair of splendid Pigmy Pouters were first, and spangled Ice Pigeons second. In the Selling class Blue English Owls stood first, and Red Dragons second, and these, with many others, were very readily sold.

The Lop-eared Rabbits were a display such as is rarely seen,

the first-prize doe, to which the cup was awarded, combining all the grand properties of the breed, and an exhibition in herself, the second going to a Sooty Fawn buck, good in all points. Angoras were very good, but some were very dirty; Himalayan of fair quality, and the Silver-Greys very good; but the gem of these classes was the Blue-and-White Dutch doe that won the first prize—neatness, form, and activity, all combined with the most perfect marking. The second award was for a Belgian Hare, but not good in fur. Both Pigeons and Rabbits were well placed as regarded light.

GAME.—Cock.—1, E. Aykroyd, Eccleshill. 2, T. E. Satterthwaite, Castle Howard. 3, T. Mason, Lancaster. Cockerel.—1, T. Mason, 2, E. Aykroyd. 3, T. Bottomley, Shelf, Halifax. Pullets.—1, T. Dyson, Halifax. 2, H. Butler, Bradford. 3, J. Mason, Worcester.

GAME.—Black-breasted Red.—1, W. Fell, Adwalton. 2, T. Bottomley, 3, J. Ormrodroyd, Wibsey. Chickens.—1, G. Ducker, Stapleton. 2, E. Aykroyd, 3, J. Mason.

GAME.—Brown-breasted and other Red, except Black.—1, E. Aykroyd. 2, T. Mason. 3, F. Sales, Crayke. Chickens.—1, W. Ormerod, Walsden, Todmorden. 2, J. W. Thornton, Bradford. 3, F. Lund, Coothouse, Bingley.

GAME.—Duckings.—1, H. H. Staveley, Driffield. 2, F. Swales. 3, J. Mason. Chickens.—1, Wilson & Hodgson, Halifax. 2, E. Aykroyd. 3, J. F. M. Fitton, Halifax.

GAME.—Any other variety.—1, R. Walker, Wood Nook, Gomersal. 2, H. C. Mason, Drighlington. 3, W. J. Mason, Drighlington. Chickens.—1, Furness and Sudall, Rawtenstall. 2, E. Walker. 3, W. J. Mason.

HAMBURG.—1, J. White, Waraby, Northalberton. 2, T. E. Kell, Wetherby. Chickens.—1, T. E. Kell. 2, J. White. 3, R. W. Richardson, Beverley.

SPANISH.—1, Furness & Sudall. 2, J. Powell, Barkerwell, Bradford. 3, H. Beldon, Goltstock, Bingley. Chickens.—1 and 2, J. Powell. 3, H. Wilkinson, Earby, Skipton.

COCHIN-CHINA.—1 and 2, W. A. Taylor, Manchester. 3, T. Aspden, Church. Chickens.—1, W. Harvey, Sheffield. 2, W. A. Taylor. 3, H. Beldon.

BRAMA POULTRAS.—1, D. Moulson, Bradford. 2, W. A. Taylor. Chickens.—1, J. Lebon, St. Helen's. 2, W. A. Taylor. 3, H. Wilkinson.

HAMBURG.—Gold and Silver-spangled.—1, H. Beldon. 2, W. Driver, Keighley. 3, J. Rollinson, Gilders, Otley. Gold-pencilled.—Chickens.—1, J. Walker, Birstwith, Ripley. 2, H. Beldon. 3, J. Rollinson. Silver-pencilled.—Chickens.—1, H. Smith, Morton Banks, Keighley. 2, J. Preston, Allerton, Bradford. 3, H. Beldon.

HAMBURG.—Gold and Silver-spangled.—1, Ashton & Booth, Broadbottom, Mottram. 2, T. Dean, Keighley. 3, J. Walker. Gold-spangled.—Chickens.—1, J. Preston. 2, J. Hall, Stacksteads, Manchester. 3, M. H. Broadhead, Holmfirth. Silver-spangled.—Chickens.—1, H. Beldon. 2, H. Robinson, Westgate, Baildon. 3, J. Rollinson.

HAMBURG.—Black.—1 and 2, H. Beldon. 3, T. Walker, jun., Denton. Chickens.—1, T. W. Holmes, Baildon. 2, W. Tate, Cottingley, Dingley. 3, H. Beldon.

POLANDS.—1 and 2, H. Beldon. 3, H. Sharpe, Shelf, Halifax. Chickens.—1, T. Dean. 2, H. Beldon. 3, W. A. Taylor.

SELLING CLASS.—1, C. Burslem, Stockport. 2, E. Shaw, Plas Wilnot, Osweley. 3, D. Moulson.

GAME BANTAMS.—Cocks.—1, E. Walton, Horncliffe, Bawtenshall. 2, G. Noble, Stairfield, Dewsbury. 3, W. Baskerville, Manchester.

BANTAMS.—Game.—1, A. Sedden, Swimby, Cleckheaton. 2, J. Blamires, Great Horton, Bradford. 3, G. Hall, Kendal. Chickens.—1, F. Steele, Stump Cross, Halifax. 2, G. Noble. 3, G. Hull.

BANTAMS.—Black.—1, H. Beldon. 2, W. A. Taylor. 3, E. Walton. White.—1, H. Beldon. 2, H. Sharpe. 3, Rev. F. Tearie, Gazeley Vicarage, Newmarket.

ANY OTHER VARIETY.—1, J. Gelder, Leeds. 2, E. Walton. 3, H. Beldon.

TERRIBLES.—1, F. Rawson, Thorpe, Halifax. 2, T. P. Carver, Langthorpe. 3, J. Walker, Rochdale.

GESE.—1, J. Walker. 2, F. E. Rawson. 3, J. B. Braithwaite, North Otterington.

DUCKS.—Aylesbury.—1, T. P. Carver. 2, W. Stonehouse, Whithy. 3, J. Walker, Rouen.—1, J. Walker. 2, J. Newton, Sidsden. 3, G. Gladstone, jun., Liverpool. Any other variety.—1, 2, and 3, W. Binns, Pudsey.

PIGEONS. CARRIERS.—1, J. Thompson, Bingley. 2, E. Horner, Harewood.

Pouters.—1, W. Harvey, Sheffield. 2, J. E. Crofts, Blyth, Workop.

TAMBLERS.—Short-faced.—1, E. Horner. 2, W. & F. Pickard, Thorne. Any other variety.—1 and 2, H. Belding, jun., Bradford.

OWLS.—1, W. Binns. 2, E. Horner.

FANTAILS.—1, E. Horner. 2, J. F. Loversidge, Newark.

BARBS.—1 and 2, J. Firth, Dewsbury.

TRETTIS.—1 and 2, W. Croft, Kibbingshall, Ripley.

JACOBINS.—1 and 2, J. Thompson.

TRUMPETERS.—1, W. Harvey. 2, J. Lederer, Bootle, Liverpool.

NUNS.—1, E. Horner. 2, W. Croft.

DRAGONS.—1, R. W. Richardson. 2, W. Ellis, Hale.

ANTWERPS.—1, J. Crossland, jun., Wakefield. 2, W. Ellis.

MAGPIES.—1, Merrell & Batty, Bramley. 2, W. Ellis.

ANY OTHER VARIETY.—1, W. Harvey. 2, J. E. Crofts.

SELLING CLASS.—Silver Medal, W. Binns. Bronze Medal, A. W. Wren, Lowestoft.

LOP-EARED.—1 and 2, F. Banks, London.

ANGORA.—1, S. Ball, Bradford. 2, G. C. Hutton, Bradford.

HIMALAYAN.—1 and 2, J. Battenworth, Rochdale.

SILVER-GREY.—1, J. Mason, Longate, Hull. 2, E. H. Glow, Wakefield.

ANY OTHER VARIETY.—1, J. Mason. 2, J. Boyle, Blackburn.

SELLING CLASS.—Silver Medal, M. J. Wharton, York. Bronze Medal, J. Hallas, Huddersfield.

JUDGES.—Poultry: Mr. R. Teebay, Fulwood, Preston; Mr. J. H. Smith, Skelton, York. Pigeons and Rabbits: Mr. E. Hutton, Garden House, Pudsey.

ASHFORD POULTRY SHOW.

This, the East Kent Poultry Show, was held on the 15th and 16th inst. The following are the awards:—

DORINGS.—Coloured.—Hens.—1, R. Cheeseman, Westwell. 2, Mrs. Brassey, Normanhurst Court, he. C. Kettle, Woadenswold, Canterbury; J. Norwood, Mersham (2). Cocks.—1, G. W. Greenhill, Ashford. 2, R. Cheeseman, he, Mrs. Brassey. 3, E. Rice, Dane Court, Sandwich.

DORINGS.—Coloured.—Pullets.—1, G. W. Greenhill. 2, J. H. Putney, Dorking. 3, R. Cheeseman, he. E. Rice, he. 4, J. E. C. Kettle, he. 5, R. Cheeseman, 3, and he. 6, B. Carous, Tenterden. c. F. Marton, Smethy; E. W. Stratford, Addington Park, Maidling.

DORINGS.—Silver-Grey.—Hens.—1, F. Cheeseman, Chart Court, Ashford. 2, C. Kettle, he. Rev. T. E. Cato, Wye Vicarage. Cocks.—1, Rev. T. E. Cato. 2, J. E. Plampyre, Godstone, Wingham.

DORINGS.—Pullets.—1 and 2, Rev. T. E. Cato. 3, T. Perkins, he. E. Greenhill. 4, C. Brown, Maidstone; F. Cheeseman; A. Gardner, Ash; J. Scott,

Elmstead. *Cockerel*.—1, Rev. T. E. Cato. 2, F. Cheesman. 3, E. Greenhill. c, C. Brown; F. Cheesman.
 SPANISH.—1, J. Francis. Hidenborough. 2, E. W. Stratford. *Chickens*.—1, E. W. Stratford. 2, J. Francis. *he*, Mrs. Brassey.
 COCHIN CHINAS.—1, R. S. Woodgate, Fenbury, Tunbridge Wells. 2, Capt. F. G. Coleridge, Wargrave. *Chickens*.—1, G. Dowker. 2, R. S. Woodgate. c, Capt. F. G. Coleridge; Rev. W. C. H. H. D'Aeth, Waterbury.
 BRAHMA FOOTRA.—*Dark*.—1, H. W. Castle, Kensington. 2, J. Harvey, jun., Thaxington. 3, Mrs. Brassey. *he*, Dr. Bech, Ashford; Rev. J. G. Knight, Danbury; W. White, Canterbury; J. Harvey, jun. *Light*.—1, Mrs. F. Cheshire. 2, R. Perry, Beckley. 3, J. Long, Bromley Common. *he*, E. Manwooch, Funnar; Lady Oxenden, Barham; Rev. F. T. Scott, Shepherdswell; Capt. W. Savill, Wye (2). c, Miss Hales, Canterbury; Rev. F. T. Scott.
 GAME.—*Black-breasted or other Reds*.—1, J. Southwaite, Ashford. 2, G. Braham. *he*, J. A. Harms, Ashford; J. Jeken, Ettham; G. Chiffon, Ashford. *Chickens*.—1, F. Warde, West Farleigh. 2, W. Foster, Bippie House, Deal. 3, J. A. Harms. *he*, R. Minton; J. Jeken; G. H. Fitzherbert, Sevenoaks (2).
 GAME.—*Any other variety*.—1, C. J. Plumtre. *he*, E. Barton, Dover; C. J. Plumtre; E. Rice. *Chickens*.—1 and 2, J. Chittenden, Willesborough, Lees. *he*, E. Rice (2). c, H. Lee, Chilham; G. H. Fitzherbert.
 GAME.—*Cock*.—1, H. H. Stuckings, Ashford. 2, T. G. Ledger, Folkestone. *he*, G. Braham; H. Lee; F. Warde. c, T. Kennett, Wye Mills.
 HAMBURGH.—*Golden-spangled*.—1, W. K. Ticker, Ipswich. 2 and *he*, C. Brown. *Silver-spangled*.—1, H. H. Stuckings. 2, J. Chapman, Ashford. *Gold-necked*.—1, G. J. Lenny, Lewes. 2, W. K. Ticker. *he*, J. Chapman; C. J. Plumtre, Wingham. c, J. Chapman (2); H. H. Thompson, Coleshill; C. J. Plumtre.
 POLISH.—1, Capt. F. G. Coleridge. *he*, E. J. Reeves, Haywards Heath; Mrs. Nickel, Leeds, Maidstone.
 CRÈVE-CŒUR.—1, W. Dring, Faversham. *he*, R. J. Foster, Epsom; T. G. Ledger.
 HOUDAN.—1, W. Dring. *he*, Mrs. C. Hill; E. W. Stratford (2). *Chickens*.—1 and 2, W. Dring. *he*, W. Perkins, Brabourne, Ashford; Mrs. C. Hill; E. W. Stratford.
 BANTAMS.—*Game*.—1, W. Adams, Ipswich. 2, G. Garrod, Islington. 3, W. S. Marsh, Winkland Oaks, Deal. *he*, J. Long; W. S. Marsh; W. Adams; E. T. Hughes, Pluckley; J. Walsh, Forest Hill. *Jay variety*.—1, R. S. Woodgate. 2, Mrs. Lister, Walton, Sandwich. *he*, Mrs. S. E. Bacon, River, Dover. c, Mrs. Brassey.
 DUCKS.—*Aylesbury*.—1 and 2, C. S. Hardy, Chilham Castle. *he*, F. E. Arter, Bantam; C. J. Hart, Lymington; E. Greenhill (2); Rev. F. E. Mayhew, Warne Rectory, Bantam; J. Harvey, jun. 2, E. Greenhill. *he*, T. L. Elliott, Ashford; F. E. Arter; C. Ratchiff; F. Cheesman; J. Harvey, jun. c, T. G. Ledger.
 GEES.—*Emden*.—1, B. Plumtre. *Any other variety*.—1 and *he*, T. Powell, East Lenham. c, W. H. Mold, Bethersden.
 TURKEYS.—1, F. Warde. 2, C. J. Plumtre. *he*, C. S. Hardy; Mrs. Brassey; C. J. Plumtre; J. Foord. *Poult*.—1, G. Dowker. 2, C. J. Plumtre. *he*, Mrs. Brassey; W. H. Mold; F. Warde (2); C. J. Plumtre. c, Dowager Countess of Aylesford, Aylesford.
 ANY OTHER VARIETY.—1, Mrs. C. Hill (La Fleche). 2, R. S. Woodgate. *he*, J. Body, Lloyd's Green (Spanish); Mrs. S. E. Bacon (La Fleche); E. W. Stratford (Dorkings); A. Warde (Lehors).
 PIGEONS.
 CARRIERS.—1 and 2, M. H. Gill, Ramsgate.
 POUTERS.—1 and *he*, M. H. Gill.
 TUMBLERS.—1 and *he*, M. H. Gill.
 FANTAILS.—1, J. E. Lovelidge, Newark. *he*, G. W. Greenhill.
 ANY OTHER VARIETY.—1, T. G. Ledger (Red Jacobins). 2, J. Body (Runts)
 SELLING CLASS.—1, R. B. Curtis. 2, F. Cheesman. 3, J. A. Harms. *he*, Dr. Bech; J. Body (2); T. L. Elliott; C. Browne; G. Wise; C. Ratchiff; F. Cheesman (2); G. Dowker; A. Gardner; R. B. Curtis; E. Greenhill; G. H. Fitzherbert; Col. Groves, Charing (2); R. Cheesman; T. Perkins; F. Minton.
 EXTRA.—*he*, C. S. Hardy (Gold and Silver Pheasants); C. Andrews (2).
 JUDGES.—Mr. J. Martin and Mr. F. Esquilant.

CANTERBURY POULTRY SHOW.

This Exhibition was held at the Music Hall, on the 12th and 13th. The competition was confined to the counties of Kent, Sussex, Surrey, and Middlesex, and considering the very limited accommodation the Music Hall offered for a Show of this description, we think it would have been wiser to have restricted the competition to one county only, or to have made a less number of classes, as it is very important both for the comfort of the visitors and the birds, that the organisers of a show should carefully consider the space they have at their command. The classes made for many of the varieties might under the circumstances have been very judiciously curtailed. For example, we had four classes of Coloured Dorkings, cock and hen, cockerel and pullet, a class for single cocks or cockerels, and another for a pair of pullets. These birds could with advantage have been placed in two classes. The entries, possibly, might have been a few less, but many really good birds which were lost to sight, would have obtained a better position. As it was, 921 pens of poultry, Pigeons, and Canaries were huddled into a space barely sufficient to accommodate half the number. They were arranged in three tiers, the first being on the ground, and as the light was all obtained from windows on one side of the building the result was, that only the rows facing the windows on one side, and perhaps a few on the top row on the other, could possibly be seen, and we had great fears that some of the birds would hardly find their food.

The Dorkings were a fine lot. In the chicken class the second-prize bird was very tender on the feet. In the cock and cockerel class the first-prize bird was very superior. In the class for pullets, three pens competed for three prizes; they were only moderate birds. In the Silver-Greys the most noticeable feature was crooked breasts. The first-prize bird in the cock or cockerel class was the most perfect in this respect. In Whites, the first-prize pen were nice birds, the others very poor. In Spanish, the old birds were generally out of condition. In the young some tolerably fine specimens might be found. Mr. Brown was justly first. The second-prize cockerel was a good open-billed bird; but the third-prize pen contained the best birds, and had they been properly prepared they must have

secured the first prize. The Cochins, with but two exceptions, were a miserable collection. The Brahma classes contained many pens of merit. The first-prize pen in the old class contained a stout cock with many good points. In the young class the first-prize bird was neat but deficient in leg-feathering. The third-prize bird was small but pretty, and had a small comb nicely placed upon his head; his companion was not so good. In this class Mr. Petter showed a good cock (Pen 132). Had he been better matched we have little doubt he would have secured a place among the winners. The Light old birds were poor. The cockerel and pullet class was much better. The first and second were neat birds, good in colour, tolerably feathered, and well matched. Pen 170, highly commended, also deserved notice. The Game classes followed. In the old Black Reds, the first was a very superior bird. Mr. Foster also showed a good pen (183), very highly commended, which we thought should have been in the prize list in this class. We were at a loss to understand why pen 191 was highly commended, the hen scarcely bigger than a Bantam. In the young class the first was a sprightly bird. The other Game classes and the Hamburgs were in such a bad position for light, that we could not venture an opinion with regard to their merits. The French fowls caught our attention earlier in the day, they were not numerous. In the Houdan class, Mr. Dring took the first and second prizes. Here the Judge reversed his Maidstone decisions, the position of the first and second-prize birds being transposed. We liked the second-prize hen best. The CrèveCœur class contained two or three nice pens. The first-prize hen was a grand bird. Bantams (Reds), secured as large an entry as usual, but with the exception of the first and second-prize pens, we could find no birds worthy of mention. The first-prize cock was fine in colour, a good shape, but a little too long in the wing. Any variety Game Bantams, with the exception of the first and second-prize pens, was so poor that we thought the third prize might have been properly withheld. The Ducks and Geese quite surprised us, and fully deserved the admiration they received. In some large Selling classes were to be found a few bargains.

In the cock and hen class, the first-prize birds, a pair of Cuckoo Dorkings, we thought the finest of this variety we remember to have seen at any show for a long time.

In Pigeons, the Carrier classes were all well filled. The old classes were both good. In the young the first prize went to a very handsome pen, well matched, and good in colour. Some exception was taken to the cock on account of his gullet, but in other points he was so superior that we quite approved of the decision of the Judge. In the Pouters a few good birds might be found. In the class for cocks, a White belonging to Mr. Coombes stood clear away from all. Of Barbs, the first-prize birds were moderate, the others very inferior. Dragons, with the exception of the first-prize pen, a pair of Yellows—the cock here being of a magnificent colour, the hen not so good—were not better than the Barbs. The Homing class of Outweps was a large one, but from the opinion we heard expressed by many of the exhibitors, we think they would rather have their birds' properties practically tested than leave their merits to the opinion of a Judge. In the Selling class for Pigeons, the first prize was awarded to a pen containing a single bird, certainly the best, but as the class was for a cock and hen, this must have been a mistake.

The Canaries followed and obtained a large share of the attention of lady visitors, who were very numerous.

DORKINGS.—*Coloured*.—1, R. Cheesman, Westwell, Ashford. 2, E. Rice, Sandwich. 3, Mrs. Brassey, Normanhurst Court. *Chickens*.—1, R. Cheesman. 2 and 3, C. Ratchiff, Canterbury.

DORKINGS.—*Coloured*.—*Cock or Cockerel*.—1, W. S. Marsh, Winkland Oaks, Deal. 2, W. J. Russell, South Norwood Hill. 3, R. Cheesman. *he*, R. Cheesman; H. H. Young, Stapton, Dorking; J. Gray, Tilmanstone. *Pullets*.—1, E. Rice. 2, M. Sandford. 3, W. Reeves, Luton.

DORKINGS.—*Silver-Gray*.—1, Rev. T. E. Cato, Wye Rectory. 2, F. Plumtre, Wingham. 3, J. D. Summons. *he*, J. Sutton, Womansfold; O. E. Cresswell, Early Wood, Bagshot.

DORKINGS.—*Silver-Gray*.—1, F. Cheesman. 2 and *he*, Rev. T. E. Cato. 3, C. Ratchiff.

DORKINGS.—*Silver-Gray*.—*Cock or Cockerel*.—1, J. Bonding, Ettham. 2, J. Scott, Hill St. Elmstead, Ashford. 3, F. Cheesman. *he*, Mrs. M. Pittman; Canterbury. c, H. H. Passy, Walmer Court. *Pullets*.—1, G. Court, Chillingdean. 2, Rev. T. E. Cato. 3, J. Scott. *he*, F. Beard, Horton, Canterbury; H. Page.

DORKINGS.—*Any other variety*.—1, O. E. Cresswell. 2, S. F. Jackson. 3, E. W. Stratford.

SPANISH. 1, J. Francis. 2, H. Brown. 3, E. W. Stratford, Addington Park, Malling. *Chickens*.—1, H. Brown. 2, J. Francis. 3, Mrs. Brassey. *he*, E. W. Stratford.

COCHIN CHINAS.—*Duff or Cantonian*.—1 and 3, W. White, Canterbury. 2, H. Knight, Canterbury. *Chickens*.—1, Sir S. Lakeman, Birchington. 2, W. White. 3, M. Bourne, Sheerness.

COCHIN CHINA.—*Any other variety*.—1, T. W. Anns, Clapham. 2, Mrs. Brassey. *Chickens*.—1, R. S. Woodgate, Fenbury, Tunbridge Wells. 2, Sir S. Lakeman. 3, Mrs. Brassey.

BRAHMA FOOTRA.—*Dark*.—1, H. C. Castle. 2 and c, F. Lake, Sittingbourne. 3, J. Harvey, jun., Thaxington. *he*, Rev. F. T. Scott; Mrs. Brassey. *Chickens*.—1, Sir S. Lakeman. 2, J. Harvey, jun. 3, W. Jacob, Shepherdswell. *he*, c, H. Kennett; J. Harvey, jun.; M. Sandford; E. Goodwin; G. W. Petter, Southwood (2).

BRAHMA FOOTRA.—*Light*.—1, Rev. F. T. Scott. 2, J. Long, Bromley Common. 3, G. Hardy, Shepherds Bush. *he*, Mrs. Brassey. c, Miss K. A. Winter, Plumstead. *Chickens*.—1 and 2, Mrs. F. Cheshire, Acton. 3, J. Long. *he*, Capt. W. Savill, Wye; Rev. F. T. Scott (2); R. Perry, Beckley; G. Dowker, Wingham; Miss Hales, Canterbury (2); Mrs. F. Cheshire.

GAME.—*Black-breasted or other Reds*.—1, J. Jeken, Ettham. 2, M. Sandford.

he, C. J. Plumtree; G. Graham, Ashford. *Chickens*.—1, F. Wade, West Farleigh. 2, W. Foster, Deal. 3, T. L. Elliott. *Chick.*, J. Jeken. *he*, J. Jeken; G. H. Fitzherbert.

GAME.—Black-breasted or other Reds.—Cock or Cockerel.—1, J. Jeken. 2, H. C. Sutton. Canterbury. 3, F. Wade. *he*, G. H. Fitzherbert.

GAME.—Any other variety.—1 and 2, E. Rice. 3, C. J. Plumtree. *Chickens*.—1 and 2, E. Rice. 3, H. I. de Chibham.

HAMDBURGERS.—Gold or Silver-pencilled.—1, H. Sticksen, Ashford. 2, J. Chaplin, Canterbury. *Chickens*.—1, J. W. G. Braddon, Maidstone. 2, F. Cheeseman. 3, W. G. Blackman, Ashford. *he*, C. Brown.

HAMDBURGERS.—Gold or Silver-pencilled.—1, J. Chapman, Ashford. 2, T. Marsh, Tunbridge Wells. 3, Mrs. Brassey. *Chickens*.—1, G. J. Lenny. 2, C. J. Plumtree. 3, W. H. Birch. *c*, J. Blackman.

PULISH.—1, E. J. Reeves, Harwards Heath. 2, Mrs. S. C. Bacon, River, Dover. 3, Mrs. Nickel, Leeds, Maidstone.

HOUANS.—1 and 2, W. Pring, Faversham. 3, Miss Chessyre, Barton Court. *he*, Sir C. Honeywood, Chatham; Rev. H. H. Dombain, Westwell, Ashford; W. Boucher, Notting Hill; E. W. Stratford. *Chickens*.—1 and 3, W. Dring. 2, Rev. H. H. Dombain. *he*, E. W. Stratford.

CREVIL-CEURS.—1 and 2, W. Dring. 3, J. Walton, Croydon. *Chick.*, J. Hugman, Canterbury.

BANTAMS.—Black-breasted or other Reds.—1, W. S. Marsh. 2, W. C. Hamre, Canterbury. 3, C. J. Plumtree. 4, S. Marsh; E. Hodges, Bridge, Canterbury; J. Long; W. Boucher. *he*, W. S. Marsh; J. Walsh, Forest Hill.

BANTAMS.—Game.—Any other variety.—1, T. W. Anns. 2, Master Sandford. 3, W. Boucher.

BANTAMS.—Any other variety.—1, R. S. Woodgate. 2, Mrs. W. V. Lister, Walton Eastry. 3, G. P. Ladd. *he*, Lady Oxenden, Canterbury; Mrs. S. C. Bacon; J. Ware; G. Ladd, Canterbury (2); Mrs. Brassey.

ANY OTHER VARIETY.—1, S. H. Smith. 2, R. S. Woodgate. 3, J. Long. *he*, C. S. Hardy; R. S. Woodgate; Mrs. S. C. Bacon; W. A. Winter, Canterbury.

DUCKS.—Aylesbury.—1, W. Jacob. 2, C. S. Hardy. 3, W. Jacob. *Chick.*, C. S. Hardy. 4, A. Heaghill. *he*, T. M. Sandford.

DUCKS.—Rouen.—1, W. F. Harvey. 2, F. Cheeseman. 3, F. E. Arter. *Chick.*, M. Sandford; G. Wise. *he*, C. Ratcliff.

DUCKS.—Any other variety.—1, W. Boucher. 2, Miss M. Plummer. 3, R. S. Woodgate. *Chick.*, C. S. Hardy.

GESE.—1, B. Plumtree. 2, Mrs. Brassey. 3, J. Ratcliff.

TURKEYS.—1, C. J. Plumtree. 2, F. Wade. 3, Miss M. Plummer. *Chick.*, C. S. Hardy. *he*, C. J. Plumtree; J. Martin, Chatham; M. Sandford. *Poult.*.—1, F. Ward. 2, C. J. Plumtree. 3, G. Dowker. *Chick.*, T. W. Jude; G. Dowker.

GUINEA FOWL.—1, G. Dowker. 2, O. E. Cresswell. 3, E. S. Woodgate.

PHEASANTS.—Gold or Silver.—1 and 2, C. S. Hardy. 3, J. H. Ferrier. *he*, W. H. Lindon, Canterbury.

SELLING CLASS.—Any variety, any age, any number.—1, R. Noble, Canterbury. 2, Miss Hales. 3, H. Kennott. *he*, J. Anston; Miss Chessyre; J. Harvey, jun.; J. Boulting; W. R. Phipps; J. Hugman; Miss Hales; J. Martin; H. Pace; W. Hutton, Canterbury.

SELLING CLASS.—Cock.—1, G. Court. 2, Col. F. Hassard, C.B. Shoerness. 3, G. W. Pether. *Chick.*, J. Harvey, jun. *he*, Capt. W. Savill (2); J. Harvey, jun.; J. Boulting; W. Jarvis, Petham; R. Cheeseman; R. S. Woodgate; J. Sleep, King William Street, London; J. Bateman, Canterbury; R. C. Bear; Miss Hales, Canterbury (2); Miss M. Hilton, Canterbury; G. Dowker; Mrs. Hake, Canterbury; W. J. Russell; Dr. Augier, Tonbridge; J. Jenner, Battle; G. Court; E. Bowen, Rochester. *Hens*.—1, E. Rice. 2, G. Dowker. 3, Miss M. Hilton. *he*, Lady Oxenden; J. Harvey, jun.; J. Francis.

EXTRA PRIZES.—Houans.—1, Mrs. Vallance, Slingsbourne. 2, M. Sandford. *he*, R. B. Neame, Faversham; F. Lake; R. Plumtree (2). *Larn-door or other Cross-bred Fowls*.—1, Rev. A. W. Waid. 2, Withfield.

PIGEONS.

CARRIERS.—Cock.—1, J. Baker, Kew Bridge. 2, Col. F. Hassard, C.B. *Chick.*, M. H. Gill, Raingate. *he*, H. C. Sutton; M. H. Gill. 3, M. H. Gill. 2, M. Martin. *Chick.*, J. Baker. *he*, M. H. Gill; Col. F. Hassard, C.B. *Young*.—1, J. Baker. 2, Col. F. Hassard. *Chick.*, M. H. Gill; M. Martin.

POULTRY.—Cock.—1, D. Combe, New Cross. 2 and *he*, J. Baker. *Hens*.—1, M. H. Gill. 2, D. Combe. *Chick.*, J. Baker. *Young*.—1, M. H. Gill. 2, M. Martin, Canterbury.

BARDS.—1, J. Baker. 2, M. Martin.

DRAGONS.—1, J. Baker. 2 and *he*, M. Martin.

TUMBLERS.—1, M. Martin. 2, Mrs. M. E. G. *Chick.*, Col. F. Hassard.

ANTWERPS.—Honing.—1, 2, and 3, J. J. Sparrow, London. *he*, W. S. Marsh. *Chick.*, G. J. Lenny; J. H. Crothall; M. Sandford; C. N. Hammond; Col. F. Hassard; A. A. Vander Meersch, Lower Tooting; M. Martin; J. J. Sparrow.

FANTAILS.—1, J. Baker. 2, M. Martin. *Chick.*, G. Mills; M. Martin.

ANY OTHER VARIETY.—1, J. Bowes. 2 and 3, M. Martin. 4 and *Chick.*, J. Baker. *he*, A. A. Vander Meersch; M. Martin (8); J. Baker.

SELLING CLASS.—1, H. C. Sutton. 2, A. A. Vander Meersch. 3, Col. F. Hassard. 4 and *Chick.*, M. Martin. *he*, W. H. Cresswell; G. Mills, Dover; A. A. Vander Meersch; G. Gunner, Canterbury; M. Martin (5).

CANARIES.

NOURICH.—Clear Yellow.—1 and 2, R. E. Newsom, Bromley. 3, C. Sennell. 2 extra, J. Caplin. *he*, E. Rice. 2, R. J. Pope, Brighton (2). *c*, R. J. Pope. *Clear Buff*.—1, J. D. Baker. 2 and 3, J. Caplin.

NOURICH.—Faded or Marked Yellow.—1 and 2, J. Caplin. 2, R. E. Newsom. *Chick.*, J. Caplin; S. T. Deakin, Canterbury. *Faded or Marked Buff*.—1 and 3, J. Caplin. 2, R. P. Newsom. *Chick.*, W. C. Selkirk, Dover. *c*, T. M. Fellingham, Brighton; B. B. Newsom.

NOURICH.—Crested Yellow or Buff.—1, 2, and *he*, J. Caplin. 2, J. Bateman. *Chick.*, W. C. Selkirk.

CINNAMON.—1, T. M. Fellingham. 2, Rev. V. Ward, Hyde. 3, W. C. Selkirk. 2 extra, W. A. Darnley. *Chick.*, Rev. V. Ward; F. H. M. Fellingham; W. C. Selkirk. *c*, A. Caplin; R. B. Newsom.

LIZARDS.—Golden-spangled.—1, Rev. V. Ward. 2, T. W. Fairbrass. 3, J. Bateman. *Chick.*, Rev. V. Ward; T. W. Fairbrass. *Silver-spangled*.—1, 2, 3, and *c*, T. W. Fairbrass, Canterbury. 2 extra and *he*, Rev. V. Ward.

MULES.—Any variety.—1, W. C. Selkirk. 2, Dr. G. F. Head, Margate. 3, Rev. V. Ward. *Chick.*, B. Coleman, Canterbury. *he*, W. C. Selkirk; E. Akhurst, Plumstone, Sandwich. *c*, T. W. Fairbrass.

ANY OTHER VARIETY.—1 and 3, J. Caplin. 2 and *c*, W. C. Selkirk. 3, Mrs. S. C. Bacon.

BRITISH AND FOREIGN BIRDS.—1 and *c*, W. Covenev, Petham. 2, J. Caplin. 3, Mrs. S. C. Bacon.

SELLING CLASS.—*he*, J. Caplin (3). *c*, T. M. Fellingham (2); J. Bateman (2); F. Anderson.

JUDGES.—Poultry and Pigeons: Mr. R. Teebay and Mr. F. Esquilant. *Canaries*: Mr. G. Billett.

BEDFORDSHIRE AND HERTS POULTRY SHOW.—We are informed that prizes will be given for Dragons, single birds. Three classes—Blue and Silver, Yellow or Red, and White. The first prize £2 and second prize £1 in each.

PORTSMOUTH POULTRY SHOW.—The following subscriptions have been collected by Mrs. Turner Turner for two five-guinea cups for competition at the above Show, on the 6th of January next. Mr. S. P. Broad, £2 2s.; Mr. Maynard, £1 1s.; Mrs.

Williamson, £1 1s.; Mr. Haines, 10s. 6d.; Mrs. Popham, 10s.; the Rev. N. J. Ridley, 10s.; Mr. J. Chisman, 5s.; Mr. H. Lingwood, 10s. 6d.; Mr. Rayner, 5s.; Rev. J. M. Rice, 10s. 6d.; Major Macleay, 10s.; Mrs. Hill, 5s.; Miss Eyton, 5s.; Mr. H. Hoare, 5s.; Mr. Croce, 6s.; Mr. J. Long, 5s.; Mrs. Young, 5s.; Mrs. Turner Turner, 10s. 6d.; Mrs. Turner, 13s. For a Game cup Rev. G. S. Cruwys subscribes £2 2s.

WATFORD POULTRY SHOW.

The annual Exhibition of the West Herts Agricultural Society was held on December 15th and 16th, in the Agricultural Hall, Watford, a building of recent construction, admirably adapted for the purpose. The prizes included several £5 5s. cups, offered by various gentlemen in the neighbourhood, and in this way exhibitors who might have competed elsewhere were induced to rest content with the substantial honours of a Show which is confined to those living within a certain area.

In *Dorkings* the Rev. E. Bartrum won the cup with a pen which would be hard to beat. The cock, we believe, was a winner at the Crystal Palace, and the hens have already been honourably mentioned in this Journal. Curiously enough, although the Show is essentially an agricultural one, and the number of *Dorkings* exhibited is large, there is no *Dorking* class open to Silvers or Cuckoos. The *Cochins* were numerous, but very few pens were noticed. The *Brahmas* were not so large a class as they ought to be. Some Japanese *Bantams* attracted much attention. The *Selling* class (a cock and two hens at a price not exceeding £2, with a first prize of £3, contained a number of excellent birds, Lord Chesham winning with a capital pen of *Dorkings*. The *Geese* and *Turkeys* constituted two of the best classes in the Show, nearly every pen being noticed.

DORKINGS.—Coloured.—1, 2, and Cnp, Rev. E. Bartrum, Berkhamstead. *Chick.*, C. A. Barnes, Chorleywood; J. H. James, Watford; W. J. Loyd, Watford. *c*, T. Kingsley, Tring. *White*.—1, D. Carnegie, Watford.

COCHINS.—Any variety.—1, Lord Chesham, Chesham. 2, C. A. Barnes. *Any other variety*.—1, T. Clutterbuck, Rickmansworth. 2, C. F. Hollingsworth, St. Albans.

BRAHMA POOTRA.—Dark.—1, Mrs. G. S. Vizor, Uxbridge. 2, W. A. Peel, Watford. *Light*.—1, 2, and *he*, R. Horsfall, Watford.

GAME.—1 and 2, T. Paramor, Aldenham.

HAMDBURGERS.—1, T. Clutterbuck. 2, A. J. Copeland, Watford.

BANTAMS.—Game.—1, Lord Chesham. 2, J. M. Hughes, Chenies. *c*, S. M. White, St. Albans. *Any other variety*.—1, *he*, and *c*, W. J. Loyd. 2, R. Horsfall. *CREVIL-CEURS* and *HOUANS*.—1 and *c*, C. A. Barnes. 2, W. A. Peel.

ANY OTHER VARIETY.—1, T. Clutterbuck. 2, C. A. Barnes.

ANY VARIETY.—1, Lord Chesham. 2, C. S. Newing, Watford. *Chick.*, C. A. Barnes; W. J. Jervis, Pinner (3). *c*, C. A. Barnes. *Cock*.—1, W. J. Jervis. 2, C. F. Hollingsworth. *Chick.*, C. S. Newing (3).

DUCKS.—Aylesbury.—1 and Cnp, Lord Chesham. 2, T. Kingsley. *Rouen*.—1, 2, and *he*, C. A. Barnes. *Any other variety*.—1 and 2, T. Clutterbuck.

GESE.—1, 2, and Cnp, C. A. Barnes. *Chick.*, T. Kingsley; T. Paramor.

TURKEYS.—1 and Cnp, W. Field, Hemel Hempstead. 2, A. H. Longman, Hemel Hempstead. *Chick.*, Lord Chesham; T. Kingsley; A. H. Longman; W. J. Loyd; T. Paramor. *c*, C. A. Barnes (2); Lord Chesham; W. Field.

JUDGE.—Mr. J. Douglas, The Aviaries, Worksp.

CAMBRIDGE POULTRY SHOW.

The following are the awards made at the third annual Show, held in the Corn Exchange on the 10th and 11th inst.:

DORKINGS.—Any variety.—Cup and 1, H. Lingwood, Barking. 2, F. Parlett, Great Baddow. 3, Rev. C. H. Cross, Cambridge. *Chickens*.—1, T. G. Burnell, Stratton. 2, T. Atterton, Heath and Reach. 3, H. Lingwood. *he*, W. C. Burnell, Stratton. 4, T. K. Heath; W. J. Denison.

COCHINS.—Cinnamon or Buff.—Cnp and 1, W. A. Burnell, Notts. 2, Mrs. A. Tindal, Aylesbury. 3, W. Mansfield, Cambridge. *Chick.*, J. Everett. 4, G. F. Bentley; H. Longwood.

COCHINS.—CHINA.—*Any other variety*.—1, E. W. Beachey, Flnder, South Devon. 2, T. M. Derry, Gt. Henny, Wisbech. 3, J. Sleep, North Kingsland, London. *Chick.*, J. L. Nash. *Chickens*.—1, J. R. Fowler, Aylesbury. 2, W. A. Burnell. 3, R. W. Beachey. *he*, H. Lingwood; Major Egmont; T. Atterton; W. Mansfield (2); Mrs. E. Poyer; C. Sanders. *c*, H. J. Gumbell (2).

BRAHMAS.—Light.—1, Horace Lingwood, Greeting. 2, T. A. Dean, Marden. 2, Mrs. Peet, Sharnbrook. *Chick.*, H. B. Maynard; Mrs. A. Tindal; W. Whiteley. *c*, P. Haines.

BRAHMAS.—Dark.—Cnp and 1, Horace Lingwood, 2, E. Pritchard, Tettenhall. 3, H. W. R.ville, London. *Chick.*, J. G. B. Knight; Mrs. A. Tindal; J. Watts. *he*, Dr. H. Jones; Rev. J. Richardson; T. F. Ansell. *Chickens*.—1, Horace Lingwood, 2, Rev. J. Richardson, Sanly. 3, W. Mansfield. *Chick.*, W. B. Haines; E. Pritchard; T. Scar. *Chick.*, Mrs. Peet; Dr. Holmes; G. Jones (2); E. Haines; Mrs. E. Poyer.

GAME. Black or Brown Reds.—1, S. Matthew, Stowmarket. 2, W. Foster, Deal. 3, K. Hall, Cambridge. *Chick.*, Miss Nelson; H. E. Martin.

GAME.—Any other variety.—1, S. Matthew. 2, H. P. Price, Brecon, South Wales. 3, W. Foster. *Chick.*, E. W. Southwood; R. Hall. *Chickens*.—1, S. Field, Ambrosden. 2, R. Hall. 3, S. J. F. Stafford, Great Yarmouth. *Chick.*, H. E. Martin; E. Hall.

HAMDBURGERS.—Gold or Silver-pencilled.—Cnp and 1. —1, H. H. Hurst, Ashdon-under-Lyne. 2, Ashton & South, Broadbottom, Mottam. 3, F. Walker, jun., Denton. *Chick.*, T. Blakeman. *Chick.*, J. Gee; H. R. Plattin, jun. *c*, J. Wmship; E. Hills; J. F. Miller.

HAMDBURGERS.—Gold or Silver-pencilled.—1, W. Speakman, Cheshire. 2, R. Newbitt, Epworth. 3, J. C. N. Row, Melford. *Chick.*, J. B. Lugar; R. Newbitt; A. Silver. *c*, E. W. Robinson.

BRECHIN.—Any variety.—Cnp, 1, and 3, W. Cutlack, jun., Littleport. 2, J. J. Malyon, High-wyke. *Chick.*, Rev. T. Brasley. 1, E. Frost; W. H. Hibbert. U. Marshall. *Chick.*, Cutlack, jun. (2); Mrs. A. Tindal; Miss G. A. Patchett.

ANY OTHER VARIETY EXCEPT BANTAMS.—1, G. W. Boothby, Louth. 2, R. Newbitt. 3, T. A. Wright, Great Yarmouth. *Chick.*, T. Walker, jun.; Rev. N. J. Ridley. *Chick.*, G. E. Knight; J. K. Fowler; J. P. Case.

BANTAMS.—Game.—Cnp, 1, and 2, Miss M. J. Nelson, Cocksham, Northumberland. 3, J. Eaton, Grantham. *Chick.*, R. Newbitt. *Chick.*, D. Warren; G. E. Porter; S. Salter; W. B. Jellines; W. Adams; A. Ashley. *c*, T. Holton; F. Beumett.

BANTAMS.—*Black or White*.—Medal and 1, W. H. Shackleton, Bradford. 2, J. H. Cambridge. 3, E. Tearle, Gazeley, Newmarket. *he*, R. H. Ashton; H. M. Maynard; T. E. Thrtle.

BANTAMS.—*Any other variety*.—1 and 2, M. Leno, Bedfordshire (Laced). 3, T. J. C. Rackham, Gatton, Norfolk (silver-laced Sablefrons). *he*, T. J. C. Rackham. c. w. Stringfield; J. W. Pountney.

SELLING CLASSES.—*Single Cock or Cockerel*.—1, E. Smith, Malden (Dark Brahm). 2, W. A. Burnell (White Cochins). 3, F. Parlett (Dorking). *he*, G. Manders; T. M. Derry; W. Branton; C. E. Cresswell; U. Marshall; C. Barber; W. Cutlack, jun.; J. J. Madden; M. Leno; Rev. J. H. Crosse; H. Poyles; T. Scar; W. H. Denison; C. Saunders; S. Salter; W. A. Burnell; c. Rev. J. Richardson; E. Prichard; J. Freer. *Four of Hens or Pullets*.—Cup and 1, W. A. Burnell (White Cochins). 2, W. Mansfield (Dark Brahm). 3, Major Barlow, Cambridge (Houdans). *he*, R. W. Boachie. *he*, Mrs. Peet; T. Atterton; F. Parlett; W. Cutlack, jun.; A. F. Faulkner; Rev. C. H. Cross; H. Powers; W. Rayner; c. T. Scar. *Single Drake*.—1, W. H. Denison, Woburn Sands. 2, S. Wallis, Cambridge. 3, F. Parlett. *he*, F. F. Upsher; J. F. Felch; H. Dowsett; J. Hedges. 2, J. Malden. c. J. King, jun.; J. K. Fowler. *Pair of Ducks*.—1, W. H. Denison. 2, J. N. Waite, Yarmouth. 3, T. F. Upsher, Sutton. *he*, H. Dowsett; J. Hedges.

DUCKS.—*Any variety*.—1, T. Holton, Buckingham. 2, J. K. Fowler. 3, T. F. Upsher. *he*, J. C. Rackham. *he*, B. Cooper; S. Wallis; Miss M. J. Nelson; H. Dowsett; Hon. Mrs. Vernon; Major J. S. Hall; J. Malden.

TURKEYS.—*Any variety*.—1, E. Arnold, Whittlesford. 2, H. J. Gannell, Milton. 3, Major G. S. Hall, Ely.

GREENS.—*Any variety*.—1, Capt. Anyon, Chorley. 2, T. M. Derry. 3, J. N. Waite. *he*, M. A. Thornhill; D. Harvey; J. K. Fowler.

PIGEONS.

CARRIERS.—*Cock*.—1 and 3, W. G. Hammock, Iford. 2, W. W. Minson, St. Ives. *he*, F. W. Metcalfe; F. Caut. *Hens*.—Cup and 1, W. Minson. 2 and 3, W. G. Hammock. *Young*.—1, F. W. Metcalfe, Cambridge. 2, Master J. W. Massey, Spalding. 3, W. Butler. *he*, C. H. Clarke; W. G. Hammock; J. Ford; S. Salter; J. C. Ord; F. W. Metcalfe.

CARRIERS.—*Blue*.—1, F. W. Metcalfe. 2 and 3, W. G. Hammock. *he*, Master G. W. Massey; C. E. Duckworth; G. Kempton. *Young*.—Medal and 1, W. G. Hammock. 2, A. B. Douglas, Hounslow. 3, J. Ord, Huddersfield, London. *he*, W. G. Kempton.

POULTERS.—*Cock*.—Cup and 1, H. Pratt, Knowle. 2 and 3, W. R. Rose, Northamptonshire. *he*, C. Martin; C. H. Byford; L. Watkin; F. Gresham. *Hens*.—1, Miss Ladd, Caine. 2 and 3, F. Gresham, Shefford. *he*, R. Ashton; C. Martin; F. W. Metcalfe.

TEMPERAS.—*Almond*.—1, W. G. Hammock. 2, J. Ford, Lond n. 3, W. R. P. G. Brown. *he*, R. Cant. *Any other variety*.—1, W. G. Hammock (Agate). 2, W. D. Brown, Cambridge. *he*, A. B. Douglas (Black Mottled). *he*, W. D. Brown; R. Barrett; J. Ford; J. Watts.

BARS.—Cup and 1, H. Yardley, Birmingham. 2, H. M. Maynard, Holmead, Hyde, Isle of Wight. 3, E. Wild, Hyde, Manchester. *he*, G. Mann.

JACOBS.—1, C. Maran, Kettering. 2, G. Mann. 3, W. Larkins, Henlow.

DRAGONS.—1 and 2, F. Graham, South Rickenhead. 3, W. Larkins. *he*, S. Salter; W. Larkins; H. Yardley.

WATERS.—1, J. F. Loversidge, Newark. 2, J. W. Wright, 3, Withheld.

TERRITS.—1 and 2, S. Salter. 3, J. E. Spivey, Camd. Rowson.

ANTWERPS.—*Short-faced*.—Cup and 1, C. F. Copeman, Birmingham. 2, H. Yardley, 3, W. Gamon, Chester. *Homing*.—1, F. W. Metcalfe. 2, R. Had. 3, J. Robertshaw, Thornton. *he*, J. Mantel; Sparrow & Cotton. *Any other variety*.—1, F. Wild (Blue Owl). 2, L. Allen, Southwark (Black Beards). 3, Major G. S. Hall (White Owl). c. R. S. Everleigh; J. Robertshaw; E. M. L. Cockeidge. c. J. Mann.

SELLING CLASS.—1, F. W. Metcalfe. 2, S. Sa tor. 3, Master J. W. Massey. *he*, J. Ford; W. H. Baker; C. Reed; W. H. James. c. Lowsend.

RABBITS.—*Lop-eared*.—Cup and 1, J. Cranch, St. John's Wood, London. 2, and 3, F. Banks, London. *Any other variety*.—1, J. Rebut, Northampton. 2, F. Gardner, Kingthorpe. 3, Mrs. Fassingham, Milton. *exhibitor Class*.—1, F. Doggett, Cambridge. 2, E. Everett, Cottenham. 3, T. M. Nash.

LOCAL PRIZES.—*Dorkings*.—Plate, Rev. C. H. Crosse, Cochins. —Plate, W. Mansfield. *Brahmas*.—Plate, W. Mansfield. *Game*.—Plate, R. Hall. *Hamburgs*.—Plate, E. Hills. *Best Pen of Fowls*.—Plate, W. Cutlack, jun. *Lantams*.—Plate, C. C. Reed. *Ducks*.—Plate, T. F. Upsher. *Carrers*.—Plate, F. W. Metcalfe. *Pouters*.—Plate, Major G. S. Hall. *Best Pen of Pigeons*.—Plate, W. D. Brown; F. W. Metcalfe. *Rabbits*.—Plate, F. Doggett.

REIGATE POULTRY SHOW.

This, the twelfth annual Exhibition, was held in conjunction with the Agricultural Show, on the 9th and 10th inst.

DORKINGS.—1, J. Ivory & Son, Reigate. 2, J. R. Corbett, Betchworth. 3, F. May, Reigate. *he*, G. Ellis, Betchworth. c. Mrs. L. Chandler, Buckland, Chicksen. —1, G. Ellis. 2 and 3, F. May. *he*, J. W. Taylor, Reigate.

DORKINGS.—*White*.—1, W. Chandler, Buckland. 2, P. Hanbury, Chicksen. —1, J. Rindou, Woodhatch. 2, W. Chandler.

COCHIN OR BRAHMA.—1, J. Aldberry. *he*, S. P. Broad, Harewood.

HAMBURGS.—1, J. Norris, Betchworth. *he*, S. P. Broad.

GAME.—1, P. Hanbury. 2, A. J. W. Lyon, Redh. *he*, S. P. Broad. *Chickens*. —1, P. Hanbury. 2, J. Men. Redh. c. G. Galt, Sutton.

BANTAMS.—*Game*.—1 and 2, P. Hanbury. 2, J. Men.

POLTS.—1 and 2, G. Simpson, Wray Park. 2, Miss A. Selmes, Blitchingly. c. W. Chandler.

GOSLINGS.—1, J. W. Taylor, Reigate. *he*, J. Clifton.

DUCKS.—*Aylesbury*.—1, W. B. Waterlow. 2, Mrs. E. Chandler. *he*, S. W. Boyes, Chipstead. *Rowen*.—1, J. W. Taylor. 2, G. Simpson. *he*, Capt. C. Smith, Deptford. 3, J. H. Webb. *Mixed and Wild*.—1, P. Hanbury. *Any breeds*.—1, J. Clifton. 2, W. B. Waterlow.

GUINEA FOWLS.—1, P. HANBURY.

OPEN TO ALL LANGUAGES.—*D'Orléans, Brabant, Cochins, Houdans, or Cross-Covers*.—Cup, R. S. Woodgate, Dunstable Wells. *he*, J. C. C. Dorking; E. May, Dorking; J. Long, Bromley Common. c. H. H. Young, Dorking. *Turkeys, Pheasants, Guinea Fowls, or Toy Fowls*, such as *Bantams*.—Cup and 1, S. P. Broad.

RABBITS.—*Length of ear*.—1 and 2, J. Ellis. *Black and White or Blue and White*.—1 and 2, J. Ellis. *Grey and White or Yellow and White*.—1, J. J. Ellis. 2, G. Finch, Reigate. *Self-colored*.—1, J. Ellis. 2, P. Hanbury. *Form*.—1, J. Ellis. 2, S. W. Boyes. Special prize for best Rabbit in the show—J. Rindou, Woodhatch.

JUDGES.—Messrs. Hedley and Wood.

HANLEY POULTRY SHOW.—The Committee have made several additional classes for poultry, Rabbits, Cats, &c., also added £100 more in money and extra prizes making a total of £999 for competition.

ABERDEEN POULTRY AND PIGEON SHOW.—This is likely to be excellent. Owing to the Glasgow Show being a close one for young birds this season, many of the Pouter breeders will

exhibit at Aberdeen where there are twenty-two classes and four silver cups for Pouters alone. It is in the hands of highly respectable parties likely to carry it out in an honourable manner in every respect. There are fifteen pieces of plate for poultry.

BURSLEM POULTRY SHOW.

The first Show at Burslem of poultry, Pigeons, Rabbits, and Cage Birds was held on the 10th and 11th inst. For a first attempt the prize list was pretty good, and though there were no cups or extras, the entries were satisfactory. Turner's pens were used, but the Society was unfortunate in the selection of a place for the poultry, the butchers' shambles being brought into requisition for the purpose, proving very dingy and damp, and altogether a wretched place, but in other respects the Show was well managed; and the Fown Hall, in which were the Pigeons and Cage Birds, was, on the contrary, a most excellent place, roomy, well-lighted, and comfortable, and the birds shown were a credit to the place.

In poultry the *Spanish* was a good class and large, and the *Dorkings* very good, but not numerous. In the Variety class of *Dorkings* good Silver-Greys were first, and Whites second. Buff *Cochins* were also a good lot, but the Whites shown by Mr. Whitworth by far the best in the Cochins classes. *Brahmas*, Dark, good and numerous, and the winners all old birds. Light also a good lot, Mr. Leno first, Mr. A. O. Worthington second, and Mr. T. A. Deane third. *Polish* were poor, while, as might be expected so near Uttoxeter, the *French* were very fine; *Crève-Coeurs* first, *Houdans* second, *La Flèche* third. In *Game* were some good birds, but these were the exception, the best being the first-prize single Brown Red cock, and the first-prize Black and Brown Red hens. *Black Hamburgs* were perfect. *Game Bantams* were but of ordinary quality, but the Blacks, and Whites, and varieties proved good. In the latter class Pekins were first, Gold-laced second, and Booted Japanese third. The Selling class was very large and good, the winners proving of more than ordinary merit. In *Turkeys* and aquatic birds Mr. Walker had the lion's share of the prizes, winning all the first prizes with capital stock.

In the *Pigeons* we noticed among the Pouters a grand White cock and Blue hen, and in *Jacobins* a most handsome pair of Yellows were placed first, and Reds second. Carriers were good in all classes, and the Dragons a show in themselves, while the *Pantails* were a grand display.

SPANISH.—1, R. Newbitt, Epworth. 2, J. F. Sillitoe, Wolverhampton. 3, E. Jackson, Finchfield, Wolverhampton.

DORKINGS.—*Coloured*.—1, J. Walker. 2, J. Watts. 3, J. Robinson, Garstang. *Any other variety*.—1, Wren & Pige, Lowestoft. 2, Mrs. E. Williams. *Cochins*.—*Cinnamon and Buff*.—1, H. Yardley, Birmingham. 2, H. Goodfellow, Middles, Newcastle. 3, W. Brunton, East Dereham. *Any other variety*.—1 and 3, W. Whitworth, Longsight. 2, E. Kendrick, jun., Lichfield.

BRAHMAS.—*Dark*.—1, W. H. Crabtree, Levenshulme. 2, T. F. Ansell, St. Helen's. *Light*.—1, M. Leno, Dunstable. 2, A. O. Worthington, Burton. 3, A. Dean, Marden, Hereford.

POLANDS.—1, J. Robinson. 2, P. Unsworth, Newton-le-Willows.

FRENCH.—1, R. E. Wood. 2, W. H. Chubb.

GAME.—*Black-breasted Reds*.—Cocks. —1, G. Bagnall, Draycott. 2, E. Kay, Tunstall. *Hens*.—1, Duke of Sutherland, Trentham Hall. 2, E. Bell, Horninglow. 3, A. Greenwood, Burslem.

GAME.—*Brown Reds*.—Cocks. —1, W. Watson, Andlem. 2, G. F. Ward, Wrenbury. 3, J. Jones, Nantwich. *Hens*.—1, Duke of Sutherland. 2, W. Watson. 3, G. F. Ward.

FRENCH.—*Any variety*.—1, G. F. Ward. 2, W. Church, Nantwich. 3, E. Bell.

HAMBURGS.—*Black*.—1, H. W. Serjeantson, Acton Barnell. 2, H. Maskery, Leek. 3, W. Marlor, Denton.

HAMBURGS.—*Golden-spangled*.—1, Duke of Sutherland. 2, J. Webster, Colne. 3, T. Boulton, Hatford. *Golden-pencilled*.—1, Duke of Sutherland. 2, W. Spearman, Nantwich.

HAMBURGS.—*Silver-spangled*.—1 and 2, Duke of Sutherland. 3, J. Webster. *Silver pen (dove)*.—1, J. Webster. 2, Duke of Sutherland.

HAMBURGS.—*Any variety*.—2, J. H. Routh, Chesterfield. 3, G. E. Sander, Sutton Cross Hills.

BANTAMS.—*Black-breasted Red Game*.—1, J. Hewitt, Prescot. 2, W. T. Eyreall, Ashby-de-la-Zouch. *Other varieties*.—1, F. Mauland, Red Hill, Worcester. 2, A. Ashby, Red Hill. 3, G. D. Jubb, Nantwich.

BANTAMS.—*Black or White*.—1, W. H. Shackleton, Bradford. 2, T. E. Thrtle, Lowestoft. 3, E. Walton, Rownton-stall. *Any other variety not Game*.—1, H. B. Smith, Broughton. 2, M. Leno. 3, Rev. W. Serjeantson.

SELLING CLASS.—1, J. H. Lane. 2, K. Ford, Newcastle. 3, R. Nesbitt.

DUCKS.—*Rowen*.—1, J. Walker. 2, Duke of Sutherland. 3, P. Unsworth.

DUCKINGS.—1, J. Walker. 2, Rev. W. Serjeantson. 3, Mrs. H. J. Bury.

DUCKS.—*White Jutesburgs*.—1, J. Walker. 3, W. H. Crew, Kidwail. *Any other variety*.—1, J. Walker. 2, H. B. Smith. 3, T. J. M. Molen, Biggleswade.

GREENS.—1, J. Walker. 2, Mrs. H. J. Bury, Rosedale, Teulny. 3, W. H. Crew.

TURKEYS.—1, J. Walker. 2, E. Kendrick, jun. 3, F. E. Richardson, Bramshall.

LOCAL CLASSES.

HAMBURGS.—1, Mrs. Flynn, Church Lawton. 2, T. Boulton. 3, E. Eardley, Tunstall.

BANTAMS.—1, A. Heath, Coberidge. 2, E. Mailland, Hauley.

ANY VARIETY.—1, H. Cartledge, Burslem. 2, H. Lowe, Wolstanton. 3, J. Broad, Colledge.

A Silver-plated Coffee Service, offered by Mr. R. Berrington for the best local Bantam, was won by Mr. Heath.

PIGEONS.

First prizes were awarded to the following exhibitors:—E. Horner, Leeds (6); H. Pratt, Knowle; H. Yardley, Birmingham; J. F. Godding, jun. Betchdale; W. H. Handford; J. Fisher, Barrow-in-Furness; J. Thompson, Banchley; F. Wild, Hyde; Rev. W. Serjeantson; J. Walker (2); F. Godding, Birkenhead; W. Gamon, Chester; G. E. Sander; L. Wren, Lowestoft; K. White, Manchester; E. Hart, Newcastle; W. Tomkinson, Smallthorpe. The following exhibitors earned off second prizes:—H. Yardley (3); J. Taylor, Crew; E. Horner (5); Owen & Pearson, Kettering; T. Chambers, Northampton; J. Thompson; J. F. Loversidge, Newark. W. Gamon (2); W.

Hill, Handforth (2); K. Wildblood, Burslem; R. White, Manchester; F. Beech, Burslem; J. Walker; J. Dabbs, Hanley; W. Tomkinson, Smallthorne.

CAGE BIRDS.

First prizes were awarded to the following exhibitors of Canaries and other Song Birds:—Banting & Keyes, Derby; J. Shatwell, Macclesfield; W. Brammer, Hanley; Bemrose & Orme, Derby (2); W. Watson, jun., Darlington (2); B. Poulton, Old Bassing, Notts; J. N. Harrison, Belper; H. Unwin, Etruria; J. Brough, Loughport.

The following exhibitors of Song Birds received second prizes:—J. N. Harrison; J. Johnson, Burslem; J. Adams, Coventry; W. Watson; Bemrose and Orme; B. Poulton; E. Williams; J. Brough.

RABBITS.—*Lop-eared*.—1, F. Banks, London. 2, S. Butterworth, Rochdale. *Any variety*.—1, P. H. Dows, Boston. 2, Owen & Pearson, Kettering.

The Judges were *Poultry* and *Rabbits*: Mr. E. Hutton. *Pigeons*: Mr. Holt; and *Cage Birds*: Mr. Barnesby.

EDINBURGH CHRISTMAS CLUB POULTRY SHOW.

We are indebted to *The Scotsman* for the following notes:—A larger Show has never been seen north of the Tweed, and the Judges averred that it excelled any on either side of the border this year for the quality of the birds. Special mention in the outset must be made of the improved arrangements for showing the poultry—the pens from the Royal Gymnasium enabling fanciers and the general public properly to see the carriage and build of the birds.

Spanish.—All of the classes of this breed were very good. The first-prize young cock's wrinkled face, which was otherwise of undoubted quality, found disfavour in the eyes of many judges. The second prize went to a fine strong-boned cock, with a pure white face. There was not a great deal to choose between the three prize pens of hens, all of them being clean in the white. The old cocks were not a large but an excellent class. Mrs. Gracie again headed the list with a bird whose wonderful length of face and purity of colour commanded the admiration of all. The old hens were a fair lot. Twenty-seven Coloured *Dorking* cockerels were penned, and it is seldom that one sees such a splendid array of young cocks. The first prize and the cup in the section went to a young bird of great size and style, while the second prize cock had perhaps a better head than the cup bird, although he is not so wide in the frame. Equally meritorious were the young hens, although their numbers are not so great. The first-prize in the old cock class was a grandly-framed bird, whose head, comb, and hackle are perfect. Not much inferior was the second-prize bird—long-breasted and short-legged. The first-prize pen of old hens were beauties, topping all the others in size. The best class of *Dorkings* were the *Silver* cockerels, of which no fewer than thirty-six came under the eye of the Judges. The first-prize was a big bird of his age, pure in colour, and jaunty in style. The second-prize bird was a very excellent cockerel, nicely marked, and strong framed. There were very few inferior birds in the class. Although the pullets were less numerous, the quality was also first-class. The first were a pair of beautifully-pencilled hens, large in bone, and of neat carriage. In the old cock class the first-prize was a bird more stylish in head and comb, but otherwise not much superior to the second and third. *Cochin-Chinas* were a splendid section. In the cockerel class the first was Buff, which has never been beaten. It has immense breadth, is very shortly coupled between head and tail, and is perfect in the covering of his legs. The second-prize was the same style of bird, but not so broad in the frame. The third ticket went to a Partridge-feathered, strong-boned cock. The first for the pullets was a pen of Buffs, extremely rich in colour, having the fluff far down the leg, and great thighs. There were few old cocks, and the lead was a Buff, whose legs were beautifully-feathered, and frame of great breadth. The only White *Cochin* placed was in this class, but he is not up to the style of the first bird. The old hens were a very nice lot, but not superior. An excellent show of *Brahmas* commanded considerable attention. The cockerels were a large class, numbering thirty-five, and the superiority of the lot is shown by the numerous commendation tickets. The first-prize was a beautiful ten-month-old cock, square in body, with a capital head, and perfect fluff on the legs. The pullets were an excellent class, and among the old cocks there were a number of splendid birds. Perhaps the finest section, everything considered, was that of *Game* birds. It was the largest, and would appear to be gaining favour in Scotland. Among the thirty-one Black-breasted Red cockerels there was not a bad bird, and the same may be said of the twenty-nine pullets. The old cock class produced the best bird in the Show, to which was awarded, besides the cup of its section, the champion seven-guinea cup. It is said to be the finest bird of the breed exhibited for many years, whether quality, colour, or substance be considered. He has the snake head so much desiderated by fanciers of the *Game* breed, grand symmetry, and splendid feather, and "is quite fit to fight for his life," as was admirably said by one of the Judges. The *Hamburghs*—Golden and Silver-spangled and Pencilled varieties, were not placed in separate classes. In the class of Spangled cocks, the

three prizetakers—all *Silver*—were magnificent birds. The Spangled hens were also a capital class, although not so numerously represented as in previous years. Of the Pencilled birds, both cocks and hens, the quality was above the average, although there were no thoroughly fine birds. It was a happy thought to place all the *Bantams* in a special enclosure, and this department was throughout the day a source of great attraction. As usual the largest classes of these diminutive poultry were the *Game*. The cup in the section and the first prize was the Duck-wing gem which secured similar honours at the Crystal Palace and Birmingham Shows. As to the hens, with the exception of the pair of wheaten birds, there was not much merit in the class. The Other variety classes were of fair quality. *Scotch-Greys* were few in number, but the prize birds first rate; and there was nothing startlingly novel in the Any other distinct breed.

The *Ducks*, both *Kouens* and *Aylesburys*, were a splendid show—the birds being large in size and excellent in quality. *Turkeys* were but indifferent, and *Geese* the worst section.

SPANISH.—*Cockerels*.—1 and 3, Mrs. Gracie, Collington. 2, A. Walker, Kilmarnock. *Pullets*.—1, W. Houldsworth. 2, Mrs. Tulpath, Poffermill, Liberton. 3, A. Walker.

SPANISH.—*Cocks*.—1, Mrs. Gracie, 2, W. Wallace, Maehelne. 3, W. Rutherford, Edinburgh. *Hens*.—1, Mrs. Kidpath. 2, W. Kutherford. 3, W. Paterson-Langholm.

DORKINGS.—*Coloured*.—*Cockerels*.—1, Mrs. Morrison, Stirling. 2, T. Raines, Striding. 3, Mrs. Dickie, Alloa. *Pullets*.—1, D. Gellatly, Meikle. 2, T. Raines. 3, J. E. Armistead, Inchmartine, Inchture.

DORKINGS.—*Coloured*.—*Cocks*.—1, Mrs. A. Bruce, Airdrie, Meikle. 2, G. S. Robb, Leslie. 3, T. Raines. *Hens*.—1 and 2, D. Gellatly. 3, P. Symon, Errol.

DORKINGS.—*Silver*.—*Cockerels*.—1, D. Annan, Mouzie, Cupar Fife. 2 and 3, Duke of Buccleuch, Dalkeith. *Pullets*.—1, T. Raines. 2, D. Draper, jun., Falkirk. 3, J. Fotheringham, Pleas, Strirling.

DORKINGS.—*Silver*.—*Cocks*.—1, T. Raines. 2, D. Draper, jun., 3, J. Malcolm, Langton. *Hens*.—1, J. Malcolm. 2, T. Raines. 3, D. Draper, jun.

COCHINS.—*Cockerels*.—1, J. Drinnan, Airdrie. 2, W. Jags, Blyth. 3, W. Sand, East Newport. *Pullets*.—1, G. H. Procter, Durian. 2, J. Drinnan. 3, J. Wyse, Falkirk.

COCHINS.—*Cocks*.—1, T. Bruce, Bushby. 2, H. Lacy, Hebben Bridge. 3, G. H. Procter. *Hens*.—1, G. H. Procter. 2, H. White, Dundee. 3, H. Lacy.

BRAHMA POOTRAS.—*Cockerels*.—1, T. Raines. 2, J. Smart, Helensburgh. 3, J. Young. *Pullets*.—1, J. Young. 2 and 3, J. Stuart.

BRAHMA POOTRAS.—*Cocks*.—1, H. Wyse. 2, J. Mitchell, Broughty Ferry. 3, H. Lacy. *Hens*.—1, H. Lacy. 2, T. Raines. 3, D. Annan.

GAME.—*Black-breasted or other Reds*.—*Cockerels*.—1, W. Allan, Musselburgh. 2, Mrs. K. Frew, Kirkcaldy. 3, J. Wishart, Lunks, Kirkcaldy. *Pullets*.—1, J. Stark, Morpeth. 2, R. Stewart, Blair Adam. 3, W. Chambers, Leslie.

GAME.—*Black-breasted or other Reds*.—*Cocks*.—1, J. Anderson. 2, D. Harley, Edinburgh. 3, C. Jamieson, Forfar. *Hens*.—1, R. Stewart. 2, J. Wishart. 3, D. Harley.

GAME.—*Any other variety*.—*Cockerels*.—1, J. A. Mather, Nithside, Closeburn. 2, C. Jamieson. 3, W. A. Swan, Leslie, Fife. *Pullets*.—1, J. Crombie, Leslie.

GAME.—*Any other variety*.—*Cocks*.—1 and 3, D. Harley. 2, C. Jamieson.

HAMBURGH.—*Gold or Silver-spangled*.—*Cocks*.—1, W. R. Park, Abbotsmeadow, Melrose. 2, J. M. Campbell, Bonny Kelly. 3, G. Stalker, West Sleekburn. *Hens*.—1, J. M. Campbell. 2, W. R. Park. 3, W. Mackintosh, Blairgowrie.

HAMBURGH.—*Gold or Silver-pencilled*.—*Cocks*.—1, G. Laing. 2, Mrs. W. Chalmers, Hallyburton, Comar Angus. 3, G. Roberts, jun., Eltrich Haugh.

HENS.—1, W. Wallace. 2, G. Roberts, jun. 3, J. Ness, Pathhead, Fife.

BANTAMS.—*Game*.—*Cocks*.—1, R. Brownlie, Townsend, Kirkcaldy. 2, D. Whitlaw, Dalrymple Loan, Musselburgh. 3, T. Raines. *Hens*.—1, E. P. Frew. 2, A. Frew. 3, R. Brownlie.

BANTAMS.—*Any other variety*.—*Cocks*.—1, J. Nesham, West Sleekburn. 2, J. Rutherford, Nocharnie, Auchtermuchty. 3, W. J. Houldsworth.

BANTAMS.—*Any other variety*.—*Cocks*.—1, J. M. Frew. 2, A. Robertson, Kilmarnock. 3, E. H. Ashton, Midtarm.

SCOTCH GREYS.—1, J. K. Cochran, Stenhousemuir. 2, J. Young. 3, T. Baillie, Bathgate.

ANY OTHER VARIETY.—1, G. Thomson, Pathhead. 2, W. R. Park. 3, Miss Trotter, Liberton.

DECKS.—*Aylesbury*.—1 and 2, A. Robertson. 3, J. R. Cochran. *Rouen*.—1, A. Robertson. 2, Lady G. Montgomery, Stobo Castle. 3, Col. C. Rice, Edenwood.

Any other variety.—1, W. Buns, Paisley. 2, G. H. Nicholl, West Ferry, Dundee. 3, A. Robertson.

SELLING CLASS.—*Cocks*.—1, J. Wise. 2, Mrs. Kidpath. 3, Col. Rice.

TRUCKS.—1, W. J. Houldsworth. 2, R. Fullarton, Loans, Troon. *Poultis*.—1, W. H. Thomson. 2, D. Ainslie, Costerton, Blackshiel. 3, W. J. Houldsworth.

GESE.—1 and 3, Lord Kinnaird, Rossie Priory. 2, Miss K. Douglas, Liberton.

SPECIAL PRIZES.

Cup for the best pen of poultry in the Show—J. Anderson.

Cup for the best pen of Spanish—Mrs. Gracie.

Cup for the best pen of *Dorkings*—Mrs. Morrison.

Cup for the best pen of *Cochin-Chinas* or *Brahma Pootras*—J. Drinnan.

Cup for the best pen of *Game*—J. Anderson.

Cup for the best pen of *Hamburghs*—W. Park.

Cup for the best pen of *Bantams*—R. Brownlie.

Cup for the best pen of *Scotch-Greys* or other breeds—J. R. Cochran.

Cup for the best pen of *Ducks*—A. Robertson.

Cup for the best pen of *Turkeys* or *Geese*—W. H. Thomson.

The Judges were Mr. Douglas, Clumber; Mr. Stratton, Edinburgh; and Mr. Paterson, Airdrie.

MONROSE POULTRY SHOW.

The following awards were made at this Show, held on the 5th and 6th inst. :—

DORKINGS.—1, Mrs. W. Chalmers, Hallyburton. 2, R. Boyle, Carnoustie. 3, D. Gellatly, Meikle. *hc.* A. Burnett, Montrose. *c.* D. Gracie, Stonehaven.

SPANISH.—*Cup*, 1, 2, 3, and *hc.* Mrs. W. Stevens, Montrose. *c.* G. Stewart, Forfar.

COCHINS.—1, 2, and *Cup*, A. Burnett. 3 and *hc.* Mrs. Armistead, Inchmartine.

BRAHMAS.—1 and *Cup*, A. Burnett. 2 and *c.* J. Smart, Carnoustie. 3, W. G. Dundee, Dundee. *hc.* Mrs. W. Stevens.

GAME.—1 and *Cup*, Mrs. Tosh, Forfar. 2, J. Guild, Forfar. 3, A. Burnett *hc.* R. Brownlie, Forfar. *c.* J. Mackay, Lunan.

POLANDS.—1, 3, *Cup*, and *hc.* J. Taylor, Montrose. 2, Mrs. C. B. Taylor Montrose.

HAMBURGH.—*Silver-spangled*.—1, 2, and *Cup*, J. M. Campbell, Bonnykelly.

8, J. Mackay, *hc*, L. Andrew, Carnoustie, *c*, H. Gibson, Maryton, *Golden Spangled*.—1, H. Gibson, 2, J. Forbes, Stouhaven, 3, J. Low, Carnoustie, *c*, J. Taylor, *Gold or Silver-pencilled*.—1, Mrs. W. Chalmers, 2, G. Caithness, Carnoustie, 3, J. Taylor, *hc*, A. Gourlay, Old Chance Inn, *c*, A. Smart, Kelsdale.

HOUDANS.—1, W. C. King, Aberdeen, 2, Mrs. C. B. Taylor, 3, A. Robertson, Carnoustie, *hc*, W. Crabb, Montrose, *c*, Mrs. Davidson, Gidraivie.

ANY OTHER VARIETY.—1 and 2, J. Smart, 3, W. Crabb, *hc*, Miss Arklay, Dundonald, *c*, R. Ross, Montrose.

GAME BANTAMS.—1, W. Fisher, Dunfermline, 2, T. Ritchie, Arbroath, 3, D. Kerr, Wauk Mills, *hc*, W. Gray, *c*, J. Scott, Broughty Ferry.

BANTAMS.—*Schright*.—1 and Cup, J. Dallas, Montrose, 2, 3, and *hc*, J. Marshall, Montrose, *c*, J. Taylor.

BANTAMS.—*Any other variety*.—1, 2, and *hc*, J. Taylor, 3, G. J. Bell, Dundee, *c*, J. Marshall.

SELLING CLASS.—1, Mrs. C. B. Taylor, 2, A. Lowson, Forfar, 3, J. Marshall, *hc*, W. G. Durban, Dundee, *c*, J. Taylor.

HICKS.—*Hybrid*.—1 and 3, A. Burnett, 2, Miss Falconer, Bogenollo, *c*, Mrs. Lindsay, Dundonald.

HICKS.—*Any other variety*.—1, M. Garland, Cairnton, 2, Miss L. R. Tailour, Dubon, 3, Mrs. Mitchell, Burreton, *hc*, Mrs. C. B. Taylor.

GREEN.—1, Mrs. Cross, Spearmill, 2, Miss M. Garland, Cairnton.

TURKEYS.—1, Mrs. Mitchell, 2, A. J. Lyall, Old Montrose, 3, Mrs. W. H. K. Erskine, *hc*, Mrs. Croll, *c*, Mrs. Lindsay.

RABBITS.—3, D. Dorward.

PIGEONS.

POUTERS.—*Cock*.—1, M.G. Skinner, Edinburgh, 2, J. C. Lyall, Monifieth, 3, J. E. K. Spence, Broughty Ferry, *hc*, J. Mullins, Perth, *c*, F. M'Crac, Aberdeen, *Hen*.—1, M.G. Skinner, 2, T. L. Johnston, Montrose, 3 and *c*, H. Gibson, Maryton, *hc*, F. M'Crac.

CARRIERS.—1, F. M'Crac.

TRUMPETERS.—*Short-faced*.—1, M.G. Skinner, 2, A. M'Neil, Coupar-Angus, 3, W. & R. Davidson, Montrose, *hc*, Rev. W. J. Steen, Montrose, *c*, J. C. Lyall, Common, *hc*, J. Butchart, Montrose, *c*, J. Smart.

BARBS.—1 and Medal, A. C. M'Neil, 2, J. Day, Edinburgh, 3, M.G. Skinner, *hc*, W. & R. Davidson, *c*, Rev. W. J. Steen.

FANTAILS.—1 and *c*, A. Smith, Broughty Ferry, 2, J. E. Spence, 3, W. Hendry, Aberdeen, *hc*, G. Halkett, Montrose.

J. M'NEIL.—*Yellow or Red*.—1, 2, and Medal, W. & R. Davidson, 3, J. E. Spence, *hc*, D. Mitchell, Burreton, *c*, G. Halkett, *White or Black*.—1, T. L. Johnston, TRUMPETERS.—1, 2, and 3, T. L. Johnston, *hc*, J. Smart, *c*, A. C. M'Neil.

TERRITS.—1 and *c*, T. L. Johnston, 2, G. Low, Montrose, 3, W. Hendry, *hc*, C. B. Taylor, Montrose.

OWLS.—1 and 2, Rev. W. J. Steen, 3, W. & R. Davidson.

NEWS.—1, 2, 3, and *hc*, A. Duthie, Montrose, *c*, J. Brown, Abercromby.

MAGPIES.—1, G. Halkett, 2, J. Day, 3, D. Mitchell, *hc*, J. Crabb, Montrose.

ANY OTHER VARIETY.—1, T. L. Johnston, 2, J. M. Rodgers.

SELLING CLASS.—1, W. & R. Davidson, 2, J. E. Spence, 3, T. L. Johnston.

CAGE BIRDS.

SCOTCH FANCY.—*Yellow-Cock*.—1, W. & R. Davidson, 1 and Medal, D. Mitchell, Forfar, 2, J. Shanks, Arbroath, 3, D. Stewart, Forfar, *Hen*.—1, J. Shank, 2, D. Dund, Montrose, 3, D. M'Harly, Montrose.

SCOTCH FANCY.—*Buff-Cock*.—1, W. Clyne, Forfar, 2, J. Kerr, Forfar, 3, F. Batchelor, Dundee, *Hen*.—1, T. Leslie, Arbroath, 2, J. Shanks, 3, W. Ferguson, Forfar.

SCOTCH FANCY.—*Green*.—1, J. Boath, Forfar, 2, D. Clyne, 3, T. Leslie.

SCOTCH FANCY.—*Probals*.—*Yellow-Cock*.—1, D. Watson, Brechin, 2, J. Shanks, 3, F. Batchelor, *Hen*.—1, J. Buth, 2, W. Hutcheon, Brechin, 3, J. Kerr.

SCOTCH FANCY.—*Piebald*.—*Buff-Cock*.—1, R. M'Inroy, Dundee, 2, J. Boath, 3, J. Adam, Arbroath, *Hen*.—1, J. Adam, 2, D. M'Donald, 3, W. Ferguson.

BELGIAN.—*Cock*.—1, W. Ferner, Brechin, 2, W. McLeod, Aberdeen, 3, D. Welch, Brechin, *Hen*.—1 and 2, W. McLeod.

FOUL-FEATHERED, or FINEGINGING CLASSES.—*Cock*.—1, J. Kerr, 2, W. Smith, Brechin, 3, T. Leslie, *Hen*.—1, G. Stewart, Forfar, 2, W. Smith, 3, A. Dunn.

SELLING CLASS.—*Cock*.—1, A. Dunn, 2, W. Clyne, 3, D. Langlands, Montrose, *Hen*.—1, B. Judd, Montrose, 2, W. Hutcheon, 3, A. Dunn.

COMMON.—*Yellow-Cock*.—1, W. & R. Davidson, 2, W. Gray, Lunan.

COMMON.—*Buff-Cock*.—1, J. Monro, Montrose, 2, W. Scott, Montrose, 3, D. Clyne, Montrose, *Hen*.—1 and 3, J. Dorward, Montrose, 2, W. Peters, Montrose.

COMMON.—*Piebald*.—*Cock*.—1, A. Craik, Montrose, 2, D. Welch, Brechin, 3, J. Monro, *Hen*.—1, W. Smith, Brechin, 2, W. Gray, 3, W. Head, Montrose.

COMMON.—*Green*.—*Cock*.—1, W. Smith, 2, W. Peters, 3, D. Clyne, *Hen*.—1, W. Smith, 2, Clyne, 3, H. Hume, Montrose.

GOLDFINCH.—*Cock*.—1 and 2, W. McLeod, Aberdeen, 3, J. Dorward.

GOLDFINCH.—*Cock*.—1, D. Beattie, Montrose, 2, D. Walkie, Montrose.

BULLFINCH.—*Cock*.—1 and 3, D. Clyne, 2, J. Taylor, Montrose.

SISKIN.—*Cock*.—1, Miss N. Burness, Seaton of Usan, 3, R. Mills, Montrose, 2, W. Burness.

SISKIN.—*MPLE*.—*Cock*.—1, 2, and 3, W. Anderson, Montrose.

LINNET.—*Cock*.—1, J. Dorward, 2, J. Scott, Montrose, 3, J. Taylor.

LINNET.—*MPLE*.—*Cock*.—1, G. Low, Montrose, 2, J. Smart, 3, J. Taylor.

PARROTS.—1, R. Kenlay, Montrose, 2, Mrs. J. Smith, Montrose.

PARROQUETS.—1, W. Johnstone, Montrose, 2, Mrs. Hughes, Montrose.

STARLING.—*Cock*.—1, J. Milne, Montrose, 2, J. Clark, Montrose, 3, P. Duff, Montrose.

LARK.—1, D. Middleton, Montrose.

COLLECTION OF BIRDS.—1, J. Monro, 2, J. Dorward, 3, D. Beattie.

A. Stephens, *Chickens*.—1, M. Mahony, Baldoyle, 2, R. P. Williams, Glaslinton, Clontarf.

COCHINS.—*Black*.—1, 2, and Cup, Mrs. Taaffe, *Chickens*.—1, T. A. Bond, Londonderry, 2, R. A. Macdonald, Ballyarnett, Londonderry.

GAME.—*Black or Brown-breasted*.—1, E. J. Poer, Limerick, 2, J. C. Cooper, *hc*, G. A. Perrin, *Chickens*.—1, J. C. Cooper.

GAME.—*Any variety*.—1, G. A. Perrin, 2, J. C. Cooper, *hc*, E. J. Poer, Limerick, *Chickens*.—1, J. C. Cooper, 2, E. J. Poer.

HAMBOURGS.—*Pencilled*.—1, W. G. Mulligan, *Chickens*.—1, J. Barlow, Castleknock, 2, W. G. Mulligan.

HAMBOURGS.—*Spangled*.—1, J. C. Cooper, 2, S. Mowbray, *Chickens*.—1 and 2, L. Stoney.

POLLARS.—*Gold or Silver*.—1 and *c*, R. P. Williams, 2, J. K. Miller, *hc*, Capt. Downman, Kingstown, *Chickens*.—1, J. K. Miller, 2, M. Barlow, Castleknock.

HICKS.—1, G. A. Stephens, Dublin, 2, J. C. Cooper, *Chickens*.—1, G. A. Stephens, 2, J. C. Cooper.

HOUDANS.—1, G. A. Stephens, 2, J. C. Cooper, *hc*, E. J. Hendman, Strabane; E. Morrison, Parsonstown; L. A. Beamsish, Co. Cork, *Chickens*.—1, J. C. Cooper, 2, L. A. Beamsish, *hc*, G. A. Stephens, *c*, E. T. Hardman.

CREVE-COEUR.—1, J. C. Cooper, 2, G. A. Stephens, *hc*, T. Mallison, *Chickens*, 1, G. A. Stephens, 2, J. C. Cooper.

ANY OTHER VARIETY.—1 and *hc*, R. A. Macdonald, Derry, 2, S. Mowbray, *Chickens*.—1, G. A. Mulligan, *hc*, Mowbray, Killybeg, Mountrath.

SELLING CLASS.—*Price not to exceed £2*.—1, M. Mahony, 2, J. Barlow, Castleknock, 3, Mrs. Marimon, *hc*, M. Mahony; J. K. Miller; Miss A. M. Warburton, *c*, E. J. Poer, *Cocks*.—*Price not to exceed £10s*.—1, Mrs. Taaffe, 2, J. C. Cooper, 3, G. N. Purdon, *hc*, G. A. Stephens (2); J. C. Cooper; Hon. J. Massey; D. Sullivan; G. N. Purdon; H. P. Gardie, Rathangan.

FAT FOWLS.—1, Miss M. Hilliard, Clontarf, 2, R. P. Williams, *c*, J. K. Miller, 3, S. Mowbray.

CYCONS.—1, T. M. Hilliard, Clontarf.

BANTAMS.—*Game*.—1, G. Knaggs, Rathmines, 2, G. A. Stephens, *hc*, E. J. Poer; J. K. Miller; G. Knaggs; J. C. Cooper, *c*, Mrs. Gidrap, Duadrumb, *Any other variety*.—1, G. A. Stephens, 2, Master M. Hilliard, Clontarf.

TURKEYS.—1, J. C. Cooper, 2, C. M. Dodd, Castlemead, Clonhar, Drumcondra, *hc*, S. Mowbray; A. S. Beane, Oiltown, Co. Dublin; Miss L. King, Greshill (2); Poults.—1, J. C. Cooper, 2, Miss L. King, *hc*, Miss L. King; Mrs. H. Craith, Cahir (2); *Cock*.—1, S. Mowbray, 2, J. C. Cooper.

GREEN.—*Emblen*.—1, J. C. Cooper, 2, Hon. J. Massey, *hc*, S. Mowbray, *Toujours*.—1, J. C. Cooper, 2, R. P. Williams, *Any other breed*.—1, R. P. Williams, *hc*, W. G. Mulligan; C. M. Dodd, *Any other breed*.—1 and 2, R. P. Williams, *hc*, Gostings.—1 and Cup, S. Mowbray, 2, J. C. Cooper, *Fat*.—1, S. Mowbray, 2, R. P. Williams, *hc*, J. C. Cooper, *Fat*.—1, R. P. Williams, 2, S. Mowbray.

DUCKS.—*Bacon*.—1, R. P. Williams, 2, Mrs. Taaffe, *hc*, Mrs. Taaffe; G. A. Stephens, 1, J. C. Cooper, S. Mowbray; W. G. Mulligan; E. J. Poer, *Aylesbury*.—1, R. P. Williams, 2, W. G. Mulligan, *hc*, P. Watson; S. Mowbray, *Selling Class for Ducks*.—*Price not to exceed £1*.—1, R. P. Williams, 2, Mrs. Taaffe, 3, J. C. Cooper.

FANCY, ORNAMENTAL, or WATER FOWL.—1 and 2, R. P. Williams, *hc*, Hon. J. Massey.

PIGEONS.

POUTERS.—*Cock*.—1, F. W. Zurborst, Doneybrook, 2, F. Robertson, Belfast, *hc*, W. G. Henry, Sandymount; F. W. Zurborst; E. A. Seale, Kilgobbin, Co. Dublin, *Hen*.—1 and Cup, F. W. Zurborst, 2, J. Hawley, Bradford, *hc*, W. G. Henry; F. W. Zurborst; E. A. Seale (2). *Young*.—1 and 2, E. A. Seale.

CARRIERS.—*Cock*.—1 and Cup, J. Hawley, 2, F. W. Zurborst, *hc*, J. Stanley, Blackburn; J. Frame, Comber, Co. Down, *Hen*.—1, J. Stanley, 2, G. A. Wherlaud, Cork, *hc*, J. T. Pardon, Belfast; J. Hawley, *Young*.—1, G. A. Wherlaud, 2, J. Hawley.

TRUMPETERS.—1 and 2, E. A. Seale, *hc*, J. Frame; F. A. Seale, *c*, J. Hawley.

TERRITS.—1, J. Hawley, 2, J. Stanley, *hc*, J. Dowling; J. Frame; G. A. Wherlaud, *Young*.—1 and *c*, J. Dowling, 2, J. Hawley.

FANTAILS.—1 and 2, E. A. Seale, *hc*, J. K. Miller; W. G. Henry (2); E. A. Seale; J. Waters, Belfast.

JACOBS.—*Red or Yellow*.—1, J. Hawley, 2, E. A. Seale, *hc*, J. Frame, *Any other colour*.—1 and 2, E. A. Seale, *hc*, R. W. Smith, Cahir (2); E. A. Seale.

TERRITS.—*Blue or Silver*.—1 and 2, E. A. Seale, *hc*, J. Dowling; W. G. Henry; E. A. Seale, *Any other colour*.—1, J. Hawley, 2, *hc*, E. A. Seale.

TRUMPETERS.—1, J. Hawley, 2, J. Frame, *hc*, J. Dowling; J. Waters, Belfast.

OWLS.—1, J. Hawley, 2, J. Dowling, *hc*, E. J. Poer.

HOMING.—1, F. W. Zurborst, 2, J. Hawley, *hc*, J. K. Miller; W. G. Henry (2); F. W. Zurborst (2); J. Stanley (2); J. Hawley.

DRAGONS.—1, J. Stanley, 2, J. Dowling, *hc*, J. K. Miller; E. C. Stretch, Omiskirk; W. G. Henry (2); *c*, W. G. Henry; J. Hawley.

NEWS.—1, J. K. Miller, 2, E. A. Seale, *hc*, E. A. Seale; J. Hawley.

ANY OTHER VARIETY.—1, E. A. Seale, 2, J. Hawley, *hc*, J. K. Miller; E. A. Seale; E. J. Poer.

MAGPIES.—1, J. Dowling, 2, J. Hawley, *hc*, R. Cowman.

SELLING CLASS.—1 and 3, E. A. Seale, 2, M. O'Reilly, Dundalk, *hc*, J. K. Miller; E. A. Seale (2); J. Hawley (2).

JUDGES.—Mr. C. F. Staunton, Sandymount, and Mr. W. G. Merry, Besinton.

(From a Correspondent.)

Pigeons.—Though only two cups were offered for competition yet 151 pens were shown, and in quality the birds greatly surpassed those shown under the "limitation system" in April. Very few faults could be found in the awards, which do Mr. Staunton the greatest credit, as he had to judge over 350 pens of poultry before he looked at the Pigeons, and this in December may, indeed, be called "cruelty to judges."

In Pouter cocks a badly-shaped White was first, with a good-coloured Black-pied second. A very fair Blue-pied hen took first and cup, with a nice little Black-pied hen second. Mr. Seale was almost unopposed for his own cup for young Pouters, and so took first, cup, and second. The cup Carrier cock was a medium bird with uneven eyes, and the only unnoticed bird in the class (pen 399) was the pick of the lot. Only four poor Carrier hens were exhibited, and if the Judge had disqualified all the young (?) Carriers no one could have blamed the decision. In old Barbs a good pair of Duus were first, Blacks second. Young Yellow Barbs, very sound in colour, beat a neat pair of Blacks. There were nine pairs of White and one pair of Blue Fantails; the Whites took first and second and the Blues were highly commended. One of the only two unnoticed pens in this class contained the cup birds of April last, so your correspondent's opinion of them then was now practically endorsed by Mr. Staunton himself. The winning Jacobins were Reds, and, though large, were good in all points; an unnoticed pen of

ROYAL DUBLIN SOCIETY'S POULTRY AND PIGEON SHOW.

This was held on the 9th inst. and following three days in the Society's Agricultural Hall. The entries were extremely numerous, and many birds of high merit were exhibited.

DONKEYS.—*Silver-Gray*.—1, G. N. Purdon, Lisnabin, Killycann, 2, S. Mowbray, *hc*, Miss A. M. Warburton, Kill, Straffan; G. N. Purdon, *Chickens*.—1, W. G. Mulligan, Springfield, Belfast, 2, S. Mowbray, *hc*, J. C. Cooper; Miss A. M. Warburton (2), *c*, Miss A. M. Warburton; G. N. Purdon.

DOCKINGS.—*Other Coloured*.—1, G. A. Stephens, Dublin, 2, Hon. J. Massey, *hc*, J. C. Cooper, 3, Mowbray; Hon. J. Massey; Limerick; Mrs. E. Grant, *Chickens*.—1, W. G. Mulligan, 2, G. A. Stephens, *hc*, S. Mowbray, *c*, J. C. Cooper.

SPANISH.—1, E. P. Williams, Glaslinton, Clontarf, 2, W. G. Mulligan, *Chickens*.—1, W. G. Mulligan, 2, J. C. Cooper, Limerick.

BRAMMS.—*Light*.—1, J. O'Brien, Kingstown, 2 and *hc*, Capt. Downman, Beechgrove, Kingstown, *Chickens*.—1 and Cup, J. Forrest, Milton, 2, Hon. J. Massey, *hc*, G. A. Stephens, *hc*, L. F. Perrin, *c*, Mrs. Taaffe, Tuls; D. Sullivan, Blackrock, L. F. Perrin.

BRAMMS.—*Dark*.—1 and Cup, G. A. Stephens, 2, Mrs. R. Sargent, Cahir, *hc*, Mrs. Taaffe; J. C. Cooper, *Chickens*.—1, J. C. Cooper, 2, G. A. Stephens, *hc*, W. G. Mulligan (2); T. Mallinson, Greshill (2); *c*, J. Barlow; L. F. Perrin.

COCHINS.—*Buff and Common*.—Cup J. C. Cooper, 2, D. Sullivan, Blackrock, *Chickens*.—1, M. Mahony, Baldoyle, 2, Mrs. Taaffe, *hc*, E. Robertson, Belfast, *hc*, Mrs. Taaffe; Mrs. Taylor, Balbriggan.

COCHINS.—*Partridge and Brown*.—1 and Cup, J. K. Miller, Blackrock, 2, G.

Yellows (438) should have been second instead of a badly-matched pair of Reds. There were six pairs of Black Jacobins; the winners were rather mousey-faced but otherwise first-rate; one of the highly commended pens was very short-faced and well matched, and should have been placed next to the winners. The winning Blue Turbits were shell-crowned. In the Turbits. Any other colour, shell-crowned Blacks, clean and thick headed, were first, and rather coarse peak-headed Yellows second. The winning Trumpeters were Black-mottled, and the cock is probably the best bird ever seen in Ireland. In the Homing class a real short-faced show Antwerp, with a rubbishy hen, took first, but a far better pair were in pen 483. The flyers shown in this class did not look like workmen, almost all of them having narrow flights and heads. Except being a trifle long the winning Blue Dragons were perfection; good-coloured Yellows were second, but the cock was of the heavy and the hen of the light variety. Nuns were poor, and the hen in the winning pen was about the worst in the class. Short-faced Tumblers were nothing particular, whole-coloured Yellows first, and all five pens badly matched. The Any other variety class was the worst in the Show, Runts first, German Toys second. The winning Magpies were black-leaked Blacks, good Reds second. Some of the birds in the Selling class were cheap enough, but the quality was rather poor. Last and least, in the Owls, White foreigners were first and second, and a lovely little Blue hen in the highly commended pen.

TREDEGAR POULTRY SHOW.

This was held on the 16th and 17th inst., at Newport, Monmouthshire. Appended is the prize list, but we must defer a further report till next week.

GAME.—Black or Brown-breasted Reds.—1, J. W. Jones, Malpas, Newport. 2, G. S. Cole, Llanelly. *che*, H. Brown, St. Austell; G. S. Cole. *Chickens*.—1, W. T. Lovering, Capra. 2, E. Winwood, Worcester. *hc*, E. S. Goodsell, Stroud. *c*, B. Jones, Rhuddaer, Cardiff.

GAME.—Any other variety.—1, H. Browne. 2, J. T. Moses, Llandaff. *hc*, E. Winwood. *Chickens*.—1, E. Winwood. 2, H. Browne. *che* and *c*, D. W. J. Thomas, Brecon.

SPANISH.—1 and 2, T. Moore, Cardiff. *hc*, H. Ellis, Bristol. *c*, H. F. Wells, Tredegar. *Chickens*.—Plate and *che*, T. Moore. 2, Mrs. E. Allsopp, *hc*, H. Sheppard, Blaenau.

DORKINGS.—Grey or Coloured.—1, E. Hooper, Calne. 2, J. Watts, King's Heath, Birmingham. *hc*, E. Leyshon, Bridgend. *c*, W. Bevan, Swansea; H. Feast, Swansea. *Chickens*.—1, J. Watts. 2, J. Kitchen, Cardiff. *hc*, E. Ponting, Frome. *c*, J. McConnell, Ewyas Harold, Hereford; Mrs. Somerville, Chink; H. Parfitt, Cwmbran, Newport.

COCHIN-CHINA.—1, H. Feast. 2, E. Ellis, Chepstow. 3, Mrs. E. Allsopp. *hc*, H. Tomlinson, Birmingham; T. A. Dean, Marden; W. Morris, Ross. *Chickens*.—1, C. Bloodworth. 2, Mrs. E. Allsopp. 3, J. Watts. *che*, Lady C. Moreton, Tortworth Court, Palfield; Mrs. Berrington, Pant-y-Goitre (2); C. Taylor. *hc*, J. Woodcock, Eastington, Stonehouse; P. Charles, Maesdyr Haf, Neath.

BRAHMA POOTRA.—Light.—1 and 2, T. A. Dean. *hc*, J. Watts; Mrs. E. Evans. *Chickens*.—Plate, T. A. Dean. 2, J. Watts. *hc*, Mrs. Potter, Cheltenham; H. K. Jordan, Coychurch, Bridgend. *c*, J. Dyer, Pencoed, Bridgend.

BRAHMA POOTRA.—Dark.—1, E. Ensor, Bristol. 2, H. Feast. *che*, J. Watts. *hc*, T. A. Dean; T. W. Williams, Brecon; H. B. Morrell, Cemaex, Clyro, Hay. *c*, W. W. Cunick, Llanfaes, Brecon (2); G. Dornford, Bryn Hafod, Llandaff, Cardiff. *Chickens*.—1, J. Watts. 2, G. Jones, Wolverhampton. *che*, H. B. Morrell. *hc*, H. Feast; E. Ensor (2); T. A. Dean; Mrs. Potter, Cheltenham; J. Evans, Meadowville, Keynsham, Bristol. *c*, W. W. Cunick; W. Morris, Ross; Rev. J. Bowen; J. Evans; H. B. Morrell. *Pullets*.—1, H. B. Morrell. *hc*, G. Jones, Wolverhampton; H. Feast. *c*, J. A. White.

HAMBURGS.—Gold-pencilled.—1, Mrs. Rolls, Monmouth. 2, P. Hanson, Eastington, Stonehouse. *hc*, H. Moore, Weston-super-Mare (2); C. Bloodworth; W. Speakman, Nantwich. *c*, H. Feast. *Silver-pencilled*.—1, J. Carr. 2, H. Feast.

HAMBURGS.—Gold-spangled.—1, T. Blakenan, Tettenhall. 2, T. A. Dean. *Silver-spangled*.—1, J. Carr. 2, Mrs. Rolls. *hc*, H. Feast.

POLANDS.—Plate. C. Bloodworth. 2, H. Feast. 3, Mrs. F. Hopkins, Llanarth, Raglan.

FRENCH.—1, H. Feast. 2, D. Lane, Hardwick. 3, W. Harris, Penyfa, Bridgend. *hc*, Miss Mortimer, Rudhall; Mrs. Llewellyn, Bridgend.

BANTAMS.—Game.—1 and 3, J. Mayo, Gloucester. 2, E. Payne, Cardiff. *hc*, R. Windfield, Worcester; Rev. J. J. Evans, Cantiff Rectory, Brecon. *c*, J. Tanner, Colmally, Malvern; E. Payne. *Black or White.*—*Clean-legged*.—Plate, R. H. Ashton, Manchester. 2, E. F. Barrot, Bristol. *hc*, J. Mayo; J. Watts; H. Feast, Swansea. *Any other variety*.—1, J. W. Lloyd, Kingston. 2, H. Feast. 3, J. Watts.

ANY OTHER VARIETY.—1, Mrs. Llewellyn, Court Colman, Bridgend. 2, Mrs. Williams, Henllys Betriew. 3, Rev. N. J. Ridley, Newbury. *hc*, D. Lane, Hardwick. *c*, G. Dornford, Llandaff.

GUINEA FOWLS.—1, Mrs. Rolls, Monmouth. 2, Col. T. C. Morgan, Ruperra Castle, Newport.

DUCKS.—Aylesbury.—1, Mrs. H. J. Bailey, Bosedale. 2, J. Wheeler and Sons, Long Compton. 3, E. Ponting, Rodden Down, Frome. *hc*, E. Walters, Redwick; T. Moore, Cardiff. *c*, A. L. Pope, Christchurch Vicarage, Newport; Miss M. Skinner, Caerleon. *Rouen*.—1, Rev. J. J. Evans. 2, E. Ponting. 3, Lord Tredegar, Tredegar Park, Newport. *che*, S. Homfray, Glen Usk. *hc*, W. Cooper, Abergavenny; J. Watts. *Any other variety*.—1, J. Watts. 2, Mrs. H. J. Bailey. *hc*, T. Moore.

GESE.—1 and 3, Mrs. H. J. Bailey. 2, R. Rees, Abergavenny. *hc*, Miss M. Skinner; T. Edwards, Strmet; R. Rees.

TURKEYS.—1, J. A. Lyce, Brynhyfrid. 2, Mrs. Rolls. 3, Lord Tredegar. *hc*, Miss J. Millward, Newton St. Loe; J. Lloyd.

SELLING CLASS.—Fowls.—1 and 3, C. Bloodworth, Cheltenham. 2, T. A. Dean, Marden. 4, W. Harris, Penyfa, Bridgend. *hc*, E. Ellis, Chepstow; H. J. Daniel, Brynderwen, Newport; T. W. Williams, Brecon. *c*, W. H.

Gayton, Newport; J. A. Phillips, Newport; J. McConnell, Ewyas Harold (2); E. Ellis; J. C. L. Rooke, Ashton-on-Clun; E. Esp, Newport; J. Dyer, Pen coed, Bridgend; Mrs. W. Lyon, Newbury; J. A. Lyce.

SELLING CLASS.—Ducks.—1, E. Ponting. 2, Miss M. Skinner. 3, J. Harrison, Newport. *hc*, D. Jenkins, Maidee. *c*, H. Yardley, Birmingham.

PIGEONS.

CARRIERS.—1 and 2, S. D. Baddeley, Hereford. *hc*, H. Yardley; T. A. Dean. *c*, Powell & Crane, Oxford; W. G. Davies, Swansea.

ROUTERS.—1, H. Yardley. 2, T. A. Dean. *c*, W. G. Davies. **JACOBINS.**—1, H. Yardley. 2, W. G. Davies. *c*, T. F. Phelps, Ross; Miss J. Millward.

TUMBLERS.—1, H. Yardley. 2, H. Raiton, Newport. *hc*, W. G. Davies. *c*, W. Fletcher, Gloucester; T. Evans, Newport.

FANTAILS.—1 and 2, W. H. Tomlinson, Newport-on-Trent. *che*, Miss J. Millward. *hc*, W. Fletcher; W. G. Davies; J. E. Loversidge, Newark.

TRUMPETERS.—1, J. Leifer, Liverpool. 2, T. A. Dean.

ANY OTHER VARIETY.—1, H. Yardley. 2, T. A. Dean. 3 and 4, J. Watts. *che*, C. F. Herrieff, Banbury; H. Yardley. *hc*, H. Draycott, Leicester; C. F. Herrieff; T. F. Phelps; W. Morris, Ross; E. L. Lister, Cefn Ila, Usk; A. Damaral, Exeter (2); Wheeler & Sons; D. Lane; T. A. Dean; W. G. Davies; T. F. Phelps (2). *c*, H. Draycott; A. J. Barnes, Gloucester; A. C. Phillips, Newport; A. Waldron, Llandaff; J. Wheeler & Sons (2).

Cup for greatest number of points—H. Yardley.

JUDGES.—Poultry and Pigeons: Mr. E. Hutton, Pudsey, Leeds; and Mr. R. H. Nicholas, Newport.

LIVERPOOL CANARY SHOW.

This was held on the 12th and 13th inst. The Belgians were the finest collection I ever saw. The Norwich I think scarcely first-class; some of them brought out under the new feeding system did not obtain any prize in either class, and this caused a little dissatisfaction. The Lizards were a really fine collection, the winners in this class and in both Clear Belgian classes having taken many first prizes in this district.—J. H. ROGERS.

BELGIAN.—Clear Yellow.—1, W. Hynton, Ormskirk. 2, F. Turner, Liverpool 3, J. Coward, Liverpool. *che*, J. H. Rogers, Liverpool; 1. Peet, Ormskirk. *hc* J. McGregor, Liverpool. *c*, T. Henshaw, Liverpool. *Clear Buff*.—1 and *c*, J. H. Rogers. 2, T. Turner. 3, I. Coward. *che*, P. Barnes, Lancum; W. Hynton. *hc*, T. Barnes, Wigan.

BELGIAN.—Ticked Yellow.—1, E. Foster, Liverpool. 2, W. H. Jacobs, Liverpool. 3, — Knowles, Widness. *Ticked Buff*.—1 and 2, J. Smith, Ormskirk. 3, J. Hughes, Liverpool.

NORWICH.—Clear Yellow.—1, J. Grice, Liverpool. 2, J. H. Rogers. 3, F. Barbone, Liverpool. *hc*, J. McGregor. *c*, J. Hooley, Liverpool. *Clear Buff*.—1, J. Grice. 2, J. McGregor. 3, F. Barbone. *hc*, J. H. Rogers. *c*, — Proctor, Liverpool.

LIZARDS.—Golden-spangled.—1, J. H. Rogers. 2 and *hc*, — Hardie, St. Helen's. 3, J. McGregor. *c*, — Lawton, Liverpool. *Silver-spangled*.—1, J. McGregor. 2, J. H. Rogers. 3, — Lawton. *hc* and *c*, — Hardie.

TESTIMONIAL TO MESSRS. BEMROSE AND ORME.

I AM sure that all Canary fanciers and breeders will hail with immense satisfaction a proposal which has come to me from several quarters, to present Messrs. Bemrose & Orme with a substantial testimonial of their appreciation of the value of their discovery, and the frank way in which they have made it public after running the gauntlet of public opinion, and asserting their integrity in the face of so much opposition. I feel satisfied that even their bitterest opponents will now join in the common expression of admiration at the manner in which they have come out of the severe ordeal to which it may be, in some directions, a well-intentioned opposition has subjected them. It was, perhaps, too much to expect that such a revolution could be effected quietly. Now that such an impetus has been given to Canary breeding by their announcement of last week, and competition, which has been almost paralysed, will flow in a broader channel than ever, it can require no argument of mine to influence fanciers, one and all, in uniting to present Messrs. Bemrose & Orme with a mark of their esteem.

If I may suggest any scheme, I should like to receive the names of representative fanciers in the various towns and districts where the Canary finds a home, who will undertake to collect subscriptions from the clubs to which they may belong, or from the fanciers in their neighbourhood, and if the Editors of the "Journal" will kindly undertake the office of Treasurers, I am sure there will be a full stream of subscriptions flowing into their coffers. Meanwhile I shall be glad to receive the names of all willing to co-operate in this matter with any suggestions for the effectual carrying-out of the object, and will be only too happy to act as Secretary *pro tem*.—W. A. BLAKSTON, 5, Douró Terrace, Sunderland.

BEEES IN PEACH HOUSES.

A YORKSHIRE BEE-KEEPER, "L. A. H.," seeks advice on this point, or rather asks, is it desirable to winter bees under glass? For the sake of experiment I am trying to winter an exceedingly weak stock of bees in a vinery. The great difficulty in such an experiment is to accustom the bees to live in confinement. On rising on the wing they fly against the glass, become quite bewildered, and seldom return to the hive. They perish on

the sills and sashes by hundreds and thousands. I therefore advise "L. A. H." to let his stocks remain in the garden. Being anxious to preserve his bees he should not expose them to the danger of confinement in a greenhouse.

Still bees can be preserved under glass. Some years ago I visited the Earl of Ellesmere's gardens, at Worsley Hall, and there found a weak stock standing in an early Peach house, and the bees busy at work impregnating the flowers of the Peach and Nectarine trees. The gardener said that they never failed to set the fruit on his Peach trees, and that "a small hive of bees was worth more for this work than ten men with camel-hair brushes." I saw the bees go straight from their hive to the blossoms and return with their loads in the same way. As I had no flowers in my vineery for the bees to work on I took the precaution to place about 8 lbs. of broken honeycombs in front of the hive before the bees came out in the morning. As soon as they came out they smelt the honey and began at once to carry it home. They were so few in numbers that, though the honeycomb was within 6 feet of their own door, they took three weeks to carry it home to their hive. They were thus trained to work under glass and return to their hive whenever they came out. A plant of *Tropaeolum* and another of *Chrysanthemum* in flower were placed in the vineery. The little bees were soon at work on the flowers, I presume in search of pollen. The queen began to lay and two patches of brood about the size of a watch were hatched. I now think it will survive the winter and do well. It will be placed out of doors about the middle of March. As I generally have a pet hive in my numerous family I will let this nursing have the place of honour next spring.—A. PETTIGREW.

THE ART OF SUPERING.—No. 4.

I HAVE now come to the concluding chapter of this subject. Owing to a desire to make it comprehensive I may have been somewhat tedious, yet one gentleman asks for a fuller description of the "process of putting one hive under another for the bees to carry the honey up to the super of the top hive; and if it is necessary to unseal the combs in the bottom hive." He adds, "I consider this method exceedingly valuable, and an easy one of storing honey from old hives without the great trouble of breaking-up combs and draining." In answer, I have to say that I have a common floor-board, with nine large holes through it. This board is placed over and on the honey hive, and the hive of bees is placed on it. A strong swarm will soon empty the bottom hive. If I wish to preserve the combs in the bottom hive I let the bees do all the work of unsealing, but when the combs are not to be used again they are generally broken-up a little with a table knife. If the combs in the bottom hive be sweet and perfect in form the bees may adopt it as an additional wing to their mansion. When they do this they are not in a hurry to carry the honey in it aloft. It is of importance to get the bees to do this work rapidly. I have sometimes placed large dishfuls of broken combs and impure honey in the bottom hive. Without any pretensions to accuracy, I should say that a strong swarm will carry up about 12 lbs. in twenty-four hours if it has room for it in its own hive. Much depends on the strength of the swarm and the number of empty combs. Such is our mode of administering surplus honey for supers. But the honey hive placed side by side with the supered hive, and a good roadway open between them, will, I daresay, answer quite as well. Bees are great burglars.

On a visit to my native place some years ago I explained to some intelligent bee-keepers there the modes I had adopted of filling supers rapidly. They were acquainted with glass supers and open lids. I advised them to try what I then intended to try myself—viz., to put large second swarms or turn-outs into empty hives with large crown holes, and large lids to cover them; the lids to have bits of guide-comb fastened to them, and the hives to have no cross sticks. In about three days such swarms will have suspended from the crown combs enough to fill a moderate-sized super. By lifting the lids gently up with combs and bees, and dropping all gently into glass supers on other hives, the bees would thus have the supers full of combs to begin with. In favourable weather the supers would be filled with honey before the queens would begin to lay; and in unfavourable weather artificial feeding might be applied as already described. I have never carried my resolution into execution; but we have no doubt as to its practicability, and therefore mention it here.

As I am now beyond the border-land of my own practice, I may here moot another point or question pertinent to the subject, and which I intend to put to the test some day—viz., whether bees will fill a super on a hive in which the queen is caged and confined with so much brood comb beside her. The wires of the cage thus to be employed to be wide enough for the bees to go in and out. This experiment will enable me to ascertain also if the bees would take the eggs from the inside of the cage and set them in combs on the outside.

The other day I received a letter from a gentleman in Scotland informing me that he "has had glasses of honeycomb

worked to the pattern of flowers on the inside," and adds that "it is easily done and of little value." On reading this I could not but think that the Thistle is in advance of the Rose; or that Scotchmen "beat us hollow" in the art of bee-keeping. If flowers are to be copied in honeycomb the reader should leave my elementary school and go to a higher-class one. I think it would be an easy task to induce a swarm to write "God Save the Queen" in honeycomb in a shallow wood super about 22 or 24 inches wide. By placing pieces of wood in certain positions in such a super, so as to form these words by the cavities or interstices between the wood, the bees could be induced to build their combs in the cavities. Of course the wood would have to be removed, leaving the inscription written by the bees in beautiful virgin honeycomb. Such a super would be worth a place in the British Museum, or even in Buckingham Palace. Will some of our young lady apiarists attempt the accomplishment of this feat?

Supers should be cut from their hives by a piece of brass wire. If the wire cut through any honeycomb the supers should be raised about half an inch by wedges, and left in this position for about one or two hours, to let the bees lick the honey from the broken cells, and make all clean and dry. I have had, in thirty years, only three supers that had brood in them when cut off. I cut out the brood and placed honeycomb in its place, and replaced the supers on their hives for two or three days, and when finally taken off, the patchwork could not be discovered.

The only question now is how to drive the bees out of the super down into the hive. I generally succeed by blowing smoke from fustian rags into the top hole of the super with all my might. If this is suddenly and vigorously done the bees run helter-skelter out of the super into the hive in a very short time. In cold weather they are more difficult to drive. Sometimes I have had some difficulty to get them to run by using fustian smoke only, but when I have placed a small bit of brimstone rag amongst the fustian I have never failed. Let me warn the reader of the danger of using brimstone in this work, for the fumes of sulphur are destructive to bee life if not given in the smallest possible doses. The smallest taste of it is enough to make them run for their lives. There are slower methods of driving bees out of supers, and I am sure that the ingenuity of your readers will not fail them in this work.

In conclusion, let me say that in going through my task I have found the subject inexhaustible by reason of its expansibility. I have simply tried to imprint on the mind of the reader my own practice. It gave me a surprise to see that my friend Mr. Breen came forward to object to my methods, and I am sorry he has so far forgotten himself as to say that I have taken two of his ideas, for no statement could be more incorrect. When the excitement of his success shall have subsided, I am sure that Mr. Breen, more than anybody else, will regret the discourtesy of his conduct in this matter.—A. PETTIGREW.

BEE FARMING.

I HAVE been very much pleased and instructed lately with the articles appearing in your bee corner, and feel somewhat tempted to relate my experience and ask a few questions on bee farming.

In 1870 I was passing a friend's house, about three and a half miles from home, when I was informed there was hanging in a plum tree a second swarm of bees, which I might have, as the owners had no hive to put it in. I came home and borrowed a hive of a neighbour (for I had none, and never thought of keeping bees at that time), and went and brought it home, placing it on a slate slab on a single post in the old-fashioned way. During the winter I happened to meet with the "Hand-book on Bees," and was so struck with the plain common sense of the practical part of it that I read it through and through again, and was very anxious for spring to arrive that I might begin to try experiments in artificial swarming, &c. Nothing of the kind was known about here or had been heard of before, and the old bee-keepers said it would not answer at all.

May, 1871, came, and I commenced blowing-in smoke and making examinations. Early in June the hive became full of bees, so on the 16th I tried my hand at artificial swarming for the first time, and had quite a success. On the 30th the hive cast-off a second swarm, and both did pretty well. I bought two swarms at 30s. each, and put them in 16-inch straw hives, resolving never to use a less size. With one of these swarms I had the misfortune to loosen the combs, and though the bees appeared to work very hard all the summer, they did not gain much in weight. In September I found out what had occurred, but too late to amend it, so I drove them out and united them to another stock. The other purchased swarm gathered me 25½ lbs. of honey, which I sold at 1s. per lb.

I had a second swarm given me on the 19th of July. Two friends offered to give me their bees that they were going to destroy (it being the custom here to destroy the bees when taking honey) if I liked to take them, so on the 22nd of September I took three swarms, and united them in one empty hive and commenced sugar-feeding. The hive took in fourteen days

30 lbs. of sugar boiled in 30 pints of water, which wintered it first-rate, and on the 5th of October I put four swarms in another hive, this one taking 28 lbs. of sugar in sixteen days—these two sugar-fed stocks being equal to any I had, so that I had five good stocks to winter and commence 1872 with. These five stocks I artificially swarmed—one on June 7th, one on the 11th, and three on the 28th. I took them to the moors on August 13th, and fetched them back on the 14th of September, when I obtained from those five swarms and one old stock—one glass super, 7 lbs. nett; run honey, 27½ lbs.; pressed honey, 40 lbs.—318 lbs. of honey, and 10½ lbs. of wax, out of six 16-inch straw hives, and the only feeding had been about 2 or 3 lbs. of sugar each at swarming time. I united my driven bees into three sugar-fed stocks, as in 1871, which, with four old ones, gave me seven stocks to commence 1873 with. I would like to ask Mr. Breen and all the wranglers for wood hives if they had equal success with a like number of wooden hives in 1872.

I am afraid if I went through the eventful season of 1873 it would make my letter too long; I will therefore leave it to a future opportunity. In the meantime I shall be glad if, through your columns, Mr. Breen will give his reasons for selecting a straw hive to endeavour to win the first prize in Class A at the International Exhibition at Manchester, if he had such unbounded confidence in wood, and if he will also favour us with his balance-sheet for 1873 showing a profit of £10 on seven hives, also stating where he purchased his honey *pur et simple*, and how much he gave to his famous wood hive that yielded him such a grand super, for it really was the grandest I ever saw.—THOMAS BAGSHAW, *Longnor, near Burton.*

BALDS, BEARDS, AND MOTTLES.—I have read the letters of "WILTSHIRE RECTOR," "WOULD-BE EXHIBITOR," "TURKEY QUILL," and "SECRETARY," and I beg most respectfully to differ from them all. If committees do not think fit to have classes for these birds, as at Birmingham, I shall keep mine at home.—W. WOODHOUSE, *King's Lynn.*

OUR LETTER BOX.

GALASHIELS SHOW (T. F.).—It was a local show not advertised.

EGG-PROTECTING NEST (R. Barrett).—It is in Vol. XVII., new series, page 427.

LIGHT BRAHMAS (Subscriber).—The Brahmans differ only in colour. In quality one is as good as the other.

WHITE BANTAMS DIRTY (H.).—You may wash your fowls with soap and water, using a piece of flannel for the operation. Wipe the feathers downwards gently. It is only the surface of the feather that is dirty. When cleansed, the feathers should be wiped as dry as possible with a clean flannel, and the bird put in an open basket filled with soft straw, and placed before a good fire.

ULCERATED LIVERS (Nemo).—The only explanation we can offer is, that moulting is a trying time to a fowl and a drain on the strength. Much is taken out of a bird in the formation of new plumage, and an extra supply of food of a nourishing character should be freely given. We are not friendly to maize at that time, and the best food we know is ground oats given night and morning, slaked with milk if possible, if not, with water; good heavy barley being the midday meal, varied with table scraps. Where fowls are underfed or improperly fed, at moulting or in great changes of weather, they sicken, and always suffer from liver complaints. At such times avoid stimulating or spiced foods.

MARKING FOWLS (L. H. E.).—You may mark your Brahmans by cutting off one wing feather half way down. The feather will remain till the moulting season. You may mark different broods by cutting different feathers, each brood having the same feather cut. Thus: First brood, second feather in right wing; second brood third feather, and so on. Or you may sew a piece of coloured cloth round the leg, the different broods being denoted by different colours. Or you may make a small steel rod red hot and perforate the web of the wing, different perforations or devices marking the different breeds. If you use the cloth it must be removed before they are exhibited, as any outward mark is a disqualification.

CROSSING DORKINGS AND BRAHMAS (Linda).—The first cross is the best, and should be made with a Brahma cock and Dorking hens. The cock used should always be pure.

VULTURE-HOOKED BRAHMA (C. J. M.).—Vulture hooks are a great disadvantage, and often a disqualification. They are always hereditary, and we strongly advise you to have nothing to do with such a bird as a stock-getter. We never recommend dealers, and we advise you to consult our columns for persons to whom you can apply for a proper bird.

GOOSE DYING SUDDENLY (G. M. E.).—We cannot in any way account for the death of the Goose. It did not die from the fasting. They, like other things, sometimes die suddenly without any apparent cause.

AYLESBURY DUCK POINTS (J. D.).—An Aylesbury Duck should be perfectly white in plumage, have orange legs and flesh-white bill. It is desirable the head should be large and the bill broad. We fear there is nothing to be done with your Span-h chicken. It is overgrown, weakly, and deficient in constitution. Leg-weakness is a new but a very bad disorder. Fowls that were up fattening were always subject to it, being forced by cramming, but it was not general as it is now.

BRAHMAS ROOSTING (Inquirer).—There is no objection to your Brahmans roosting on the ground. We keep large numbers: some roost on the ground, some on perches—all do well alike. Where they roost on the ground you will have fewer crooked breasts. The only way to make them perch is to go in at night and put them on the perches.

SPACE FOR TWELVE FOWLS (Smallest Space).—The least you can allow will be 30 feet by 20, and then you must supply them artificially with green food, such as growing grass, also with road grit. Wire-netting will be the

best and most economical fencing. You ask for the smallest space and we give it. If you can increase it the fowls will do better.

BRAHMA COCKEREL DEFICIENT IN FLUFF (R. S.).—Where a cock is deficient you should choose hens or pullets possessing largely the points lacking in the cock. Thus to the bird you mention, you should put heavily-feathered hens, but avoid vulture hooks. We never recommend dealers. Look at our advertisements. There is a sale at Stevens's, 38, King Street, Covent Garden, every alternate Tuesday. They will send you a catalogue on application.

CHOICE OF BRAHMA COCKERELS (L. J. F. C.).—We have no hesitation in deciding in favour of the second.

NAME OF BIRD.—"Naturalist" asks for the name of a bird which comes in the autumn and stays during the winter months: same size as the Chaffinch, and like one when feeding with them, only the breast is a much brighter colour; the head is marked with black and a bluish grey. Instead of the white feathers in the wing it has yellow or gold colour. Its call note is the same as a Caury or Linnet. It is called by some the French Chaffinch.

WAX MOTHS (G. W. D.).—We do not know any plan to prevent moths entering hives. In summer nights, an hour or two after sunset, many moths may be seen flying about the doors of hives, and sometimes going into the hives when the watchmen are off their guard. We have never found moths do harm in a healthy hive.

METEOROLOGICAL OBSERVATIONS,

CAMDEN SQUARE, LONDON.

Lat. 51° 32' 40" N.; Long. 0° 8' 0" W.; Altitude 111 feet.

DATE.	9 A.M.				IN THE DAY.				Rain.	
	Barom. at 399 feet at Sea level.	Hygrometer.		Direction of Wind.	Temp. of Soil at 1 ft.	Shade Temperature.		Radiation Temperature.		
		Dry.	Wet.			Max.	Min.	In sun.		On grass.
1873.										
Dec.	Inches.	deg.	deg.		deg.	deg.	deg.	deg.	deg.	In.
We. 10	30.562	25.0	25.0	W.	39.8	29.9	24.4	27.3	24.3	—
Th. 11	30.642	27.6	27.6	S.W.	38.7	32.0	22.9	36.6	19.4	—
Fri. 12	30.651	34.5	33.9	N.E.	38.8	37.7	26.4	58.3	22.8	0.010
Sat. 13	30.631	37.3	36.2	N.W.	38.0	38.6	33.2	49.3	31.4	—
Sun. 14	30.479	34.2	34.0	N.W.	38.1	36.6	33.2	39.4	33.5	0.012
Mo. 15	30.244	38.8	37.6	W.	38.5	43.3	32.7	48.1	32.2	0.032
Tu. 16	30.839	54.4	54.0	E.	41.4	55.5	38.1	69.0	37.4	—
Means	30.438	33.0	33.2		39.0	39.9	30.1	44.0	28.5	0.054

REMARKS.

10th.—Very foggy all day, and very cold at night.
 11th.—Fog in the morning; clear and very bright for a short time about noon, but soon as foggy as before.
 12th.—Frosty and bright till about 3 P.M., then rather dull and warm the rest of the day, with less fog than the previous days.
 13th.—Dark and very foggy morning; clearer at noon, dull afternoon.
 14th.—Still fair and rather thick; very dark a short time before noon, clear by 2 P.M., and so continued.
 15th.—Very dark with slight rain in the early part of the day, and occasionally during the whole day.
 16th.—Much warmer, and though there was a strong wind and slight rain in the morning, the after part of the day was remarkably fine.
 The night temperature nearly 9 below last week; all the other temperatures about 5 below. Fogs, at times very dense, have prevailed more or less nearly all the week. Barometer still very high; it had fallen below 30 ins. this (Tuesday) morning, but has risen rapidly during the day. A great rise in temperature after the middle of the day on 15th, a difference of 16° between the 9 A.M. reading on that day and the following one.—G. J. SYMONS.

COVENT GARDEN MARKET.—DECEMBER 17.

The close approach of Christmas has not influenced the markets here to any extent, it is chiefly to be noticed in the presence of Holly and other ever-greens, and the many varied and beautiful displays of dried Mosses, Grasses, and flowers that have come so much into use during the past few years. French Lettuces are now coming from Paris in good condition, accompanied by a few bundles of Asparagus. The Potato trade is heavy, with large stocks on hand.

FRUIT.

	s.	d.	s. d.		s.	d.	s. d.
Apples.....	1	0	0	Oranges.....	1	0	0
Chestnuts.....	1	0	0	Quinces.....	1	0	0
Grapes, household.....	2	0	0	Pears, kitchen.....	1	0	0
Filberts.....	1	0	0	dessert.....	1	0	0
Cobs.....	1	0	0	Pine Apples.....	1	0	0
Lemons.....	1	0	0	Walnuts.....	1	0	0
Melons.....	1	0	0	ditto.....	1	0	0

VEGETABLES.

	s.	d.	s. d.		s.	d.	s. d.
Artichokes.....	1	0	0	Mushrooms.....	1	0	0
Asparagus.....	1	0	0	Mustard & Cress.....	1	0	0
French.....	1	0	0	Onions.....	1	0	0
Beans, Kidney.....	1	0	0	pickling.....	1	0	0
Beet, Red.....	1	0	0	Parsley per doz.....	1	0	0
Broccoli.....	1	0	0	Parsnips.....	1	0	0
Cabbage.....	1	0	0	Peas.....	1	0	0
Capsicums.....	1	0	0	Potatoes.....	1	0	0
Carrots.....	1	0	0	Kidney.....	1	0	0
Canflower.....	1	0	0	Round.....	1	0	0
Celery.....	1	0	0	Radishes.....	1	0	0
Codworts.....	1	0	0	Rhubarb.....	1	0	0
Cucumbers.....	1	0	0	Salsafy.....	1	0	0
pickling.....	1	0	0	Savoy.....	1	0	0
Endive.....	1	0	0	Scorzonera.....	1	0	0
Fennel.....	1	0	0	Sea-kale.....	1	0	0
Garlic.....	1	0	0	Shallots.....	1	0	0
Herbs.....	1	0	0	Spinach.....	1	0	0
Horseradish.....	1	0	0	Tomatoes.....	1	0	0
Leeks.....	1	0	0	Turnips.....	1	0	0
Lettuce.....	1	0	0	Vegetable Marrows.....	1	0	0

WEEKLY CALENDAR.

Day of Month	Day of Week	DECEMBER 25—31, 1873.	Average Temperature near London.			Rain in 49 years	Sun Rises		Sun Sets		Moon Rises		Moon Sets		Moon's Ago.		Clock before Sun.	Day of Year.
			Day.	Night.	Mean.		Days.	m.	h.	m.	h.	m.	h.	m.	h.	Days.			m.	h.
25	TH	CHRISTMAS DAY.	43.4	29.4	36.1	9	8	af	8	53	11	59	10	6	0	28	359	
26	F	Bank Holiday.	43.2	31.4	37.3	16	8	8	54	3	after.	noon.	0	0	58	360		
27	S		43.0	29.7	36.4	15	8	8	55	3	21	0	23	0	8	1	28	
28	SUN	SUNDAY AFTER CHRISTMAS.	42.6	29.5	36.0	13	9	8	55	3	56	0	46	1	9	1	58	
29	M		43.9	33.0	38.5	20	9	8	55	3	54	0	10	3	10	2	27	
30	TU	Wagner died, 1695.	44.4	31.7	38.1	17	9	8	57	3	16	1	35	4	11	2	56	
31	W	Boerhaave born, 1668.	43.9	32.4	38.2	15	9	8	58	3	45	1	58	5	12	3	24	

From observations taken near London during forty-three years, the average day temperature of the week is 43.5; and its night temperature 31.0°. The greatest heat was 58°, on the 25th, 1827, and 28th, 1855; and the lowest cold 8°, on the 28th, 1853. The greatest fall of rain was 0.62 inch.

HEATING—FUEL.



ANTICIPATING that some of your many readers and correspondents would have favoured us with their experience of heating greenhouses by hot water, gas instead of coal or coke being used as fuel, I have deferred reverting to this subject, which it was my intention to have done at an earlier date. As there has been no response to my inquiries in vol. xxiv., page 237, I have concluded that no one has thought the subject

of such importance as to keep an account of the expense of heating garden structures by gas. The comparative value as fuel of coal, coke, and gas cannot be accurately ascertained without statistics such as these, and only an approximation to the truth can be arrived at. Permit me, however, to repeat the queries—viz., 1st, How many cubic feet of gas are abstracted from a ton of coal, its value per thousand feet, and the gallons of water heated by a thousand feet to a temperature of 212; or given the size of the house, feet of piping, and feet of gas, what is the cost of keeping it at a certain temperature? 2nd, The coke produced from a ton of coal after the gas has been taken from it?

It is a common idea, and not, I think, an altogether erroneous one, that of fuel in ordinary use coke gives off the most heat. This we should not expect to be the case, as before we have coke the gas from the coal is extracted. Now, it might be reasonably expected that coal would give us the heat of the coke, and that of the gas taken from the coal from which the coke was made. This is, however, altogether erroneous, as will be shown by the following table of the heating power of various combustible substances "exhibiting the utmost quantity of water evaporated by the given weights, and the quantity of air capable of producing total combustion."

Combustible.	Pounds of water which a pound can heat from 0 to 212.	Pounds of boiling water evaporated.	Weight of atmospheric air at 42° to burn 1 lb.
Perfectly dry wood.....	35.00	6.96	5.96
Wood in its ordinary state .	26.00	4.72	4.47
Wood charcoal	73.00	13.27	11.16
Pit coal	60.00	10.90	9.26
Coke	65.00	11.81	11.46
Turf	39.00	5.45	4.60
Turf charcoal	61.00	11.63	9.86
Carburetted hydrogen	75.00	13.81	11.58
Oil			
Wax	78.00	11.18	15.00
Tallow			
Alcohol of the shops	52.00	9.56	11.60

Specific gravity 0.838

According to the preceding table gas stands second in heating power, being only surpassed by oil, wax, and tallow, which we may leave out, and then gas takes the first place, followed by charcoal, then coke, turf or peat charcoal fourth, and coal fifth. Let us see what this means

in heating gallons of water (weight 10 lbs.). Their heating values would appear as follows:—Gas, 76.00 lbs. = 7.60 gallons; wood charcoal, 73.00 lbs. = 7.30 gallons; coke, 65.00 lbs. = 6.50 gallons; turf charcoal, 61.00 lbs. = 6.40 gallons; coal, 60.00 lbs. = 6.00 gallons. Coal, therefore, with its gases unextracted stands lowest of the five in heating power, and if we include oil, wax, and tallow, sixth. Its maximum heating power is nearly half a gallon less than turf charcoal, less by half a gallon than that of coke, less by a gallon and a quarter than that of wood charcoal, and less by a gallon and a half than gas. This difference may not seem great, but it will be greater than at first sight appears if we represent it by feet of piping, say 2-inch, heated. Coal with 6 gallons is represented by 45 feet; turf charcoal, 6½ gallons = 47 feet; coke, 6½ gallons = 48 feet 9 inches; wood charcoal, 7½ gallons = 54 feet 4½ inches; and gas, 7½ gallons = 56 feet 3 inches. The heating power of gas may, therefore, be safely considered to be the highest of all ordinary combustible substances; wood charcoal is from the limited supply of wood this country affords not purchasable at a price calculated to lead to its adoption, coke must consequently take second place; turf charcoal, inasmuch as it excels coal in heating power, the third rank; and coal lowest of all, except wood, which may give an average heating power equal to that of turf—viz., 30.00 lbs. = 3 gallons, or 22½ feet of 2-inch pipe.

Turf and wood can never, from their low heating power, compete with coal, or its products coke and gas, unless they are converted into charcoal, and then the heating power of wood charcoal far surpasses that of coke, whilst that of turf charcoal considerably exceeds coal. Is it not worth while in these days of dear coal to draw attention to the many thousands of acres of turf in the country, and what a boon to the public, as well as a source of wealth to the proprietors, it would be were the turf made into charcoal, and consequently fuel of high heating power? As it is, turf is of no use to the country or its owners beyond affording pasturage for a few sheep and herbage for grouse. Railways would be needed to convey the fuel to our towns, they would bring lime and other requirements of agriculture, the land would be improved by the removal of the turf, and enough of the charcoal could be left on the ground to render it fertile when assisted with the other substances that would be brought by the scientific agriculturist. The exodus of our very sinews—our agricultural brethren—would not be to Canada, but to our moors; the manufacture of the charcoal would give a profit that would meet the cost of draining, making roads and homesteads, as well as pay a good percentage on capital, and whilst adding materially to the extent of our food-producing land would bring down the price of coal. This would be another stride in continuing, if not increasing, our manufacturing superiority, to which it will not be disputed our present unparalleled prosperity is mainly due. However, the introduction of turf charcoal or other descriptions of fuel may affect the consumption of coal, it is certain that this will not for many years, if ever, be superseded. Coal, and its products gas and

coke, will in the future, as at present, be the great heating power, and on these I shall remark separately as they appear suited or otherwise for the heating of horticultural structures.

Coal.—The heating power of this not being equal to gas or coke, though it is contended by some that "coke is but coal minus its virtue"—*i.e.*, gas; and because coal is used in the furnaces of locomotive and stationary engines, as well as for other purposes for which coke was only a few years ago employed, from its being considered to have a greater heating power, it has been concluded that as it is used for purposes for which coke was formerly employed, coal must necessarily be superior. It seems to be altogether overlooked that coal is cheaper from being the material from which coke is made, therefore entailing no cost of manufacture, and owing to its taking up less room being easier of transit. Besides, coal as used in most engine furnaces is so consumed that the smoke is also burnt, the gas not wasted, and therefore in this case coal may have a greater heating power than coke. It is entirely different with our hot-water boilers. None that I know are smoke and gas consuming, or, at least, a portion only of the gas is consumed, the rest escaping with the smoke up the chimney. Coal as used in hot-water boiler furnaces is not so efficient nor so economical as coke; such, at least, has been my experience. When coal is used the surface of the boiler soon becomes coated with soot, and this forms one of the worst barriers to keep the heat of the fire from the water in the boiler. How it would be were the smoke consumed is another matter. Hot-water boilers, as well as those for the generation of steam, ought to consume in their furnaces the smoke resulting from the combustion of coal or other fuel. Until this is the case, the fire acting directly instead of, as at present, indirectly through a coating of soot on the boiler surfaces, I cannot admit coal, with its "virtue," to be so great in heating power as coke, especially as experience has shown me the contrary. Besides, it is absurd to have the charcoal of coal—that is, coke, of less heating power than coal, charcoal having more than double the heating power of wood, and turf charcoal double that of the turf from which it has been produced.

A boiler that will consume coal, coke, or wood may be a desideratum with some. I have not seen a boiler furnace that would not consume any or all of these substances, but they do not do so with the same result. Some, as the upright tubular-boiler furnaces, are not suitable for consuming small or slack coal, though they burn a mixture of small coal and coke, or cinder, very well. The horizontal boilers, or rather their furnaces, will consume anything, and I have often put their capacities in this respect to the test; but then boilers which consume all kinds of fuel are, as a rule, possessed of no great heating power, and as an exception to the general run of boilers, may safely be excluded as calling for any special remarks, for all boilers ought to have sufficient draught which can be regulated to consume every description of combustible matter.

Coke is in most instances a superior fuel to coal, but as some of our boiler-furnaces are constructed, and so ill-provided for insuring a draught, they do not hold a sufficient quantity of it nor of air to insure free ignition and thorough combustion; but where they are properly constructed I have not found coal equal to coke in heating power, nor so economical. Coke does not give-off smoke, the surfaces of the boiler do not become coated with soot, the heat of the fire has consequently full play on the boiler's surface; the heat does not pass along the flues to the chimney, but is absorbed by the water inside, and is, in fact, all heat; whilst coal has a black surface for a long time after feeding, and the smoke and the gas liberated along with it are often not consumed. If the gas be not consumed (and when the fire has a dull surface it is not, as it cannot be ignited without contact with flame or great heat), it must be lost, and on this account I contend it would be more economical to take from coal its gas, employing it with coke, but separately, for the same heating purposes as coal now is, and I am sanguine enough to consider that the heating power would be doubled, or, in other words, double the heat would be obtained that is at present secured.—G. ABBEY.

PANSY BLUE KING.

In your issue of the 4th inst. there is a descriptive list of bedding Pansies by Mr. Shenton, where he describes Blue King as of "rather a straggling habit, a late bloomer, and a variety that will not stand the sun well." The Blue King of

Hale Farm Nurseries must be a very different and much inferior variety to the Blue King of Stanstead Park Nurseries (the true Blue King), as here it begins flowering very early in the season, and continues to bloom profusely throughout the spring and summer months, and very late into the autumn—in fact, it is almost perpetually in bloom, having commenced flowering at the beginning of last March and continued in flower ever since (it is in bloom now). It is a splendid blue, of good substance, and as a mass there is no other blue bedding Pansy to compare with it. Mr. Shenton has evidently grown a spurious variety.—R. B. WRIGHT.

ORNAMENTAL PLANTING.—No. 13.

ALMOST all kinds of trees and shrubs may be removed with much less risk of failure than would otherwise be the case, and become more quickly established, by a judicious use of the pruning knife, sometimes to the roots, and sometimes to the branches—to the roots when the tree has remained stationary sufficiently long for them to become "lusty, stout, and strong," with very few fibres near the bole. It is therefore necessary to cut asunder all the large roots one year before the removal, putting sufficient rich soil about the whole of them to induce the formation of abundant fibres, staying the tree with wires to prevent its being blown over; then, when it is lifted in the following season, the ball is one mass of hungry mouths that quickly seize upon the fresh soil, spreading in it with surprising vigour and rapidity. The knife may be used to the branches at the time of removal, in order to shorten all long, slender, or immature growth so as to check excessive evaporation, and to lessen that strain upon the system which so frequently proves fatal.

This pruning of both kinds is so important and invariably beneficial that it may be well to explain somewhat more fully why it is so. Although our present knowledge of the meanings and uses of the various organs in vegetable physiology is imperfect, yet we do know that the vitality of a tree principally depends upon a healthy and vigorous root action. When a shrub is transplanted it sustains a certain shock or check, the effects of which are precisely in proportion to the plant's fitness for and the manner of its removal. As has been already stated this fitness consists in its having numerous rootlets and fibres upon the roots that are nearest the stem, so that as many of them may be retained as possible, and the chief aim of the planter is to transplant it so carefully that the roots as well as the branches may sustain no damage. Then when the soft temperature of spring induces fresh growth nothing is wrong in the economy of the plant, no wasted growth nor exhausted tissue ensues, but all is in readiness for its natural requirements during the season of growth—the roots very frequently being already spreading in the fresh soil, thus the sap out of which every part of it is formed is abundantly supplied to every swelling bud, and branchlet, and leaf, and it is to insure this that the tips of any long branches are pruned off. But this is not always necessary, and when there is no risk of drooping or exhaustion, it is generally best to retain them intact.

The treatment of the roots cannot be too tender, no turf or flowers should be suffered to exhaust the soil near them for the first two or three years, nor should it be subjected to the effects of drought, or frost, or even become water-logged.

A word or two more in reference to the plan of a portion of shrubbery border in page 19. The shrubs in the front row should be 6 feet apart, increasing the distance to 9 feet for those of larger growth in the next row, and to 12 feet for the occupants of the third row, which last distance would be ample for the trees of the sheltering belt behind.—EDWARD LUCKHURST.

PRIMROSES AND POLYANTHUSES.

I HAVE more than once had my attention drawn to the fact that thrum-eyed Polyanthuses do sometimes change to pin-eyed. This I have only found in seedlings of the first year; but I have no recollection of an established flower changing its character in that respect. Two or three times last season I was especially puzzled by some plants of Pantaloon Polyanthus, which were labelled the previous year as being thrum-eyed, proving to be pin-eyed and *vice versa*. This winter a fine large-flowered common Primrose which I took from the woods, and which has been labelled thrum-eyed for the last two years, has just flowered with a pin-eyed flower. I can

hardly imagine that I can have made a mistake in all these instances, so closely as I have kept an eye on every plant in my collection.

I would take it very kind if "J. B. Q." or any other reader would oblige me with a plant of the true Bardfield Oxlip, to compare with that which is not unfrequently found in Sussex, and which is very different from a caulescent Primrose.—**PHILANTHOS.**

ADIANTUM FARLEYENSE.

MANY say that they cannot make this queen of Adiantums grow, and that instead of its growing larger it becomes smaller, yet not the slightest difficulty is experienced in producing a free healthy growth, while with others success seems impossible. I am sure, however, that it will always be a rare plant, and my reasons for thinking so are—first, as far as I have noticed, it does not produce spores, and therefore cannot be raised from seed; secondly, many who buy it have not a proper house for it, and consequently it soon dies. No doubt, as "OLD FRIEND" says, propagation has been conducted under high pressure, and the plants are in some places kept in green-houses, at others in Cucumber houses, and at others, again, it is planted-out in the fernery. It is very seldom to be seen in perfection in such places, for it is truly a stove Fern, and one that will not be played with—no draughts, no syringe, no hot dry pipes, and it does not like to be taken into the house for decoration; for although it may not be noticed that the plant has been injured by being taken from its proper home, still a good gardener can soon see that his plant has received a check which it will take some time for it to recover. These are my reasons for thinking that *Adiantum farleyense* will always be a rare and choice plant.

Another piece of advice is very good—viz., to have slate for the plants to stand on; and if anyone is under the necessity of having open wood stages, let them be covered with common roofing slate or a layer of cocoa-nut fibre refuse; for if hot pipes are beneath, it will be worse than the bottom heat "OLD FRIEND" speaks of.

Another good hint is that with respect to potting, which I find to be quite true. I have two plants in 24 pots; one is potted rather high, and it produces large strong fronds, and has quite a crown or stool; the other, which is potted low, has the fronds much smaller and is spreading fast towards the rim of the pot. Your correspondent's remarks on watering are likewise truly practical—"Careful, thoughtful watering is the secret of success with other plants besides Ferns."

I will here give a few hints which must be strictly acted upon if success is expected. Be sure and crock your pots well; let there be no worms in the soil; be careful not to over-water your plants, for if your drainage is defective your pots will become waterlogged. If there be worms in the soil they will soon stop the drainage, and the soil will become sour. Water should always be given by the same person; for a man becomes acquainted with the wants of all plants under his care. I am certain that the treatment recommended by your correspondent for *farleyense* cannot be beaten for all Adiantums. There are also a few other Adiantums which when grown to perfection are really magnificent.

I wish that "OLD FRIEND" would give us a little advice respecting *Pteris tricolor*; it is so seldom that we see a good plant of it, but when it is so it is fit to shine in any collection.—**JAMES R. POCOCK, The Garden, Bromborough Hall, Cheshire.**

JUDGING ROSES.

MR. CAMM has brought this subject forcibly before your readers, page 459. As he justly states, hardly any two judges ever agree as to the value of a certain number of Teas amongst the Hybrid Perpetuals on the exhibit stands, and when we hear that the stands would be made up differently to meet the views of different judges, who should be such men as Keynes, Paul, Cant, or Turner, the answer to his question comes readily. This certainly should not be. But how is it to be altered? Mr. Camm's idea of a perfect box is to have a Tea in each row (as I suppose) of a twenty-four stand, and no one would surely question the enhanced beauty of the same by their insertion. But it seems to me that in judging Roses taste in the arrangement of the stands should be the last point considered. The object of Rose shows is, I take it, to encourage the production of the finest possible individual blooms. When, therefore, such authorities as Mr. Camm

quotes, are likely to have different opinions about the presence or absence of Teas, I should agree with him in preferring to see them excluded from the stands of Hybrid Perpetuals altogether. It is certain, however, that we cannot lose these most lovely of Roses from the exhibition table, and now that the varieties of Teas and Noisettes are so multiplied, would it not be better for committees of Rose shows to offer separate prizes for them? Such an arrangement would very much simplify the work of judges, and would also prevent the loud questioning of their decisions, so frequently heard in the after-noons of show days, oftentimes to the annoyance of visitors.

This plan would also be likely to encourage the cultivation of these classes of Roses, as well as the production of new varieties of better quality, so that in a few years we might have our Tea Charles Lefebvres, Alfred Colombes, &c., in quantity. The more the merrier.—**F. W. COOPER, Huntingdon.**

MR. CAMM has started what ought to prove a very interesting discussion. Many of your exhibiting readers will have felt the same difficulty. Dare I venture a Tea Rose in that box or no? It is to be hoped some of the leading judges will favour us with some remarks on his article. On the whole I incline against inserting Tea Roses amongst Perpetuals. One of the most approved canons of judging gives substance, colour, size, distinctness, and novelty, as the five principal points. A Tea Rose could hardly help failing by comparison in substance and size. *Maréchal Niel*, *Gloire de Dijon*, and, perhaps, *Devoniensis*, being exceptions. But, indeed, it is almost impossible to compare Tea Roses with Hybrid Perpetuals. It is something like the old mathematical puzzle of having to multiply the poker and tongs together, and then divide by the shovel. As Mr. Camm remarks, they are infinitely the most difficult to grow and to show, I incline to think that varying the situation would best meet his second difficulty. *Maréchal Niel* for example on an eastern or western wall would be likely to come in later than those on the south. I cannot but consider it a subject of regret that there is not more opportunity for showing Tea Roses at the Crystal Palace Show. Except as Yellow Roses they have but little opportunity of coming to the front.—**ALAN CHEALES, Brockham Vicarage.**

FAILURE OF PEACH CROPS IN UNHEATED HOUSES.

SEVERAL cases of the failure of Peach crops in unheated houses have come under our notice this season. Considering the very sunless summer, and especially autumn, of 1872, in a great many districts such a failure is just what might have been predicted; and any gardener who had it not in his power to apply artificial heat to his Peach trees in the October of 1872, cannot reasonably be blamed for the want of fruit this year. Under such circumstances, the fruit buds never get properly developed, nor the wood ripened. The foliage clung to the tree unnaturally late; and when the time of blossoming arrived, not only were the blooms and their sexual organs weak, but the whole trees were in such a condition that the blooms were thrown entirely off before they set. This result is none the less likely to occur to Peaches in spring, on account of their being enclosed in a glass case, but the reverse. Hence in some cases there were outdoor crops, while in unheated cases there were none or next to none. Trees under glass are, from the effects of bright suns, more likely to be excited at a pace which outdoor trees are not subject to; and the more violent the flow of sap, the wood-buds are more likely to take the flow and start into growth, while as a consequence, and at the same time, the flower-buds are actually thrown off altogether, and the crops are thus lost. In the northern parts of England and Scotland, where there are less chances of thorough ripening, late Peach-cases should have some means of being artificially warmed, in order to ripen the wood in such autumns as 1872, and of this year also, when we have had such sunless and wet seasons. It does not matter how healthy the trees may be; no power at the command of the gardener can insure a crop if the buds and the wood are not, to say the least, moderately well ripened. We saw several houses near the very centre of England, where strong-growing Peach trees had not produced any fruit, and from no other cause than that of the want of applying or having the power to apply, fire heat to ripen the wood and "plump up" the buds. And after the very sunless and wet season we have this year experienced over a great breadth of the kingdom, if like results

follow, employers should not blame their gardeners unless it be where they have the means of firing the trees in autumn and have neglected to do so. Peach-cases should all be heated, to enable gardeners to cope with the effects of a dull season in the case of the Peach crop, as well as render such structures available for wintering half-hardy plants, in many cases where such accommodation is of the worst description.—(*The Gardener*.)

THE ROYAL HORTICULTURAL SOCIETY'S EXHIBITION AT BATH, 1873.

Statement of Receipts and Expenditure.

<i>Dr.</i>	£	s.	d.	£	s.	d.
To Sale of tickets	1368	16	0			
Cash taken at gates	2108	2	8			
Special prize fund	1101	7	6			
Veitch Memorial prizes	30	0	0			
Royalties for printing, supply of refreshments, &c.	118	2	0			
Space for implement department ..	293	4	0			
Advertisements	22	13	6			
Special donations	17	12	0			
Sale of pipe and sundry receipts ..	16	9	3			
Interest allowed by bank	29	18	6			
				5106	5	5
				£5106	5	5
To balance brought down				£1248	17	3
				£1248	17	3
<i>Cr.</i>						
By Laying out and restoring exhibition ground	243	10	8			
Fencing ground and erecting glass pavilion	416	6	10			
Rent of ground	130	0	0			
Prizes and medals	1312	9	6			
Judges' fees	119	14	0			
Hire of tents	212	8	0			
Police	112	13	5			
Printing and stationary	168	7	8			
Advertising	227	9	9			
Bill posting	50	16	7			
Bands	214	0	11			
Secretary's remuneration and agents' commission on sale of tickets ..	154	11	8			
Travelling expenses, board, lodging, wages, &c.; the London Council and Society's staff, &c.	217	2	5			
Judges' and exhibitors' luncheon and breakfasts; refreshments for police, &c.	78	17	4			
Carriage of tents, parcels, &c.	52	4	1			
Postages and telegrams	49	9	6			
Microscopical soirée	27	1	2			
Painting	6	13	0			
Law costs and auditor's fee	5	5	0			
Hire of chairs, photograph of ground, Abbey bell-ringers, and incidental expenses	28	6	8			
Balance carried down	1248	17	3			
				£5106	5	5
Royal Horticultural Society, one moiety				624	8	8
Royal Literary and Scientific Institution Gardens, Bath				20	0	0
Royal Victoria Park, Bath				302	4	4
Hanoverian Band and Floral Fête Committee ..				302	4	3
				£1248	17	3

GRAPES IN SOUTH AUSTRALIA.

[Mr. R. FENN has sent us the following, received by him from South Australia.]

I HAVE just been reading your article on British wines, but I felt more particularly interested and somewhat amused at your account of Grape wines made by you. I have had my pleasant home in this good land over twenty years, and knowing how luxuriantly the *Vino* flourishes and ripens its fruit here, I felt surprised to read your statement—that it is the practice in many foreign vintage districts to add sugar and water to the Grapes to make wine. I can assure you that in our vineyards such deceit is never practised, and the wines made here and exported to London are purely and simply the juice of the Grape, and most of our wines, without any fortifying with spirit, contain from 24 to 30 per cent. of pure spirit.

You will believe my statement about the purity of our wines when I tell you that in the fruit shops in Adelaide (our capital) you can buy glorious Grapes of all kinds, of such a luscious ripeness that you never yet tasted in England, at 1*d.* and 2*d.* per pound, while if you live in a village like Norwood your friends give you as many Grapes as you like to have for fetching. From the middle of January to the middle of May, notably in February, March, and April, the great abundance of all kinds of the most beautiful Grapes would astonish you, and in the public market you can buy them at £4 to £5 per ton weight, and the wine-makers buy as low as £2 10*s.* to £1 per ton, so that there is no fear of our wines being adulterated. We have all other fruits in equal profusion—Peaches, Figs, Pomegranates, Pears, Apricots, Loquats, and in the winter Oranges, and our gardens are filled with flowers in the open air all the year round, such as many of those mentioned in the February JOURNAL OF HORTICULTURE as requiring in England great care and trouble to bring to perfection. This is indeed a glorious land of beauty and of plenty. The warmth of our summers you like after the first year or two, while the lovely scenery around Adelaide would charm you.

I suppose in no country in the world are gardens and flowers so generally cultivated as here, and it would be worth a journey to Adelaide to be able to look at the lovely flowers exhibited at our October Show, and the glorious fruits in the February or March Show.—E. EDWARDS, *Norwood, South Australia, June 14th.*

A CENTURY OF ORCHIDS FOR AMATEUR GROWERS.—No. 16.

CYPRIPEDIUM.

THE Lady's Slipper family. The very name of this genus should be sufficient to render it a great favourite with all amateur growers of the masculine gender, quite independent of the beautiful colours and markings. There are now a great many species of *Cypripediums* in cultivation, a few only of which can, however, be introduced into these pages, because one of my chief objects is to select those plants which afford the greatest variety in a given quantity, and therefore any of my readers who may feel disposed to commence the cultivation of this order with, say a hundred plants, certainly would not approve of one-fourth being members of this genus. This, then, must be my excuse for omitting many very beautiful species, not only of *Cypripediums* but of many other genera. With the permission of the Editors I hope, however, at some future time to say something upon those species and varieties which have been left out of this enumeration.

Cypripediums are easily distinguished by their peculiar pouched or calceolate labellum. There are some American species which have been separated, and a new name coined for them—viz., *Selenipedium*. These are distinguished by having a three-celled ovary; but the whole family is such a natural one in all outward appearance, that it seems to me unnecessary to separate them in this place.

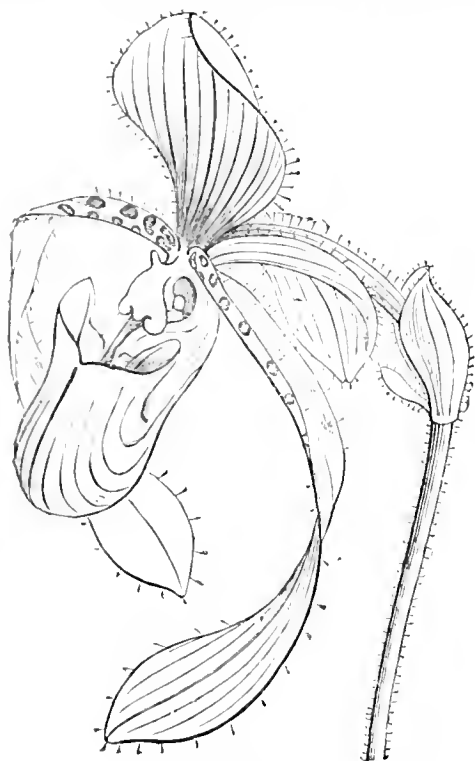
The *Cypripediums* are plants of easy cultivation, they flower very freely, and last a very long time in flower; even as cut blooms, if a little attention is bestowed upon them, they will last three or four weeks. The compost should consist of good peat, chopped sphagnum moss, and sharp silver sand, in about equal parts. The drainage must be good, and a liberal supply of water is necessary both in summer and winter, because these plants have no pseudobulbs, or any thick or fleshy leaves to support them through a period of drought, neither should they be raised above the rim of the pot like other Orchids.

C. CAUDATUM.—This very handsome species produces bright green, carinate, distichous leaves. The scape is produced from the centre, is erect, from 12 to 18 inches in height, usually bearing three of its extraordinary and attractive flowers. The sepals and petals are tawny yellow, suffused with brown. The petals produce the most wonderful appearance, as they continue to grow for several days after the bloom is expanded, until they reach a length of upwards of 2 feet. The pouched lip varies much in colour in the different varieties; the finest forms have the upper portion deep rose, suffused with yellowish brown. It blooms from April to June, and lasts several weeks if the flowers are kept dry. Native of Quito.

C. BARBATUM GRANDIFLORUM.—There are numerous forms of *C. barbatum*: that which I have selected will, undoubtedly, please all who grow it. The leaves are broad and obtuse, arranged in two ranks, and producing a terminal scape, which

in this instance is single-flowered. The dorsal sepal is large and broad, the upper portion pure white, purplish brown at the basal part with longitudinal streaks of a deeper shade; petals standing at right angles, oblong, furnished on the upper edge with numerous black-bearded wart-like protuberances, and purplish brown in colour; labellum a large dark brown pouch, resembling the toe of a shoe. It blooms from April to the end of July, and continues nearly two months in beauty. Native of Malacca.

C. Lowii.—This fine species is a native of Borneo. The leaves are somewhat thick, carinate below, from 12 to 18 inches long, and 2 inches broad. The scape usually bears three flowers, but I have seen as many as six; this, however, is very unusual; dorsal sepal large, pale green; petals oblong, the



Cypripedium Lowii.

basal portion greenish, with purple spots, the ends wholly rich purple, with ciliated edges. Lip large, light brown, suffused with purple. It blooms at various seasons, and continues a long time in full beauty.

C. missillimum.—In this species the foliage somewhat resembles that of the fine old winter-blooming kind, *C. insignis*. The leaves are from 10 to 15 inches in length, and about 1 inch in breadth, of a uniform dark green, saving at the base, where they are slightly stained with dull purple. The scape is erect; flowers solitary; sepals greenish brown; petals of the same colour at the base, but the upper half is wholly purple. The lip is moderate-sized, greenish brown, but having in addition a faint tinge of purple. It blooms during spring and early summer. Native of the East Indies.

C. superbiens.—This truly beautiful species is the last I shall introduce into this enumeration. The leaves are from 6 to 10 inches in length, about 2 inches in breadth; ground colour light yellowish green, being reticulated with mottlings of dark green, rendering it very handsome and distinct. Scape erect, bearing only a single flower, but that is a very large one; dorsal sepal large, white, streaked with fine lines of greenish brown; petals broad, ground colour white, spotted and lined with purplish brown on the edges; lip large, shining brown, with just a tinge of rose. It blooms from May to July, and continues in full perfection a very long time. Native of the Indian Archipelago.

CHYSIS.

This is a small genus of plants, most of which well deserve the attention of the amateur, and the species here introduced

is quite indispensable to even a small collection. They are distinguished by their thick fleshy pseudobulbs, which are covered with membranous sheaths, and by their lateral spikes of thick waxy flowers, which are furnished with eight pollen masses. The species of *Chysis* are easily grown; indeed, so are most plants when an interested party has charge of them. They should be potted upon a cone of peat and sphagnum, and elevated above the rim of the pot. During the growing season give them plenty of heat and moisture, but when at rest place them in a cool house and keep dry. Their thick fleshy pseudobulbs enabling them to withstand a long season of drought with impunity.

C. bractescens.—This is the only species I can introduce here. The pseudobulbs are from 6 to 12 inches long, covered with scaly sheaths, and bearing thin, ribbed, light green leaves, which fall away during the period of rest after growth is complete. The spike comes up in spring with the young growth, and bears five or six flowers, which measure nearly 3 inches in diameter; sepals and petals broad, thick, waxy, and pure white; lip also white, stained in the centre with lemon or light yellow. It blooms in April and May. Native of Guatemala.—*EXPERTO CREDE.*

THE ROYAL HORTICULTURAL SOCIETY.

IN answer to your anonymous correspondent, "A LIFE FELLOW, R.H.S.," his first paragraph should have run thus: "The old Council was caused to retire by a very small number of votes, and most of them local ones." I believe that there is great writing power in the new Council (it is one comfort that we shall have no slovenly papers), and expect that the forthcoming report will be a masterpiece, putting the very best possible face on a bad case; but that the Council can pay £2100 a-year rent, according to the Charter (and rent has a way of coming due), and pay their way without starving horticulture, is, I believe, beyond the power of man to show, even on paper. I wish I could think otherwise; it would give a hope that our country show-fund money has not been spent after all.

I do not see how the large sum spent on the gardens affects either my argument or myself. Though on the Council eight years ago, it was spent long before my time, and I fear its results would now be only considered as a tenant's improvements at their value for the purposes of the present time, and therefore as worth nothing like the £6000 a-year suggested by "A LIFE FELLOW." He is mistaken in supposing that I suggested that Her Majesty's Commissioners should make building land of the garden. What I said was that either the garden should be made of more use to the public, or, if it were to be kept private, as at present, that the rich neighbourhood should pay its value, about five times the present rent; this sum to be applied to public purposes.

If "A LIFE FELLOW" inquires, he will find that the two Societies he names are on a totally different footing from ours. The Crown is, I believe, the great landlord in the Regent's Park. I do not know what rent the two gardens pay directly; they pay a very large one indirectly, as the beauty of the garden at the Botanic, and the continuous show and other attractions at the Zoological, must greatly add to the rental of the vast number of houses owned by the Crown in their neighbourhood. In answer to the next objection, what I suggested was that a guinea should be our subscription, and that this should admit only to the Show and Meeting part of the gardens. For the recreation part, those interested would make their own terms with the Commissioners.

From "A LIFE FELLOW's" point of view he is right in opposing proxies. If the Kensingtonian rule is to be kept up, clique voting must be continued, and the country still prevented from expressing its opinion. Seeing through my horticultural spectacles, I warmly advocate voting by proxy.

In answer to Dr. Denny, I have only to say that he is mistaken in supposing that the Society's difficulties are due to the "acts of former Councils, of which Mr. Wilson was a member." Dr. Denny is rather a new Fellow of the Society. If he inquires of an "old Fellow," he will find that the source of the difficulties was long before my time, and that the Council I joined about eight years ago inherited them as the new Council has. I hope that Dr. Denny will stick to the opinion contained in his last paragraph, that it is wise to give up the lease of the gardens for a fair consideration. I wish every horticulturist could be brought to feel as strongly as I do, that as long as our home is in Egypt we shall be in bondage; as

long as we are more than lodgers at Kensington for rooms and space for committee and other meetings and shows, we shall never have, what the country is in want of, a free and independent purely horticultural Society; and that the only way to make a really successful national Society is to bring in Fellows all over the country by reduction of the subscription to a guinea.

It has been said, upon seemingly good authority, that the new Council is negotiating with H.M. Commissioners for the admission of Exhibition visitors, if not for giving up the lease; or in the language which was lately fashionable, is trying its hand at "selling the Society to the Commissioners." I doubt any body of gentlemen so soon doing that for which they so loudly condemned the late Council, and which they were placed in office to prevent.—GEORGE F. WILSON.

BELGIAN HORTICULTURE.—No. 5.

M. LOUIS VAN HOUTTE'S NURSERY.

As well as memory enables me I will venture an outline description of the last and greatest trade establishment visited a little more than a year ago. I think I may well call it the "last," as being the last visited and the last to describe, and if I am correctly informed it is the latest-established of the principal nursery businesses in Belgium; and certainly, so far as I saw, is not only the greatest, but larger than all the others put together—*i.e.*, than the four previously described. It is, in fact, a monument of perseverance, ability, and enterprise of the energetic head whose name and fame as a horticulturist is a household word in all civilised nations. This is no mere figure of speech, as M. Van Houtte's business connections reach not only to every nation in Europe, but also to North and South America, China, and Japan. This sounds, perhaps, rather grand, and readers may possibly imagine the place grand too—a place of imposing approach and noble entrance, a place where some grand external is provided to represent its internal importance; a place where glass structures call up crystal palaces ornate with domes and minarets glistening in the sun, and attractive by elaborate ornamental architectural appendages telling us "how rich it is." But no. Think of nothing of the kind. It is not common for a healthy-minded man to parade his wealth, or a thoroughly able man to proclaim his knowledge from the house-tops. Well, at Van Houtte's there is no dazzling show—no fangdangs. There are no palaces of glass, nothing, in this respect, out of the ordinary way except, perhaps, one like a railway tunnel and another like a hand-light highly magnified. Yet if men of great acquirements do not revel in display they work in every legitimate way to achieve success with indomitable perseverance, and with skilful planning take care, above all things, that what they have for the world the world shall know about. "Of what use," said a successful florist to me, "is my having this good thing if the world does not know about it?—it is my duty to let all know." He was then a small gardener, he is now fast rising to be a large and esteemed nurseryman. But the simple making known is not enough. There must be honesty and faithfulness governing all, or success will be flickering and transient. It is necessary, to realise substantial and lasting fame, to do as did Hugh Miller's stonemason, who "put his conscience into every stone that he laid." "And what," I ventured to ask M. Van Houtte, "what is your governing principle in conducting so large a business?" "My plan, Mr. Wright, is this: I do the best I can for my friends abroad, and the best I can for my friends at home and my men in my nursery, and when I do the best I can for all these I do the best for myself." That is a liberal, honourable, and right principle and such as our best firms at home act upon or they would not have become great as they are. Having no idea that the distance from here was two miles we—self and *protégé*—rushed through the cab line intending to find our rendezvous on foot in about ten minutes. But landing in the middle of the street and taking our bearings we were the next moment in a state of siege, fourteen or fifteen men in blouses—commissionaires—clustering round us, assailing us with such incomprehensible jabber that my friend could only answer by a fit of laughter. This was the signal for losing his bag and a dozen fellows wrangling over it like a pack of hounds at a fox. It was only by the expressive interpretation of a stout walking-stick that the bag was recovered, when we took refuge in an "estaminet" (having learned what that meant) and holding-up two fingers and uttering the solitary word "cognac," when about two thimblefuls were put before us, and we were entitled

to "rest and be thankful." The next step was to write the address of M. Van Houtte by way of seeking direction, but they could make nothing of it. Deciding that their education was in fault the same words were printed in round characters, which resulted to our mutual satisfaction, and a guide was at once procured.

After walking about half an hour with nothing at all inviting on either side we turned into what looked like a by-lane to the left, we came to a group of tall Poplars through which the glass shimmered, and this we found to be Van Houtte's celebrated nursery. Judging it by comparison with our great home establishments—as Veitch's, Williams's, the "Pine Apple," &c., first impressions were not favourable. There was no semblance of attempt made to strike the mind and give effect at once, but, what was to us of more moment, there was a porter at the gate who could speak English. Before leaving home I was repeatedly told by friends, who thought they knew all about it, "Oh! when you get there you will find almost everybody able to understand you." Never was a greater mistake. Certainly there is plenty—too much—of the "vulgar" tongue on the quay at Antwerp. In first-class hotels and at railway stations a "one language" traveller has no difficulty, but out of these not one person in five hundred can understand you or you him. It is as well just to mention this fact for the information of gardeners, like myself, who have not quite reached the degree of professors of languages, and who may venture from home a wee. At the left of the entrance to the nursery is the porter's lodge, and on the right the spacious and comfortable-looking residence of the proprietor. Awaiting an answer to "the Dr.'s" kind letter I was taking stock of the immediate surroundings. I could see on my left a vast array of glass houses, or more properly, perhaps, brick pits, for nearly all have brick sides, are span roofed, and have slightly sunken pathways. They are erected for use and not ornament. The outer walls are coated with ship-tar and for years together need no repairs as to painting. Over these the English and Belgian flags were flying, it being about the time of the volunteer fêtes, and a "royal nursery" minus the "royal flags," at such a time, would have been a misnomer. On the right is arranged a long line of buildings as offices, printing house, packing sheds, &c. Straight ahead is the nursery with a group of choice Conifers at the entrance, standing like sentries or the advanced guard of the greater army beyond. In the line of vision is the bulb warehouse. Above wire—lines of wire from all directions converging into a corner of the dwelling, which at this point resembles nothing so much as a telegraph terminus, which I suppose it is, M. Van Houtte being able to communicate to any part of his establishment without leaving his bureau or even, I believe, his chair. Not that he is indolent as—as will be clearly seen—few men work harder than he. But the answer comes that M. Van Houtte will see me in an hour, and meanwhile an English-speaking guide is provided to conduct us through the houses. It was a rush through from house to house, a glance at everything yet seeing nothing. At length, with watch in hand, the guide intimated that it was within two minutes of M. Van Houtte's time, and to the second, perhaps, the door opened and the renowned horticulturalist stepped out with tottering step to welcome us. It was not, however, a tottering welcome but, on the contrary, so robust as not only to make a man at home in a minute but to startle him by its earnestness.

"Mr. Wright I have heard of you, and am glad to see you. Come into my house. All good gardeners are welcome here. Let us refresh and talk; then you dine with us, you sleep with us, you go into my nursery and house when you like, you have all you want. My son, who speaks English like you, will attend to you, and I go and attend to my business. You stay as long as you like, you and your friend," and then with definite emphasis, "you stay a month." That was enough and to spare, for instead of a month I could only afford a twentieth part, or a day and a half.

What I saw during this short visit I will attempt to narrate. But first I should like to describe the man and his mode of business. Pen-and-ink sketches of those who are not strangers in name have in some way a relish to most people. We hear of them, we read about them, we almost seem to know them, yet we have never seen them. "What sort of a man is he? Is he old, young, genial, communicative, or what is he?" is a very common query relative to representative men who, by their position, works, and ways have made themselves more than private individuals.

M. Van Houtte is a gentleman who has evidently turned the leaf of three score years but is not yet grey with time, and if his step has lost its spring it is due to a slight affliction common to sedentary habits rather than innate physical weakness. He is of robust physique and vigorous intellect, and subjected to his penetrating vision a nervous man might feel himself the subject of stock-taking and being read all through. He has not much time for polished ceremony or to press courtesy to an unpleasant extreme. Like many another eminent man he is a great listener and seems content for his friends around him to do the conventional talk, himself sifting and speaking only to the point. His characteristic is soon seen to be matter-of-fact exactitude, which is one of the greatest acquisitions any man can inherit or acquire, and which, in the end, will serve him the best. Van Houtte's is a house of work. Each one has his or her duties in conducting this great business. Even the daughters of the household—of charming manners and genial—have their share in foreign correspondence, their maternal parent being chief cashier. Van Houtte spends his whole time in his business bureau. He has not been all round his nursery for three years, yet is cognisant of everything in every part of it. From five to eight every morning is occupied in arrangements with different foremen, and if it is never seen there the governing head is felt in every corner of the establishment. Surrounded by a large staff of clerks every detail of management is arranged here, the chief himself commencing work between one and two o'clock every morning and working incessantly until 8 p.m. with less than one hour's intermission. And this not at any particular season but constantly from one year's end to another. I have the best authority for this extraordinary fact and will frankly confess felt myself humiliated thereby. What a lesson it teaches that there is no royal road to success, and is one more example that those who have won have worked—worked with rare zeal and perseverance irresistible in pressing to the goal of success. So it has ever been, so it will ever be.—J. WRIGHT.

VINTAGE IN HUNGARY.

By looking at a book of comparative statistics you will find that, after France, Austria-Hungary is the greatest wine-producing country in Europe; and again, that to the wine-production of Austria-Hungary, which is estimated to reach in a good year above three hundred million imperial gallons, Hungary contributes about five-eighths. These figures alone, without any further comment, show the importance of this branch of agriculture for the country. It is, therefore, natural that the vintage should constitute quite an event, and be looked forward to with almost as much interest as the harvest itself. If a good vintage can never quite make up for a bad harvest, it may go far to mitigate the evil, for the 670,000 Austrian acres, equal to about one million English acres, on which the Vine is cultivated are more or less spread all over the country, so that, with the exception of the higher mountain regions in the north and east, there is scarcely a county which does not in some measure participate in the production. It is above all, however, round those isolated heights which rise up at various points of the alluvial basin which constitutes Hungary that the Vine is cultivated, forming a series of wine districts and regions more different in the character of their produce than almost any other country can show. Thus, the district of Ruth in the west, that of Carlovitz in the south, that of Mènes in the south-east, produce wines allied in flavour and strength to the wines of Spain and Portugal; the hills of Villany in the south, the slopes of the Matra range at Visonta, and the mountain slopes round Buda yield wines which even a connoisseur might take for Burgundy; again, the hills alongside Cater Balatar, the environs of the isolated hill of Soulo in the west, the valley of Küküllö, in Transylvania, and many others, produce wines having all the characteristics of Rhine wines, only with more body, while the detached range at the foot of the Carpathians boasts of its Tokay, with its own distinctive bouquet, and a combination of mellowness and strength which is probably unrivalled.

Of course, with such a variety of Grapes as is implied by the variety of wines, the vintage extends over a considerable period, so that while with the lighter sorts it begins towards the end of September, the gathering-in of stronger sorts rarely begins before the middle of October, and the owners of the vineyards of Tokay wait for the first hard frosts in November, which are deemed essential to develop fully the flavour and that unusual quantity of sugar and alcohol which distinguishes

their wines. It may seem strange in a free country that the period of vintage in each district is not left to the discretion of the owners of the vineyards, but it is the local authorities who fix not only the beginning, but actually the period within which everyone must have finished his vintage. This is an old custom, which arose at the time when most of the vineyards in the country were not the freehold property of those who cultivated them, but had to pay tithes to the landlord who owned the soil. As, however, the tithes have been redeemed by the State, and the cultivator has become likewise the free owner of the vineyards, this restriction is not likely to be maintained much longer. Indeed, this very year, the small wine-producers in the district of Buda, who wanted the vintage earlier than the time fixed by the authorities, remonstrated and carried their point. It will not be to their advantage, most of the large wine-producers say, for the weather has been unusually hot, and a week or ten days longer would have made a notable difference in the quality. You will say, Those who thought so might have waited, and thus shamed their foolish neighbours; but this is more difficult than may seem at first sight, for they would thereby have been exposed to the inroads of self-constituted tithe-gatherers. Like game, fruit of every kind, but above all, Grapes, have somehow or other in the eyes of the people the character of a *res nullius*. No one would think of taking even one Wheat-ear, Potato bulb, or head of Indian Corn from his neighbour's field, but somehow or other the orchard or vineyard, although protected by ditch or hedge, is not considered as sacred. As soon, therefore, as the Grapes begin to ripen a number of special guardians are set over the vineyards by the authorities. They have their elevated stands from which they watch by day, while at night they prow about, keeping up a communication between each other by the sound of horns with which they are provided. In some of the small towns—for instance, the one I am writing from—there is a special functionary, usually himself the owner of a vineyard, who manages this vineyard police. His sign of office is a horn larger than the others, with which he is supposed to call occasionally, so as to keep alive the attention of his subordinates, who have to answer the call. Well, this improvised police ceases when the period fixed for the vintage is over, so that everyone, whether he thinks the Grapes ripe or not, must finish his vintage within that period, unless, indeed, he likes to establish a police of his own.

With the burgher of Székes-Fehérvár (whence this is written) the vineyard forms, as it were, a necessary part of his existence and position. To possess a bit of vineyard is the ambition, therefore, of everyone, and he would rather deprive himself of many other things than resolve to sell it. Almost as much as the vineyard itself, some sort of building on it is equally a social necessity of any man of standing. With those of humbler fortunes it is, indeed, only a cell and a shed of some kind for the wine press; but in many instances it has grown into a snug rustic building, where not only friends may be received, but where a night, or may be some weeks, may be passed without too much inconvenience. The vintage, and, indeed, the whole cultivation, is a work of love which everyone likes to superintend himself; so whatever may be the stress of business in the shop in the town, especially on the two weekly market days, when the country people all around come in to make their purchases, the master or the good wife always contrives to find time to look after the vineyard. If nothing else, it is an occasion for an outing, even if it be at the sacrifice of a walk of a couple of miles.

But when once the vintage itself approaches it engrosses all attention. There is first a good deal to do before it begins; there are the vats to be cleaned, as well as the casks; the press must be set all right and cleaned of the dust of a twelvemonth, then vintagers are to be procured—men who squeeze the Grop by trampling upon it in the old fashion with their heavy boots. Nor are the cares of the mistress of the house smaller. All the people have to be fed while the work lasts, besides preparations made to keep open house during the time. Impatiently as everyone has waited for the day fixed for the opening of the vintage, on the first morning a regular emigration sets in from the town, and all is alive and astir in the vineyards. Much, of course, depends on the weather, for if by chance the autumn rains should begin just then, the vintage becomes a misery rather than a pleasure. The dusty road is converted into a quagmire, the few hackney coaches are all bespoken and almost intractable; while that open-air amusement, visiting of neighbours, dispensing of hospitality, and the many other pleasures connected with this sort of gipsy life, are

marred. Whoever would take advantage of one of the few remaining occasions for seeing old Hungarian hospitality must come here for the vintage. I have been told of an officer who arrived with a transport of recruits to pass the night. He found the town quite empty; it was vintage time, and his comrade, who was on guard bemoaning his own fate, advised the new comer to go and amuse himself. On the observation of the latter that he knew no one, he was told to go in at the first vineyard where he saw a light and heard the sound of music. He did so, was warmly welcomed, and danced till morning. Some people complain that of late the old free and easy way of going and coming is rather on the decline, and that set visits are becoming the fashion more and more; but from all I saw, I think strangers would not fare worse now than formerly. You can scarcely pass a house where you are not asked to step in, and where every pains is not taken to show that you are welcome; but I should not advise foreigners to go there unless they are blessed with a strong constitution and unlimited powers of imbibing.

As the period fixed for the vintage is usually a week, there must be a Sunday in it, and this is really the grand day. Not a soul, young or old, rich or poor, who can in any way contrive it, will remain then in the town, so that you may pass a muster of the whole population in the open air. Every house in the vineyards down to the poorest is full of friends who come out for the early dinner at 1 p.m., and spend the afternoon and evening there till late in the night, winding up with supper, dancing, fireworks, singing, flirting, and all sorts of other pastimes for young and old.—(*Times*.)

PORTRAITS OF PLANTS, FLOWERS, AND FRUITS.

PASSIFLORA (TACSONIA) INSIGNIS. *Nat. ord., Passifloræ. Linn., Monadelphica Pentandria.*—Native of Peru. "T. insignis is without question the finest species of the genus, whether in foliage or flower, owing to the bright glossy deep green of the rugose upper surface of the leaf, and the gigantic size of the flower, the sepals of which are violet crimson, and the petals of a deeper and redder hue. Dr. Masters observes that it belongs to the section Poggendorffia of Passiflora, characterised by the filamentous corona. Its affinity with T. Van-Volxemi (tab. 5571), T. quitensis (tab. 5876), T. eriantha (tab. 5750), and T. mollissima (tab. 4187), is evident; but in all these the corona is reduced to glands, and the leaves are lobed."—(*Bot. Mag., t. 6069.*)

GAULTHERIA INSIPIA. *Nat. ord., Ericacæ. Linn., Octandria Monogynia.*—"A pretty little half-hardy shrub, of which the old leaves in autumn assume a most beautiful rich red-brown or claret colour on the upper surface, and which bears, at the same time, a profusion of pearl-like white fruits, each with five crimson spots on the crown, answering to the lobes of the baccate calyx, which are scarlet in flower. It is apparently a common plant in the Andes of Ecuador and New Grenada. It was discovered by Colonel Hall at 7000 feet elevation, near Camino Real in the valley of Loa. Professor Jameson next sent it from woods on Pilzheim and Pichincha, at elevations of 9-10,000 feet. Goudot gathered it on the peak of Tolima, to the westward of Santa Fe de Bogota, in New Grenada; Hartweg, near Quito; and Weddell, in the province of Pasto. The above localities embrace a range of nearly eight hundred miles of the Andes. The fruit is described as eatable, but tasteless."—(*Ibid., t. 6070.*)

ALOE (APICRA) DELTOIDEA. *Nat. ord., Liliacæ. Linn., Hexandria Monogynia.*—Native of South Africa. Flowers greenish white. "This singular succulent belongs to the same section of Aloe with A. foliolosa (tab. nost. 1352), pentagonia (tab. nost. 1338), spirilla, imbricata (tab. nost. 1415), spiralis, &c., of Haworth, which are all closely allied, having 5-fariously densely imbricating leaves, that clothe the stem throughout, and terminal racemes of erect flowers, with an oblong tube and short segments. It differs from the first-named of these chiefly in size, and in the leaves not being spirally disposed except on the young shoots, though I should much doubt this character being of any value. It has long been cultivated in the Royal Gardens, where there is no record of its introduction. The perfect regularity with which the leaves are superposed in five series, and the columnar stem, render it a very striking object in the greenhouse. It flowers in May, and is easily propagated by offshoots from the base of the stem."—(*Ibid., t. 6071.*)

SYRINGODEA PULCHELLA. *Nat. ord., Iridacæ. Linn., Triandria Monogynia.*—Native of South Africa. Flowers lilac.

"Syringodea pulchella is one of Mr. Harry Bolus' interesting discoveries, and was found in plains amongst the Sneeuwberg mountains at an elevation of 4600 feet above the sea, flowering in April. He sent bulbs to Kew, which flowered in September of the present year. The name is derived from syringodes, fistular, in allusion to the slender perianth-tube."—(*Ibid., t. 6072.*)

AQUILEGIA LEUCOCERAS var. CHRYSANTHA. *Nat. ord., Ranunculacæ. Linn., Polyandria Pentagynia.*—Native of New Mexico. Flowers pale yellow.—(*Ibid., t. 6073.*)

CHERRIES—Early Rivers and Monstrous Heart.—The first was some time since described by Mr. Rivers in this Journal. "For some years he has been engaged in endeavouring to raise early Cherries which would supersede the old Early Purple Gean, which is notoriously a bad one to propagate, and in addition has a bad constitution. The early quality is, however, so well developed in this variety, that Mr. Rivers selected it as a basis on which to work, and after many attempts he raised a seedling from it, which combined its early-ripening habit with a hardier constitution.

"The Monstrous Heart Cherry, or *Bigarreau Gros Cœuret*, is a very old variety of Cherry, having been described by Duhamel, Mayer, Kraft, and all the noted pomologists of the last century. Its great size, fine colour, excellent flavour, and generally handsome appearance commend it as a variety worthy of general cultivation. The tree bears abundantly, and grows to a large size, with a spreading habit. The sort is admirably adapted for orchard planting, where the fruit is sent some distance to market, as it bears carriage well, and will keep fresh for several days, provided it is gathered dry. The fruit is of a large size, as broad as high, of a regular heart-shape, and marked with a well-defined suture, which is rather deep towards the stalk, but shallow and faint at the apex, where it is marked with a distinct style-point, which is rather prominent. The stalk is greenish, from 2 inches to 2½ inches long, set in a wide but not deep cavity. Skin rather thick and membranous, adhering closely to the flesh, smooth and shining, changing as it ripens from yellowish white to golden yellow, splashed and streaked with bright red. Flesh firm, crackling, yellowish white, with a few faint stains of red next the stone; juicy and richly flavoured. It is ripe in the middle of July."—(*Florist and Pomologist, 3 s., vi., 265.*)

HOLLY, IVY, AND MISTLETOE IN THE LONDON MARKETS.

TOWARDS Christmas, Covent Garden, and other markets of the metropolis, are glutted with Christmas evergreens for the decoration of the three-million-peopled city. "The boughs with clustered berries bright," and the Laurel, Ivy, and Box, can be had for the asking in rural and less populous places, suddenly become in London important articles of commerce, and the poorest households are willing to pay in coin for a spray of Holly and Mistletoe to welcome Christmas. Dark as it is on a December morning, long before daybreak Covent Garden and the adjacent streets and approaches to the market are thronged with heavy waggons, some from the railways and some from the country turnpike roads, and all laden with Mistletoe, Laurel, Ivy, Box, and Spruce Firs for Christmas trees. Here are waggons, piled up with the festive evergreens. Many laden with at least a ton. The procession is at a standstill, for the market is already full. Every market morning for more than a fortnight this is the aspect of Covent Garden; and Covent Garden is only one of the great markets at which Christmas evergreens are received, in order that they may be retailed in all the squares, streets, lanes, and alleys of London. Where does this vast supply come from? These waggons of Mistletoe are not from the turnpike roads, but from the railway stations—from the South-Western and Great Western termini.

English Mistletoe for the London market comes almost exclusively from the cider and perry counties—from the Apple and Pear orchards of Worcestershire, Herefordshire, and Gloucestershire. The Apple, and not the Oak, is the tree which yields the Mistletoe in abundance. In the western and south-western counties of England, where a moist climate and a warm summer produce the juicy fruit for making cider, not unfrequently 50 per cent. of the Apple trees are infested with the Mistletoe. So important a commodity has the Mistletoe become, that the quantity despatched from Hereford alone every December has been estimated by Dr. Bull to exceed 100 tons. From Worcester even a greater quantity is supplied. The London supply is despatched from Gloucester, whilst the northern

towns receive their proportion from Hereford and Worcester. The orchards of Normandy and Brittany, too, supply large quantities of Mistletoe to the London markets at Christmas time. Large tracts of country in western France, as in western England, are devoted to Apple-growing. In Normandy alone, the tree which the Mistletoe most delights in has been so widely cultivated, that as many as five hundred varieties of the acid or Bitter Apple are known in the district. The French Mistletoe finds its way to St. Malo, and is thence shipped to England by steamer. From the Channel Islands, too, Mistletoe is shipped for England, although orchard culture in Guernsey and Jersey has of late years been decreasing.

Arrived at Covent Garden or its precincts, the Mistletoe is offered for sale in bulk or in small lots. Even in the off-streets, too, where the cargo can get no farther on its way to the headquarters of the market, the sales begin and are often completed on the spot. The waggon is converted into a shop, and the sales are legally effected, for they take place within the market precincts, and the dues are collected as though the transactions had occurred in the Piazzas of the market itself. As we stand here, Mistletoe is selling all around us from 1s. 6d. a branch to £5 and £6 a-ton. But, great as are the quantities of Mistletoe which find their way to the London markets at Christmas time, the various kinds of Holly are still more plentifully supplied. Holly, however, is not so peculiarly the growth of certain districts as Mistletoe, and the sources of its supply are more various, and perhaps at the same time more questionable as regards the law of *monum* and *tuum*. All around London the festive season is one of uneasiness and trepidation to the owners of evergreen gardens and shrubberies, and not seldom it is regularly signalled in such cases by the employment of watchmen, night and day, to protect the grounds against marauders. A considerable quantity of the Holly which finds its way to the London markets is come by in a casual but not necessarily dishonest manner. Here, for instance, are several loads which have been brought in railway vans from the Bricklayers' Arms Station. We learn that some railway works in progress in Surrey are being carried through a thick jungle of wild Holly and underwood. The Holly becomes the requisite of the ganger and his men, and is found to be well worth transport to Covent Garden Market. Many other consignments have a history which tells of the exceptional character of the trade.

Much of the evergreen supply for Christmas purposes is offered by itinerants, who may or may not have contracted for the goods they possess, and it is hardly doubted in Covent Garden, Spitalfields, the Borough, and Farringdon Street that many a load of Holly, which looks as honest as its neighbours, has been obtained surreptitiously. But the great Holly supply of the London markets comes in in the form of consignments to order from well-known business clients in the country. Stewards of great estates are wont to sanction the clipping of the plantations at Christmas time, and some valuable patronage of this kind is freely exercised. Gardeners at gentlemen's seats, too, are allowed to lop the evergreens and to treat the spoil as their perquisites, or they sub-let the privilege to the local market-gardener, who well knows where to find a customer for his wares. Nor must it be forgotten that the Holly still maintains its aboriginal hold on the common lands of Surrey, Hampshire, and other counties near enough to London to repay the expense of carriage and yield a profit to the vendor, besides putting an honest penny in the way of the villager far away. Some of our finest native Hollies are found in the New Forest, but Sevenoaks and Cobham and Hotham are equally well known to the purveyors of Christmas evergreens. We find, too, that it even pays to bring Holly from Shropshire, and that large quantities are being brought from the environs of Shrewsbury year by year. At Covent Garden it is sold to the retailers in bundles from 6d. upwards, whilst the same quantity of variegated Holly often fetches from 5s. to 6s. and upwards. A load of well-berried variegated Holly sometimes fetches as much as £20. So at Covent Garden, before daylight on a December morning, the trade goes on in glistering broad-leaved Laurel; Ivy, glossy and black-berried; Holly, "with its thorny leaves and berries like crimson drops," as the symbolical writers love to describe it; and round toppling bushes of the white-berried Mistletoe.—(*Leisure Hour.*)

GARDENERS' ROYAL BENEVOLENT INSTITUTION.—We ask subscribers to consider the case of Mrs. Edlington, widow of the late John Edlington, who died in October last, leaving her and six children, three of whom are totally unprovided for.

The wife has suffered for twenty years from disease of the heart, which has not only prevented her doing any kind of hard work, but also necessitated the husband's earnings being spent in medical and other attendance, and she is now quite incapable of earning her own living. Mr. Edlington was at the time of his death gardener to Sir M. Cholmeley, Bart., Easton Hall, Grantham, and previously he had lived with the Earl of Strafford, Wrotham Park, Barnet, the Earl of Erne, &c. He was a staunch supporter of the Institution, having been seven years a subscriber, and never having lost an opportunity of advocating its claims amongst his friends.

THE CATHCART PRIZE ESSAYS ON THE POTATO DISEASE.

MESSRS. CHARLES WHITEHEAD, John Algernon Clarke, William Carruthers, and H. M. Jenkins, the Judges appointed by the Royal Agricultural Society to examine the essays competing for the £100 prize offered by Lord Cathcart for the best essay on "The Potato Disease and its Prevention," presented their report at the last meeting of the Society's Council. Among ninety-four essays not one has been found worthy of an award; in fact, had anybody really succeeded in combating the disease, he would probably have done better with his discovery than by describing the *modus operandi* for £100. The causes most frequently set forth in the manuscripts were degeneration of the tuber, fungus on the tuber, superabundant moisture and wet weather, *Peronospora infestans* attacking the leaves and stems of the plant, electrical action, and unhealthy condition of the plant, induced by the use of certain manures. The principal remedies recommended were the cultivation of new varieties, use of disease-proof sorts, employment of lightning-conductors, application of lime as a manure, avoidance of specified manures, steeping or kiln-drying the tuber before planting, dressing the haulm with sulphur, chlorine, &c., cutting off the tops on the first appearance of disease, growing the Potatoes in small clumps or hillocks, bending down the haulm so as not to drip over the roots, and tying up the haulm to stakes, or cultivating sorts having erect stalks. Evidence in some essays contradicted in nearly all cases alleged results stated in others. The Judges have recommended the Society to grant a handsome sum of money for the purpose of inducing some competent mycologist to undertake an investigation of the life-history of the Potato fungus (*Peronospora infestans*) in the interval between the injury to the Potato plant and the reappearance of the fungus in the following year. Also that valuable prizes should be offered for the best disease-proof early and late Potatoes, the awards to be made after testing the competing sorts and their produce during three seasons.

DEATH OF MR. CHARLES LAWSON.—We regret to have to announce the death of Mr. Charles Lawson, head of the late firm of Peter Lawson & Son, of Edinburgh, and lately Lord Provost of the city, which took place on Sunday night, the 21st inst.

THE YEW AT CROWHURST, IN SUSSEX.

CAMDEN observes that "in times past the whole county (Sussex) throughout, by reason of the woods, was hardly passable, for the wood Andradswald took up in this quarter a hundred and twenty miles in length, and thirty in breadth." Evidence of this remains in the number of places in the names of which the Anglo-Saxon word *hurst*, a wood, was applied, and is still retained. Within ten miles round Hastings are Hurst Wood, Cowhurst, Maplehurst, Coghurst, Crowhurst, Piddlehurst, Penhurst, and Rathurst. Other parts of the county are similarly characterised. Wadhurst, Brickhurst, Hawkhurst, Ticehurst, Bellhurst, Sackhurst, Hurst Green, and Ewhurst, are all in close vicinity to the South-Eastern Railway between London and Hastings. With the exception of the Yews, all the trees of the Anglo-Saxon days have passed away, but of the Yews many are still existing. I know no county in so many of the churchyards of which ancient Yews are remaining as in Sussex.

Ray, the botanist, I believe, was correct in considering that our forefathers so placed them because, being evergreen, they symbolised the immortality that triumphs over the grave. The peasants of Ireland wear sprigs of Yew in their hats during Eastertide, the season that commemorates the assurance of immortality; and Evelyn tells that in his days the Yew sprigs were called "Palms." The durability of the wood



THE CROWDEST VIEW.

From a photograph by Mr. F. C. Mann, photographer, Ha. (line.)

of the Yew, even when dead, is so prolonged, that the men of the New Forest in Hampshire say "a post of Yew will outlast a post of iron." Some have thought that the Yew was planted in each parish churchyard to furnish bow-staves for our archers, but foreign wood was preferred for the purpose, and no ancient Yew I ever saw shows any trace of being lopped.

One of these giants in age, durability, and size is in the churchyard of Crowhurst, in Sussex, about five miles from Hastings, and fully realises Wordsworth's verse, being

"Of vast circumference, and gloom profound,
This solitary tree! A living thing,
Produced too slowly ever to decay,
Of form and aspect too magnificent
To be destroyed."

* I measured its clustered trunk a few weeks since, and found it, as Mr. Cater Rand states it was in 1735, "33 feet in circumference at the ground, and 27 feet at 4 feet from the base." At about 7 feet from the ground the trunk divides into four main limbs, and these have produced branches, covering a circle full 60 feet in diameter. The trunk is hollow, and to prevent the leverage of the side branches breaking down its sides, strong bands of iron have been applied to hold the trunk together. The extremities of the branches are dead, and the highest of the top are stag-headed. De Candolle adjudged its brother tree at a village similarly named in Surrey to be fourteen centuries and a half old, and if so, which I see no reason to doubt—Mr. Lower says some think its age is 3000 years!—then William the Conqueror may have rested beneath its branches, for when he landed at Bulverhythe it was six hundred years old, and he must have passed near it when advancing to plant his standard on Telham Hill, just beyond, on the eve of that battle in which Harold, his rival, fell. That brave and rash rival also must have been beneath the branches of this Yew tree, for Domesday Book tells us that Crowhurst was his domain, and by the Normans was devastated, "*vastatum fuit.*"

In course of time Crowhurst passed into the possession of Sir John Pelham, and his crest, known as "the Pelham buckle," is still remaining in the church tower. That buckle is said to have been assigned him by heralds as indicative of his aiding in the capture of John, King of France, at the battle of Poitiers. That he did so is certain, but we think that the crest was assigned in acknowledgment of his general title to such a distinction, for heraldic authorities tell that the buckle was intended to represent power, fidelity, and firmness. Near the church, on the south side, are the remains of Court Lodge, the manor house; they are only a pointed arched window and part of the walls of the east gable. The Papillons, connected with the Pelhams by marriage, now reside in Crowhurst Place.—G.

WORK FOR THE WEEK.

KITCHEN GARDEN.

DUNG should be prepared for forcing the various culinary vegetables which are required early; a considerable quantity of leaves may be used with it. If the autumn sowing of *Cauliflower* failed, it will be advisable to sow in a box, which may be placed in a forcing house, and when the plants are of a sufficient size prick them out in a frame on a slight hotbed. *Celery* trenches may now be dug out, so that they may receive the benefit of the frost; in the spring Cauliflowers may be planted in them, and dwarf Peas or Lettuce between, which will be off by the time the trenches are wanted. A seed bed should now be made to raise young *Cucumber* plants for the hotbeds; a one-light box is generally of sufficient size for this purpose. After the bed is made and the heat is up the dung should be forked up to the depth of a foot every other morning until the burning heat has subsided. Earth-up *Dwarf Kidney Beans* as they advance in growth; never allow them to grow to too great a height before this is done; water them before doing it if they are at all dry. If young *Potatoes* are wanted very early, some Early Frame, or any of its varieties, may be planted on a slight hotbed. If it is not convenient to plant them immediately, they may be laid in a forcing house till they begin to shoot. A second crop of *Rubishes* may now be sown in a similar situation to the last—that is, on a slight hotbed.

FRUIT GARDEN.

As there is, comparatively, not much of importance to attend to at this season, a good opportunity is afforded for renovating old borders and forming new ones. The first thing to be attended to after removing unfavourable soil, is to render the border dry by forming a drain in front, the top of the drain being deeper than the bottom of the border, giving that bottom

a good inclination from back to front, and then rendering it impervious to the roots of trees by any of the methods usually employed, of which we would prefer grouting with lime and gravel, as the best and cheapest. The forming of this hard bottom might be dispensed with in favourable circumstances, particularly if there was no necessity for cropping the borders, and then by mulching the surface the roots would be encouraged to rise to the top. From 1½ to 2 feet would be depth enough of good soil where healthy fruitful trees, in opposition to mere luxuriance, were the object, giving the greater depth to Pears, Plums, Vines, &c., and the less depth to Peaches and Nectarines. The next thing is obtaining a good supply of hazel-coloured loam, if it can be procured, which will answer admirably by itself for Apples and Pears; for Plums if kept somewhat adhesive; for Cherries if sand or road-grit be added for the tender sorts; for Peaches and Nectarines, with the addition of about one-third of road drift or sandy matter, and a little leaf mould if the soil is naturally adhesive; and for Apricots, with less sand than for Peaches, and of a greater depth. For Figs it will be advisable to restrain the extension of the roots, to keep the tree growing from one stem instead of suckers, and to supply necessary nourishment by mulching. For Vines the same soil will suit well, but it must be incorporated with calcareous matter, such as lime rubbish, &c., and well manured with broken and bruised bones in preference to hotbed or other manure, as being more lasting in their effects, and because the latter, when buried deep, becomes effete for all useful purposes by being placed beyond the decomposing influence of atmospheric agency. The addition of brickbats and large lumps of porous sandstone, interspersed in the border so as to keep it open, will be an advantage.

FLOWER GARDEN.

Where any of the beds or borders require a dressing of fresh soil this should be provided in order to have it in readiness to wheel on while this favourable weather lasts. Fresh soil in most cases is preferable as a dressing for flower beds to manure, which is apt to cause too luxuriant a growth for a first-rate display of flowers. On soils that are naturally poor, however, and where neither fresh mould nor decayed leaves can be had, a moderate dressing of well-rotted farmyard manure will be useful; but this should be well mixed with the mould the full depth of the bed, and not carelessly turned in and left in lumps near the surface, for in this case a gross habit of growth would be promoted early in the season, and as the principal part of the roots would be near the surface in the manure, the plants would soon feel the effects of dry weather; whereas if the manure is well-incorporated with the soil to the depth of about 18 inches, no ordinary amount of dry weather will injure the plants after they once get fairly established. After the severe frost we have had, the cultivators of Carnations will be able to appreciate the advice we have so earnestly endeavoured to inculcate, that of the paramount importance of potting layers early, so that they may withstand frosts like the one we have had without the frame-lights being constantly closed. Take care that Auriculas get no drip, and that the covering, whether glass or prepared calico, is perfectly water-tight. Tulips will now each succeeding week be getting nearer the surface, some slight protection will be necessary where they are grown for exhibition in order to prevent all possibility of injury to the embryo bloom. Pinks may be sheltered with small pieces of spruce fir boughs round the beds.

STOVE.

If there is any prospect of a scarcity of plants next May, a portion of the *Glorinas* and *Achimenes* which have been the longest at rest may be started at once, as also a few *Clerodendrons*. The latter should be cut back to the lowest eyes so as to secure having bushy specimens and the pots covered with foliage, and when they fairly start into growth the balls should be reduced sufficiently to allow of giving a good shift of fresh soil without increasing the size of the pots. A few *Allamandas* may also be pruned and placed in heat provided the wood is well ripened. Where there is not a house that can be kept at a rather high temperature for such plants as it is desirable to push into growth at this early season, they should be placed in a bottom heat of 80° or 85°, which will encourage the roots and render a high atmospheric temperature, or overdriving the other inmates of the house, less necessary.

GREENHOUSE AND CONSERVATORY.

Any specimens in pots of the more valuable hardwooded plants which it may be necessary to winter in the conservatory, should be frequently examined, turning them partly round every week to expose the foliage equally to light; when in unsuitable quarters they are sure to suffer from the slightest neglect. Let *Cytisuses* and other early-flowering greenhouse plants occupy the coolest part of the house, where air can be admitted on favourable opportunities. Early-forced bulbs should now be introduced to take the place of *Chrysanthemums*. These will make a fine show until the forced shrubs are in bloom. Watch for the appearance of green fly, and as soon as observed smoko the house.

PITS AND FRAMES.

If any dampness is observed among the plants go over them and remove all dead leaves, moss, and everything likely to cause damp. Give water very sparingly.—W. KEANE.

DOINGS OF THE LAST WEEK.

FRUIT AND KITCHEN GARDEN.

ALTHOUGH we have had a few frosty days, the weather, so far, has been mild, and many trees and roots are in a forward state.

On uncovering a large "clamp" of *Potatoes* of the Regent second early class, the whole was a mass of growths from 1 to 3 inches in length. The crop was extensively diseased at the time of lifting, and it has been suggested that this is the cause of such an early growth. Though quite half of them were diseased when the crop was taken up, nearly half of those that remain are also bad, and from accounts sent from Scotland it appears that in many cases quite half of what have been stored by some farmers for the winter are also diseased. Those who have the largest portion of their winter supply stored in "clamps" (or pits, as it is called in some parts) should look them over, so that the diseased portions may be removed, and also the growths from those that have sprouted.

Celery has kept better with us this year than it has usually done; many sorts have been tried in our kitchen garden. Major Clarke's Solid Red was planted this year for the first time, and seems to be the best keeping red sort. For several years the ridges have been slightly thatched with wheat straw; this is merely laid on the top of the ridge, and bent down on each side, so that nearly all the rain that falls on the straw is carried down between the ridges, when the straw can be removed in fine weather to allow the ridges to dry. It is a most efficient protection both from rain and frost.

We have had the utmost difficulty to keep the ground free from weeds; Dutch hoeing was of no use whatever, as, instead of destroying, it only transplanted them. Loam which contained grass seeds was used to place round the roots of the young Strawberry plants, and not approving of digging amongst the roots, it was necessary to handpick the beds; this was done during mild weather.

It is highly necessary for those who have the management of gardens to select a time when the weather is most suitable for the different operations. Men will make but little progress at hand-weeding or nailing wall trees if the thermometer is not much above the freezing-point. Digging should also be done when the surface is comparatively dry. Trenching may be reserved for a time of frost, or when the ground is too wet for the surface to be dug with advantage.

We have been digging between the rows of a plantation of *Raspberries*. This fruit delights in rich, deep, moist soil. Before planting, the ground should be deeply trenched, working in a good dressing of farmyard manure; and when the plants are in full bearing a liberal dressing of manure is essential every year. A plantation, when well managed, will continue in full bearing for very many years. A large proportion of the active rootlets are near the surface, and not far removed from the base of the stool, so that in digging a little manure may be worked in over the roots by slightly moving the surface, but on no account should the roots be damaged. If stout sticks have been used to support the plants, they must be examined to ascertain if any are unsound, so that they may be replaced.

Nailing has also been forwarded. This is an operation wherein our amateur friends who manage their own gardens do not excel as a rule, and even in large gardens the young men do not take so much pride in their trees as used to be the case in the old times. But this may be all the better for the trees. We would rather see a shoot not quite straight, than that it and the wall should be damaged to get it into a line. Our rule is to drive a few nails into the wall as possible, and to avoid much strain upon the shreds by pulling the shoots into their place. Supposing a tree trained on the fan-system has to be nailed to the wall, all the main shoots should be nailed in first at the proper distances apart, the intermediate spaces to be filled in with the smaller fruit-bearing wood. The method of training one shoot will suffice for all. Begin at the base of the shoot by doubling a shred round it, and driving the nail so that there will be ample room for the wood to swell. The next shred should be doubled the opposite way, and so that the shoot is gently pulled into its place. This is continued all through until the tree is in its place. Trees that have been managed as described in previous "Doings" will require but little pruning. Should any growths be too much crowded they may be cut out, it is always better to have too few than too many. All wood that shows traces of gumming should be removed.

FRUIT AND FORCING HOUSES.

In early *vineries*, owing to the mild weather, we have been enabled to maintain a sufficiently high temperature without much artificial heat. Keeping-up a plentiful supply of moisture in the atmosphere is necessary to cause the Vines to break regularly. A bed of leaves in the house throws out a steady

moist heat, which is wholesome to tender plants. Stable manure heats more violently, and will throw-out steam which will be injurious to the leaves of plants. This may be avoided by mixing it with old manure. Roses, Lily of the Valley, or, indeed, all sorts of early-flowering shrubs and roots may be forced on such beds. The bottom heat promotes root action, and the gradually increasing temperature requisite for the Vines suits them well. In the late vineries all the leaves have been removed so that the Grapes will keep better. We do not remember a worse season for them than this has been; all that can be done is to have good fires in the day, and ventilate whenever the weather is fine. The bunches require looking over twice a-week. Removed another batch of Black Prince Strawberries to the forcing house. Those so far advanced that the trusses can be readily observed, are removed to a temperature of about 60° at night, or 65° in fine weather. Abundant syringing and copious supplies of water are necessary to vigorous development. The batch which has been removed from a cold pit has been placed in a house where there is very little artificial heat.

The orchard house has been cleared-out for the reception of trees in pots. Strawberries have been removed from cold frames to shelves near the glass in the same structure. Strawberries in pots plunged in cold frames do not succeed nearly so well as they do in an airy house, but damp is so destructive to the *Chrysanthemum* blooms that it is not desirable to have more pots to water than absolutely necessary.

The recent dense fogs have been most destructive to flowers and fruit, and owing to the fith which was held in suspension for three or four days, the roofs of our glass houses are covered with a black substance resembling a mixture of soot and grease. This has been washed-off Cucumber houses and places where much light is necessary. Our country friends have no such infliction as this to deal with.

STOVE AND GREENHOUSE.

It was curious to notice the effect of the fogs on all delicate hothouse flowers, such as the different species of Orchids. We have usually during the winter months had *Phalenopsis grandiflora* in flower. There were two spikes of *P. amabilis* with flowers wholly and partially expanded. As the fog increased the sepals collapsed as if the flowers had been impregnated, and before the fog cleared-off all the flowers were shrivelled-up. The same effect was produced on *Laelia autumnalis* in a cool house.

In the greenhouse department the seeds of mould have been sown, so that *Cyclamens* and other subjects that are densely covered with flowers and foliage has been carefully examined and all decaying parts removed.

FLOWER GARDEN AND SHRUBBERY.

The weather has been suitable both for digging herbaceous borders and amongst shrubs, and advantage was taken of it to have some of the work forwarded in this department. In digging herbaceous borders great care is necessary in order that none of the more delicate species which are as yet underground may be injured by the digging-fork—a spade should not be used. All labels that have the writing defaced should be replaced with new ones. We find wooden labels which have been covered with two coats of white paint the best for our purpose. *Terracotta* was tried, but the paint peeled-off the first year, and many of the labels are broken and useless.—J. DOUGLAS.

TRADE CATALOGUES RECEIVED.

James Vick, Rochester, New York.—*Vick's Floral Guide for 1874.*

F. C. Heinemann, Erfurt, Prussia.—*Special Trade List of Flower Seeds.*

W. Barron & Son, Elvaston Nurseries, Borrowash, near Derby.—*Catalogue of Ornamental Plants, Fruit Trees, &c.*

TO CORRESPONDENTS.

N.B.—Many questions must remain unanswered until next week.

BOOKS (*H. H. D.*).—"The Amateur's Rosarium," by the Rev. R. W. Thomson. It is an excellent book, too little known, published in London by Hamilton, Adams, & Co. "The Canary," by Brent, which you can have free by post from our office if you enclose 5*d.* in postage stamps with your address. (*J. S.*).—"Pearson on the Vine" will suit you. It may be had free by post from our office if you enclose 1*s. 1*d.** with your address.

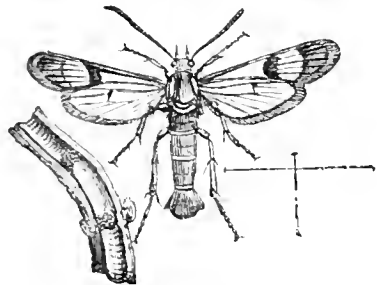
GRAPES SHRIVELLING (*G. B. U.*).—The portion of a bunch of Mrs. Pineo Grape was smashed flat in coming through the post, but there were a few berries left to show how good the sample is. We do not detect any shrivelling, and we doubt much if there is any. Is it not that they are withering through want of moisture? as being planted inside a house "on a high position and abundantly drained," they may require water. Fruit will "flag," as well as leaves, through a lack of moisture.

CALANTHE VEITCHII (*Miss C. Wingate*).—Your flower is a garden hybrid Orchid, for which plant-growers have to thank Mr. Dominy. It is undoubtedly one of the very finest of winter-blooming plants, added to which its cultivation is of the simplest. It enjoys a good heat when growing, but when at rest may without injury be placed in the drawing-room. In potting drain well

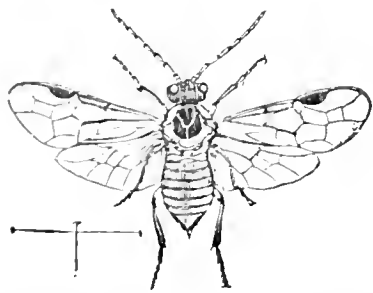
and use a compost consisting of peat, loam, leaf mould, and dry cow manure in equal parts, and while growing give abundance of water. Do not pot them upon a cone of soil, but a little below the rim, as with ordinary plants. It may be propagated by breaking the old pseudobulbs into two or three pieces, when each will make a shoot.

CYCLAMENS WORM-EATEN (J. Young Beginner).—The creatures sent, which you say are destroying your Cyclamens, are a small white species of hair-worm, and not the larva of some small gnat. They generally attack the roots of plants already in a state of decay, and are not the cause of the disease. —I. O. W.

CURRENT-SHOOT GRUB AND GOOSEBERRY CATERPILLAR (J. M. S.).—We repeat what we have before often published. Every one acquainted with old gardens must have frequently noticed that one or more of the branches of the Currant trees tenanted them have suddenly withered and died without any apparent cause. In such cases, if the wood of the branch be split down the centre, the pith will be found all consumed, the tube where it had been blackened, and nothing remaining but the excrements of a caterpillar, which may also be caught at his work of destruction if the examination is made so soon as the branch first shows symptoms of withering. This caterpillar is fleshy, whitish, with four yellowish-brown spots near its head. It is the larva of the Currant (Sphinx typhiformis, Sesia, or Egeria, or Bombycia typhiformis). The parent moth is beautiful, and may be seen at the end of May and early in June during hot sunshine, either settled on the leaves of the Currant, or



flying around the flowers of the Syringa and Lilac. It is about three-quarters of an inch across the wings when these are quite opened; the prevailing colour is bluish black, with various parts yellow; the antennae black; the breast with a yellow line on each side; the abdomen, or lower part of the body, has three yellow rings round it in the females, and four in the males; the fore wings are barred and veined with black; it has a brush of fine scales at the end of its abdomen, which fan it can expand as it pleases. The Red, White, and Black Currant, and, we think, the Gooseberry are all liable to its attacks. It lays its eggs in April in openings of the bark of a young shoot, and the caterpillar immediately it is hatched penetrates to its pith, and eats its way down until it reaches the pith of the main branch. The only securities measure are to kill the moth whenever seen, and to split open the withered branches and serve the caterpillars similarly. The green caterpillars which so soon strip off a Gooseberry-bush's leaves, are the larva of a Saw-fly. The cross lines show the natural size of this Saw-fly. This insect, which has been named by entomologists *Nematus trinauculatus*, *Nematus Ribesii*, *Tenthredo grossularis*, and *Tenthredo ventricosa*, comes forth in the course of April. Its body is yellowish-brown; its antennae nine-jointed and brown; the crown of the head, eyes, three large spots divided by a light line on the back, and a large spot on the breast, are all black; the body, or belly, is orange; the wings reflect the colours of the rainbow; and their nerves, with a



large spot on the front edge of the fore wings, are brown; the legs are brown also. The female lays her eggs along the principal nerves on the underside of the Gooseberry leaves, and less frequently on those of the Red and White Currant. The eggs are hatched within ten days; and the arrival of the caterpillars may be known from the leaves being eaten through into numerous small holes. These caterpillars are pale green, with one ring at each end yellow; the head, tail, feet, and rows of spots on their sides, being black. Successional broods are hatched from the beginning of May until October, but it is during May and June that they are in usually most abundant and destructive. Some of these descend into the earth from cocoons, and bring forth fresh flies at the end of the summer; but the later broods of caterpillars remain in their cocoons throughout the winter, and give birth to the earliest spring-swarm of Saw-flies.

PEACH TREES REPOTTING (Rob. Roy).—The Peach trees in 18-inch pots we should not re-pot, at least not now, nor remove the surface soil until the fruit is set and begins to swell; then top-dress with equal parts of turfy loam and fresh sheep's droppings, removing only the loose old surface soil. If the sheep's droppings cannot be had horse droppings may be substituted. The top-dressing may be repeated after the fruit is stored. Potting is best done when the leaves are beginning to fall. We should not increase the size of pot, but reduce the ball, and re-pot in the same size. Rather turfy loam two parts

half a part each rotten manure and marl, are a good potting compost for the Peach.

ORCHIDS REPOTTING (Idem).—Keep them in the pots as they are, rather dry, until March, and then re-pot them, using clean pots extra well drained, and a compost of fibrous brown peat and rough or lumpy chopped sphagnum and broken pots; of these materials employ equal parts, with a sixth part of pieces of charcoal, and a like proportion of silver sand. Pot firmly, keeping the plants high in the centre of the pots. All do well in pots except the Stanhopeas, which should have a basket.

WINTER TREATMENT OF SHOW PANSIES (J. S.).—The plants ought to have been potted, and placed on, or better plunged in coal ashes in a cold frame. This we should do now, admitting air freely in mild weather, but shielding from heavy rains, when the light should be tilted at the back, and in frosty weather have the protection of mats over the lights. It will not do to place them in the greenhouse. If you have no frame, protect them where they are in severe weather with mats on sticks arched over the bed. The kinds mentioned in our paper were bedding ones, yours are show varieties.

VEGETABLES FOR SOWING NOW—MELON AND CUCUMBER (Petite).—Beyond Peas and Broad Beans the present is not a suitable time for sowing the seeds of vegetables. Blue Peter and Dillstone's Early Peas, Early Long pod, and Beck's Dwarf Green Gem Beans. Sow them on a warm border. It is too early to sow Kidney Beans. The middle of April is quite soon enough. Sow Carrots early in that month. Read's New Hybrid Melon, scarlet-fleshed, and Blue Gem Cucumber will suit you.

PINES NOT FRUITING (A Sussex Subscriber).—Your plants which were suckers last December have done very well. The bottom heat is rather high, 85° should be the maximum, and 75 to 80° would be the highest we should give at this time of year. The plants would have been better potted early in August instead of September. All they want is time, and they will probably show for fruit early in spring.

KIDNEY BEAN LEAVES SPOTTED (Aynes).—The leaves sent are spotted from being kept in a close, moist atmosphere, and too low a temperature. Give a temperature of 55° to 60° at night, and 65° to 75° by day, admitting air freely, and they will do well, the pods not falling off but swelling freely. December and January are the worst two months in the year for Kidney Bean growing.

PRUNING VINE RODS (H. H.).—The canes having reached the top of the house they should be cut back two-thirds the length of the rafter, which on 15 feet of rafter will be 5 feet. From the rod at the bottom of the rafter you will need to train-up another shoot, and take it up alongside the last year's cane, and it ought not to be stopped until it has grown 6 feet, and take another cane from the main or centre one to the top of the house. The other eyes will give shoots that are to carry the crop of next year. Next autumn the centre rod is to be cut back one-third its length, or one-half the growth of the current year, and the side rod shortened to 5 feet. The year following, on the other side, you will need to let a shoot grow, not stopping it until it has grown 6 feet, and this is to be cut back to 5 feet. Your Vine will then be formed; the centre cane will have one-third its length at the top, the first side cane will bear the middle third part, and the cane on the other side will bear on the lower third part of the length of the rafter. This is the long-rod system; in the short-rod system the canes are annually shortened to six eyes. Neither system we consider suited for Vines in a greenhouse. Spurr-pruning is much preferable, and in this case we should shorten the canes to six or eight eyes from the bottom of the rafter or trellis, and so on annually until the top of the house is gained.

TREE VIOLETS.—Can any of your readers tell me where to procure pots of tree Violets, either double Neapolitan or any other kinds? A lady, a friend of mine, is in want of some.—C. P. PEACH.

CHERRY FORCING (J. S.).—The roots should be taken-up now, or better in November, and have the tops cut off to within an inch or so of the roots. When wanted to force they should be placed in soil level with the crown, and set in a Mushroom house or other dark place having a temperature of 55° to 60°. The roots may be potted and covered with an inverted flower-pot having the hole in the bottom stopped with moss to exclude air and light, and placed in a house with the temperature named. They also do well in a cellar. A fresh lot of roots should be introduced at intervals of ten days or a fortnight so as to keep-up a succession of blanching leaves for salads.

HEATING A SMALL GREENHOUSE (Amateur).—A gas-stove and hot-water pipes 1 inch in diameter would not give sufficient heat. A large Shrewsbury's apparatus might, but the fumes of the gas must be conveyed into the open air.

GRAPE CRACKING (Constant Reader).—In all probability your Grape is Chasselas Musqué. It cracks just as you say. We know no such Grape as Tokay Frontignan. To prevent cracking, the border where the roots are should be moderately dry at the time of ripening; preserve also a dry atmosphere in the house; and as a further precaution cut a notch on the branch to which the bunch is attached, between the bunch and the main stem, this will check the flow of sap to the berries. Plant the old Ash-leaved Kidney Potato at once and force gently at first.

PLANTING WALL FRUIT (Welby).—On the east wall plant Apricots and Pears. On the west aspect Plums and Cherries. The following is a good selection. *Apricots*.—Henskerk, Moor Park, and Peach. *Pears*.—Bergamotte d'Esperen, Gansel's Bergamot, Beurré Bosc, Beurré Diel, Easter Beurré, Beurré Hardy, Williams's Bon Chrétien, Doyenne du Commerce, Glou Morceau, Marie Louise. *Cherries*.—Archbûche, D'Arcange Napoleon, Black Tartarian, Elton, Knight's Early Black. *Plums*.—Blue Gage, Coe's Golden Drop, Golden Esperen, Green Gage, Guthrie's Late Green, Jefferson, Transparent Gage, Victoria (Denyer's), and Washington. Maiden trees of the above would cost from 9d. to 1s. 6d. each. Now is the best time to plant, but they will succeed if planted at the end of February or beginning of March. Wall trees may be planted 15 feet apart.

VINE MANAGEMENT (E. A.).—Plant out your Vine in the usual way, but do not cut any part of the stem in the ground. Prune the young wood back to two eyes. We have destroyed scale on the old branches of fruit trees by dressing them with boiled oil.

PEAR TREES NOT BEARING (Kilworth).—As your trees blossom freely and produce no fruit your climate must be too cold for the sorts you have. Every district has its special sorts which succeed better there than they do at other places. Could you not obtain grafts of the sorts that succeed best in your neighbours' gardens? With us Marie Louise is a moderately free bearing sort. Marie Louise d'Uccle bears freely. Williams's Bon Chrétien, Louise Bonne of Jersey, Triomphe de Jodogne, Napoleon, Beurré d'Ardenne, Beurré Bosc, Madame Treyve, Beurré d'Amaluis, Winter Nelis, and Zéphirin Gregoire are amongst the most certain bearers. We once erected a framework of wood

around some of our trees and threw some frigi domo over them, but it was not satisfactory. We get the best fruit of Louise Bonne of Jersey from trees worked on the Quince. Did you plant your trees deep enough? They ought to have the union of the stock with the scion just covered with soil.

STORING ICE (G. M.).—Store it while freezing.

NAMES OF FRUITS (Centurion).—1, Pennington's Seedling; 2, Gravenstein; 3, Duke of Devonshire; 4, Not known; 5, Franklin's Golden Pippin; 6, Beurre d'Arenberg.

NAMES OF PLANTS (Lero).—The Strawberry Tree, *Arlantus Unedo*. (*H. C. N., Bath*).—All *Adiantum Capillus Veneris*. (*E. D.*).—1, *Pellex hastata*; 2, *Aspidium falcatum*; 3 or 5, *Aspidium angulare*, var.; 4, *Althernanthera*; 5 or 3, *Tradescantia* sp.; 6, *Santolina* or *Achillea*. (*F. W. P.*).—A, *Polypodium Phymatodes*, or a close ally; B, *Pteris cretica*; C, *Nephrolepis cordifolia*; D, *Pteris quadraurita*; E, specimen insufficient; F, *Aspidium Lonchitis*.

POULTRY, BEE, AND PIGEON CHRONICLE.

MUSEUM OF STANDARD SPECIMENS OF POULTRY.

I HAVE been reading with considerable interest the controversy in our Journal on Judges v. Poultry Standards, &c. I really had intended to select a breed of fowls and try my hand at prize-taking, but the insight I have thus obtained has knocked my intention on the head. It is all very easy for a man to write a description of a fowl, and append a catalogue of English and Yankee points, but it is next to impossible for me, by my fire-side, to see (in my mind's eye) the bird he has described. What living man can write "shape?" Who can write "colour to a shade" so that I can fancy it? From what I gather poultry breeding is left a great deal to the imagination of the breeder. He breeds to his standard, his fowls are judged according to another man's standard, and that judge's awards are commented on in the papers by half-a-dozen correspondents, each possessing a private standard of his own! The whole, in my inexperienced eyes, is a tangled network of crochets and fancies from beginning to end, and the winner has more luck than good judgment to contend against.

I wish to breed for showing but cannot. I have plenty of time on my hands but cannot spare a day to attend a show, though if I did I should be as wise as ever. The standard, in my humble opinion, ought to be settled—but not on paper. Let a good bird of every kind be purchased, let him or her be scientifically killed, stuffed, coloured if necessary, and made perfect. I would gladly give a crown to go over an exhibition like that, and would find the time to do so. I should then know what a perfect bird ought to be. I should do my best to breed birds as good in shape and colour and to excel it, if possible, in that nameless grace, elegance, and carriage which one perfect bird possesses over another perfect bird, and which is akin to that gentlemanly bearing which raises a man so much above his fellows.

Perhaps some one with more experience will point out a way of organising an exhibition of stuffed perfect birds, which would possess far more charms in the eyes of true fanciers than the best exhibition ever did.—GALLUS.

MINGLING VARIETIES.

Black fowls—Red fowls—
White fowls and Grey—
Mingle fowls—mingle all,
Mingle while you may.

HAVING received a present from Birmingham of a splendid Dark Red Game cock I want to know what to do with it. I have two yards of fowls, one contains two thoroughbred Dorking cocks with twenty-eight Dorking hens and one Brahma cock. Yard No. 2 contains Golden-spangled hens, Cuckoo Dorkings, Minorca, and Crève Cœurs, with a Crève-Cœur cock. I have sent my Game cock to yard No. 2, Is this right?—J. S.

[The only place where you can put your Game cock will be in yard No. 1. He will do you good among the Dorkings as you do not care for pure-bred birds. His blood will make them harder. He would be worse than useless in yard 2. We should be curious to see some of the chickens bred there. It is always a mistake to put sitters and non-sitters together, you cannot improve either and may lessen the good properties of both.—EDS.]

GUILDFORD POULTRY SHOW.

This was held on the 15th and 16th inst.

DORKINGS—*Grey*.—1, H. Mills, Dorking. 2, J. H. Putney, Dorking. 3, E. May, Dorking. *Chickens*.—1, C. Pannell, Ostlands Park. 2, J. Ivery & Son, Dorking. 3, J. H. Putney. *he*, O. E. Cresswell, Bagshot; Mrs. Mayo, Dorking. c, G. H. Finckard, Chiddingfold.

PONCEONS—*White*.—1, O. E. Cresswell. 2, G. Cabitt, Denbies. *Blue*.—1 and 2, W. Messenger, Wottonsb. c, R. Gammon, Dorking; Mrs. Mayo; H. H. Young, Dorking.

SPANISH.—1, J. W. Trowbridge, Dorking. 2, W. Balchin, Farnham.

COCHINS.—*Luff and Cinnamon*.—1 and c, J. F. W. Park, Chilworth. 2, Executors

of the late H. D. Barclay, Eastwick Park. *Any other colour*.—1 and 2, O. E. Cresswell. *he*, C. J. Webster, Wottonsb (2).

BRAHMAS—*Dark*.—1 and 2, O. E. Cresswell. *Light*.—1, J. Pares. 2, Mrs. Wildsher, Guildford. *he*, J. Bradshaw, Cranleigh. c, Mrs. M. Marshall.

GAME.—*Black-breasted or other Reds*.—1, J. T. Kenton Wottonsb. 2, Rev. J. Merriman, Cranleigh. *Any other variety*.—1, W. Balchin, Farnham. 2, R. B. Baker, Tooting.

HAMBURGS.—1, J. W. Trowbridge. 2 and c, O. E. Cresswell.

GAME.—1, J. T. Randall, jun., Guildford. 2 and *he*, Rev. G. Chilton Guildford. *Any other variety*.—1 and 2, J. Pares. *he*, O. E. Cresswell.

DUCKS—*Aylesbury*.—1, Executors of the late H. D. Barclay. 2, Mrs. M. Marshall. *Bacon*.—1, Mrs. M. Marshall. 2, R. Harrison, East Clandon. c, E. Hilder. *Woking*; J. Pares; R. Harrison. *Any other variety*.—1, Withheld. 2, E. Hilder.

GEES.—1, E. Hilder. 2, J. Coles, Hatchlands. c, O. E. Cresswell. *Goslings*.—1, W. Messenger, Wottonsb. 2, Rev. J. Merriman, Cranleigh. *he*, W. Messenger.

TURKEYS.—1, G. H. Langford, Albany. 2, W. Messenger. *he*, Countess of Lovelace; R. Harrison. *Poulters*.—1, R. Harrison. 2 and *he*, W. Messenger. c, G. H. Pinckard; Countess of Lovelace.

ANY OTHER VARIETY.—1, T. Moore, Petersfield (Silver Dorkings). 2, A. Alderton, Hershaw (Malays). *he*, Rev. G. Chilton (Crève-Cœur); O. E. Cresswell (Japanese Silkies). c, W. O. Hodges, Bagshot (Golden Polands); T. Moore (Silver Dorkings).

EXTRA STOCK.—G. W. Ward, Weyles (White Angora Rabbit); G. Johnson, Bramley (Spanish Rabbit); J. Coles, Hatchlands (Turkeys).

JUDGE.—Mr. P. H. Jones, Fulham.

SELKIRK POULTRY SHOW.

VOLUNTEER drill halls in all parts of the country are well adapted for ornithological shows, and that at Selkirk proved sufficiently commodious for the Exhibition held on the 17th and 18th, although the entries were much larger than at any previous show. The arrangements, with one exception, were good; the Bantams being exhibited in bell-shaped pens were in full view of each other, and the Game did not show to advantage. No birds were ever better fed or attended to, the Pigeons, especially, being provided with a great variety of food.

The winning *Spanish* were fair, as also the *Dorkings*, but in the adult class a grand Silver-Grey cock was mated with a dark Grey hen, and in consequence left out. The chickens were well shown and very good, as also the *Cochins*, the winners in which were Buff. Only the first-prize *Brahmas* were of note, but these, an old cock and a pullet, were good in all respects. *Hamburghs* were very good in all except the Silver-pencils, and many of the pens were noticed. In adult *Game* a very perfect pair of Black Reds stood first, with good Brown Reds second. Brown Reds were first among chickens, and Black Reds second. There were but four entries in the cottagers' class, but these were all noticed. The *Any other variety* class was one of the best; Golden Polands were first, Silvers second, and Cambridge Turkeys third. The Selling class was poor. *Aylesbury Ducks* very good, but the *Rouens* were even better. Red *Game Bantams* formed a very large class, and the quality was close throughout, the winners being about perfect; the second-prize pen contained the best pullet we ever saw. In the next class capital *Piles* stood first, *Duckwings* second, and *Piles* third; while in single cocks a *Duckwing* was first and a *Pile* second, with a Black Rose-combed third. In the Variety class only the two first-named pens were of any quality.

Pigeons were a much larger show than has ever been seen at Selkirk, and among the specimens were many of the highest quality. In Tumblers *Almonds* won the prizes, but the best pair came too late for competition; in fact, the whole of Mr. Rule's birds only arrived after the adjudication. *Fantails* were very good, also the *Pouters*, *Blues* being first and *Whites* second. *Nuns* were good; while *English Owls* were one of the best classes, *Blues* being first and third, and *Powdered Blues* second. *Turbits* seem to be well understood here, the class being a good one, *Blue*, *Silver*, and *Blue* winning respectively. In the Variety class *Barbs* were first, *Black Letz* second, and *Red Magpies* third. The Selling class for Pigeons was much better than that of the poultry.

There was also an excellent show of *Canaries*, where the Scotch fancies prevailed.

SPANISH.—1, H. Wilkinson, Earby, Skipton. 2, W. Paterson, Langholm. 3, J. Cairns, Gadashiels. *he*, G. F. Stutter, Broomhall, Carlisle.

DORKINGS.—1 and 2, R. Reid, Holmhirst, Canonbie. 2, W. Roekie, Carterhaugh, Selkirk. *Chickens*.—1, W. Harvey, Salfield. 2, A. M. Kie, Hawick. 3, G. Amos, Melrose. c, R. Reid.

COCHINS.—1, W. Harvey. 2, G. F. Statter. 3, W. R. Park, Melrose. c, H. S. Stephenson, Tillyarn, Whitehouse; J. C. Bruce, Edinburgh.

BRAHMA POUCE.—1, E. Brownlie, Townsend, Kirkcaldy. 2, G. H. Plummer, Dalkeith. 3, T. Barker, Hillend, Burnley. *he*, Lieut. Col. Rice, Cupar-Fife. c, R. Reid; H. S. Stephenson.

HAMBURGS.—*Golden-pencilled*.—1, R. Dickson, Selkirk. 2, Lady M. Scott, Bowhill, Selkirk. 3, W. R. Park. *he*, G. Roberts, jun., Ettrickhaugh, Selkirk. G. Dodd, Park Milton, Carlisle. *Silver-pencilled*.—2, J. Stephenson, Airdrie. 3, A. Stoddart, Selkirk.

HAMBURGS.—*Golden-spangled*.—1, R. Dickson, Selkirk. 2 and 3, G. Stalker, West Sleskirk, Bodington. *he*, R. Cunningham, Stewarton. *Silver-spangled*.—1, W. R. Park. 2, K. Cameron, Stewarton. 3, G. I. Campbell, Tilnamalt, New Fithago. *he*, J. M. Campbell, Bonny Killy, New Blyth, Tuff; G. Stalker.

GAME.—1, W. Younghusband, Darlington. 2, J. Nelson, Cockshaw, Hexham. 3, J. A. Mather, Nithside, Clo-eburn. *he*, J. Froug, Carlisle. *he*, T. Young, Bebbide, Mowpeth. *Chickens*.—1, G. C. Wilson, Milnthorpe. 2, J. A. Mather. 3, J. Nelson. *he*, J. Bryn. *Any variety*.—1, R. Dickson, Selkirk. 2, G. Walker, Selkirk. 3, W. Counts, Selkirk. 4, R. Linton, Selkirk.

ANY OTHER VARIETY.—1, W. Harvey. 2, J. Nelson. 3, H. S. Stephenson (Turkeys). *he*, A. Wyle, Johnston (Polands); J. T. Froud, Banchester, Bishop Auckland (Polish).

SELLING CLASS.—Cock and Hens or Ducks and Ducks.—1, G. Parker, Biddell (Dorkings). 2, J. Shaw, Hangbridge, Mithrop; (Crown Red Game). 3, W. Linton, *phc*, W. Fairbairn, Whitnour, Selkirk (Dorkings); F. L. Loy, Nenthorpe, Kelso (Black Red Bantams and Dark Brahmas); R. Dickson (Golden-pencilled Hamburgs); W. Linton, *c*, G. Dryden, Selkirk; G. Stalker; F. L. Roy (Silver-spangled Hamburgs).

DUCKS.—*White Aylesbury*—1 and 2, G. Dryden. 3, J. Grierson, Camptown, Jedburgh. *phc*, P. C. Bruce, Edinburgh. *c*, G. Amos, Melrose. *Rouen*—1, G. F. Statter. 2, J. Nelson. 3, J. A. Matter. *phc*, H. S. Stephenson.

BANTAMS.—Game, Black or Brown Red—1, H. Butler, Bradford. 2, F. Newbitt. Epworth. 3, W. Atkinson, Kendal. *phc*, J. Nelson. *hc*, T. Barker. F. E. L. Roy. R. Brownlie. *c*, Miss B. P. Frew, Sinclairtown, Kirkcaldy.

BANTAMS.—Game, any other variety—1, F. Parker. 2, Master A. Frew, Kirkcaldy. 3, R. Irvine, Kirkhouse, Milton. 187, K. Brownlie. *hc*, J. C. Steelman, Jedburgh; J. Scott, Jedburgh.

BANTAMS.—Any variety, other than Game—1 and 2, R. H. Ashton, Mottram. 3, W. H. Shackleton, Bradford. *hc*, Miss A. M. Frew, Kirkcaldy. *c*, W. Harvey.

BANTAMS.—Any variety, Cuck—1, A. Haichison, Grahamstone, Falkirk. 2, E. Newbitt. 3, R. H. Ashton. *phc*, W. Atkinson, Kendal. *hc*, T. Barker; F. L. Roy; G. McMillan, Jedburgh. *c*, J. Paterson, Selkirk; Mrs. R. Frew, Sinclairtown, Kirkcaldy.

PIGEONS.

TUMBLERS—1, W. Harvey, Sheffeld. 2 and 3, W. Brydson, Longtown Main; Danse. *hc*, S. D. Baddley, Hereford; J. Gardner, Preston; McGill Skinner, Edinburgh. *c*, J. Coburn, Selkirk; J. Day, Edinburgh; W. & R. Davidson, Montrose.

FASTAILS—1, J. F. Loversidge, Newark. 2, A. Crosbie, Abbotismead, Melrose. 3, A. Smith, Broughty Ferry. *hc*, W. Harvey.

POTTENS—1, McGill Skinner. 2, J. Hye, Hexham. 3, W. Brydson. *hc*, W. Rutherford, Edinburgh (2); McGill Skinner; W. Harvey. *c*, B. Day.

JACOBS—1, W. Brydson. 2 and 3, J. Lambie, Pathhead, New Cumnock. *hc*, W. Brydson; W. & R. Davidson. *c*, J. W. Watson, Thurgarth, Leeds; W. Harvey.

NCSS—1, A. H. Imrie, Ayr. 2, J. Lederer, Bootle, Liverpool. 3, J. Lambie, *c*, R. Lawrie, Melrose (2); S. Ireland, Melrose.

OWLS—*English*—1, K. Lawrie. 2, J. W. Watson, Leeds. 3, W. Leithard, Tinnis, Selkirk. *phc*, J. Dye. *hc*, J. Gardner, Preston; W. & R. Davidson; McGill Skinner. *c*, A. Leithard, Hartwoodhays, Selkirk; W. Brydson; A. Crosbie.

TURBITS—1, R. Lawrie. 2, W. Brydson. 3, G. Cutler, Crooks Moor, Sheffield. *phc*, A. Crosbie. *hc*, J. Smith, Selkirk; J. Gardner; W. Harvey; R. Lawrie. *c*, J. Nash, Walsall; A. C. Lane, Selkirk (2).

ANY OTHER VARIETY—1, S. D. Baddley. 2, A. Crosbie (Letz). 3, S. Ireland. *hc*, J. Day, Edinburgh (Barbs); J. Dye; J. Gardner; A. Crosbie (Swallows).

ANY VARIETY—1, J. Day (Pouters). 2, S. D. Baddley. 3, J. Dye (Bino-Turbits). *hc*, McGill Skinner. *c*, A. Leithard (Turbits); J. Dye (Pouters); Miss J. M. Frew; A. Crosbie.

CANARIES.

YELLOW—*Cock*—1, R. Hunter, Kirabene, Galashiels. 2, G. Laidlaw, Galashiels. 3, T. Darling, Hawick. *Hen*—1, R. Hunter. 2, J. Hardie. 3, T. Darling.

BUFF—*Cock*—1, R. Hunter. 2, J. Hardie, Galashiels. 3, J. Heatlie, Selkirk. *Hen*—1, A. Mason, Gala-bells. 2, R. Hunter. 3, P. Marshall.

FLECKED YELLOW—*Cock*—1, F. Hawkins, Galashiels. 2, T. Darling. 3, J. Hardie. *Hen*—1, R. Hunter. 2 and 3, G. Park.

FLECKED BUFF—*Cock*—1, G. Park. 2, G. Ritchie, Selkirk. 3, W. Mirtle, Galashiels. *Hen*—1, J. Hardie. 2, R. Hunter. 3, A. Armstrong, Hawick.

MULES—1 and 2, G. Spiers, Selkirk. 3, T. Hope, Selkirk.

NATIVE BIRDS—1, A. Fowler, Selkirk. 2, W. Turnbull. 3, J. Heatlie, Selkirk. A Sweepstakes of 1 each for the best Game of Birds, containing not less than four—1, P. Marshall, Selkirk. 2, T. Ewart, Selkirk.

JUGGES.—Poultry and Pigeons: Mr. E. Hutton, Pudsey, Leeds. **Canaries**: Mr. Robertson, Burntisland.

BURTON-ON-TRENT POULTRY SHOW.

An excellent little Show, which was more of an experiment in connection with the Canary Show, was held in St. George's Hall on the 19th and 20th inst. This Hall is well lighted and showed the birds to advantage, and with a large schedule of prizes we think the Committee would find it pay.

Dorkings were poor but the Buff *Cochins* proved good, as also did the first-prize pen of Partridge. Of Light *Brahmas* the entries were large, a two-guinea cup having been offered by Mr. A. O. Worthington. The first and second prizes went to old birds, and the third to chickens. Dark *Brahmas* were also numerous, the winners being well formed and good in colour and pencilling. *French* were of fair quality. Black or Brown Red *Game* proved a very irregular class, many pens containing one good bird with a bad one. Brown Reds were first and Black Reds second. The genus of the *Game* classes were the first-prize Pile chickens, which were stylish, hard, and close-feathered, the second being good *Duckings*. The winners in pencilled *Hamburgs* were first Gold and second Silver; and in spangled Gold won the prizes, all the winners being really good. *Bantams, Game*, were poor, except the winners, which were Black Reds, the same remark applying to the Variety class, where only the Blacks were good; and in the Variety class for large fowls a pair of Spanish were first, and a good pair, but the hen (a dangerous cannibal) had to be parted from the cock, which she had half eaten. Handsome *Malays* were second, and very good Black *Hamburgs* highly commended.

DORKINGS—1, J. Watts, Birmingham. 2, W. H. Cress, Etwall. **COCHINS**—*Cinnamon or Buff*—1, Mrs. Allsopp, Worcester. 2, H. Tomlinson, Birmingham. *hc*, T. Rogers, Walsall. *Any other variety*—1, T. Rogers. 2, W. B. Denton, Gloucester. *hc*, W. Whiteley, Sheffield. **BRAHMAS**—*Light*—1, A. O. Worthington, Burton-on-Trent. 2, H. Chawner, Junr. 3, C. Gray, Chesterfield. *phc*, W. Whiteley. *hc*, A. G. Worthington; Mrs. A. O. Hincham. *hc*, J. E. Hinecks, Humberstone; H. Chawner, Junr.; J. E. Smith, Sheffield; W. Ford, Humberstone (2). *c*, G. Wall, Burton-on-Trent; Rev. N. J. Kilday; Mrs. A. Isopp. *Dark*—1, J. Watts. 2, D. Holmes, Chesterfield. *hc*, E. Pritchard, Wolverhampton; J. Widdowson, Derby; Dr. Holmes; W. Whiteley; H. Chawner, Junr. (2). *c*, Miss A. Francis, Birmingham; W. J. Cooper, Burton-on-Trent; T. Rogers. **FRENCH**—1, G. W. Hibbert, Manchester. 2, Rev. N. J. Kilday, Newbury. *hc*, W. Long, Burton-on-Trent; J. French, Melton Mowbray. 3, J. E. Hinecks. **MULES**—1, *Cock or Brown Red*—1, H. Chawner, Junr. 2, D. Hulme, Alrewas. *hc*, E. Bell, Burton-on-Trent; E. Clavey, Burton-on-Trent (2); Lord Mancham, Derby; Mrs. Allsopp; J. Tyler, Loughborough; J. Andrews, Worcester. *c*, J. Tyler. *Any other variety*—1, Mrs. Allsopp. 2 and 3, E. Bell.

hc, S. Matthews, Burton-on-Trent; J. Wilmot, Burton-on-Trent; T. Everard Ashby-le-Zouch; H. H. Staveley, Driffield; J. Andrews; J. Laue. **HAMBURGS**—*Gold or Silver pencilled*—1 and 2, Dr. Hall, Burton-on-Trent. *hc*, W. Speakman, Nantwich. *c*, W. N. Stator, Burton-on-Trent (2); J. Lowe, Burton-on-Trent. *Gold or Silver spangled*—1, C. Dawes, Burton-on-Trent. 2, J. Ward, Ashby-le-Zouch. *hc*, G. Hevict, Melton Mowbray; J. Watts; 2, T. Newbold, Burton-on-Trent. *c*, J. Angleton, Burton-on-Trent. **BANTAMS.—Game**—1, R. Wingfield, Worcester. 2, J. Lane. *hc*, Lord Mancham; J. W. Cro by Walsall; C. H. Kye, Nottingham. *Any variety not Game*—1, R. H. Ashton, Manchester. 2, R. Wingfield. *c*, Mrs. A. O. Worthington; W. H. Crewe; J. T. Hinecks; J. Watts. **ANY OTHER VARIETY**—1, Mrs. Allsopp. 2, J. S. Routh, Chesterfield. *phc*, Dr. Hall. *hc*, E. Cudde, Burton-on-Trent; N. J. Kilday; J. Watts. *c*, J. Eardley, Burton-on-Trent; W. Jones, Walsall (2).

CANARIES AND OTHER CAGE BIRDS.

NORWICH—*Clear Yellow*—1, T. Newbold. 2, W. Jackson. 3, A. Curtis. *hc*, W. Jackson. **NORWICH**—*Marked Yellow*—1, W. Holmes. 2, T. Bates. 3, W. Port. *Marked Buff*—1, W. Holmes. 2, T. Bates. 3, W. Rice. **NORWICH**—*Variegated Yellow*—1, W. Holmes. 2, W. Port. 3, W. Gretton. **BURTON-ON-TRENT**—*Variegated Buff*—1, W. Jackson. 2, A. Curtis. 3, W. Gretton. **NORWICH**—*Green—Buff or Yellow*—1, T. Newbold. 2, W. Gretton. 3, W. Holmes. **NORWICH**—*Crested Yellow*—1, A. Curtis. *Crested Buff*—1, T. Bates. 2, W. Holmes. 3, F. A. Parker. **GOLDFINCHES**—1, A. Curtis. 2, F. A. Parker. *hc*, S. Hayns, Burton-on-Trent; T. Newbold. **GOLDFINCH MULES**—1, A. Curtis. 2, W. Holmes. 3, W. Gretton. **BRITISH BIRDS**—*Any variety*—1, H. Heath, Burton-on-Trent (Jay birds). 2, Mrs. Fogg, Burton-on-Trent (Thrush). *hc*, J. Cowley, Burton-on-Trent (Eull-bird); W. Elson, Burton-on-Trent (Thrush). **PARROTS**—*Grey*—1, W. Austin, Burton-on-Trent. 2, T. Pegg, Burton-on-Trent.

YOUNG BIRDS.

BELGIANS—*Clear Buff*—1, R. Cowley, Burton-on-Trent. **NORWICH**—*Clear Yellow*—1, T. Newbold. 2, R. Heath, Burton-on-Trent. 3, R. Cowley. *Clear Buff*—1, W. Jackson, Burton-on-Trent. 2, K. Cowley. 3, T. Newbold. **NORWICH**—*Marked Yellow*—1, W. Holmes, Burton-on-Trent. 2, T. Newbold. 3, W. Jackson. *Marked Buff*—1, T. Newbold. 2, W. Port. 3, W. Rice. **NORWICH**—*Variegated Yellow*—1, W. Port. **BURTON-ON-TRENT**. 2, R. Cowley. 3, W. Holmes. *Variegated Buff*—1, W. Jackson. 2, J. Fearn, Burton-on-Trent. 3, T. Newbold. **NORWICH**—*Green—Buff*—1, W. Jackson. 2, J. Fearn. **NORWICH**—*Crested Yellow*—1, W. Holmes. 2, A. Curtis, Burton-on-Trent. 3, W. Port. *Crested Buff*—1, T. Bates, Burton-on-Trent. 2, A. Curtis. 3, R. Cowley. **NORWICH**—*Heavily variegated Yellow*—1, W. Jackson. 2, W. Port. 3, G. Barnes, Burton-on-Trent. *Heavily variegated Buff*—1, W. Jackson. 2, A. Curtis. 3, W. Rice, Burton-on-Trent. **LIZARDS**—*Golden-spangled*—1, J. Lacey, Burton-on-Trent. 2, W. Jackson. *Silver-spangled*—1, W. Jackson. 2, J. Lacey. **CINNAMONS**—*Buff*—1, F. A. Parker, Burton-on-Trent. **GOLDFINCH MULES**—*Junque*—1, A. Curtis. *Mealy*—1, A. Curtis. **MULES**—*Any variety*—1, A. Curtis. **BEEFING BIRDS**—1, T. Newbold. 2, W. Jackson. 3, C. Pratt, Burton-on-Trent.

JUGGES.—Poultry: Mr. E. Lowe, Combeford, and Mr. E. Hutton, Pudsey. *Cage Birds*: Mr. J. G. Barnesby, Derby.

TREDEGAR POULTRY SHOW.

This annual Show was held at Newport, Monmouthshire, in one of the sheds of the extensive Cattle Market. On this occasion Turner's pens were used in place of the wickerwork baskets heretofore in use, and this was a great improvement. An excellent staff of attendants was present, and the fowls entrusted to their care could be little the worse for their two days' detention.

In *Red Game* fowl some of the birds were good, but there was not a really good pair in the lot except the winners, the first of which were Brown and the second Black Reds. In old *Game* of Any other variety, first were Duckwing and second Pile, but this order was reversed in chickens where a perfect pair of Yellow-legged Piles stood first. *Spanish* were good in both classes, and the cup for the section was awarded to the chickens. Old *Dorkings* had mostly bad feet, but the chickens were very good in size, feet, and colour. Old *Cochins* were a good lot, the winners being of high quality, but the chickens fairly beat them, the colour, shape, and size being superior in all the winners, which were Buffs. Light *Brahmas*, old birds, were a fair lot, the winners being very good, but as a class the chickens were somewhat faulty, still the winners very good in both shape and marking and the section prize was awarded here. *Brahmas, Dark*, old birds were a heavy lot, some grand cocks being among them; the hens being also well developed birds and good in pencilling. Chickens were very fine and many birds were noticed, the winners being very good in all respects. A prize of £2 was offered by L. H. Arkwright, Esq., of Hampton Court, for the best three Dark *Brahma* pullets, but with the exception of the first these were not up to the previous classes in point of quality. *Hamburgs*, as a section, were inferior to some we have seen at this Show, but the first-prize and plate winners in Silver-spangled were just perfection, and the Gold-spangled were very good, and *Polands* very fine. *French* were also of fair quality, the first-prize *Crève-Coeur* being good. *Bantams, Game*, were moderate, if we except the first-prize Black Reds and second-prize *Duckings*, the latter, however, being too bronzy on tail and wing. *Bantams, Black*, were some of the best we have ever seen, the first-prize pair being perfection, the second being old birds and also good. In the Any other variety, Silver *Sebrights* were first and Japanese second, and in the general Variety class of *Lowis Sultans* were first, *White Dorkings* second, and *White Leghorns* third. *Aylesbury Ducks* were an improvement upon previous years, the *Rouens* were also good, and though the *Geese* and *Turkeys* were not in large

goon class we thought the best of the Pigeons, and the distribution of the prizes could not have fallen into better hands than those of Mr. Percivall; Yellows were first, a beautiful pair, and Blues second. In Jacobins an extraordinarily pretty pair of Whites were first, but we liked a highly-commended pair better than the second pen. In Fantails the first-prize pen was in superb condition, and here we liked a highly-commended pen better than the second pen, but the difference was not great. The classes for working Antwerps were large ones, the Brighton and County of Sussex Pigeon Club contributing a great number of entries. The "objectionable" point cup, over which we hear such a variety of opinions, went to Mr. Vander Meersch, he beating Mr. Maynard by three points.

Three classes for Rabbits completed a most pleasing Exhibition, which was well arranged, and promises, under the superintendence of Mr. Lenny, to be one of the most interesting Shows in the south of England.

DOBBINGS.—Any variety except White.—Cock or Cockerel.—1, H. Lingwood, 2, R. Cheeseman, 3, F. Parlett, *vic.* Viscount Tarnour, *hc.* Mrs. Shaw; R. Cheeseman, *vic.* *Hens or Bullets.*—Cup, H. Lingwood, 2, Mrs. Brassey, 3, O. E. Cresswell, *hc.* H. Sted.

DOBBINGS.—White.—1, O. E. Cresswell, 2, Mrs. E. Williams, 3, Lady A. Nevill, *hc.* Rev. A. Lee.

BRAMMAS.—Dark.—Cup, H. Lingwood, 2, Rev. L. Van Straubenzee, 3, Rev. J. D. Peake, *vic.* Mrs. Brassey; Rev. T. Cochrane; H. W. Reville; Mrs. J. G. Hepburn, *hc.* Mrs. F. Fryer; Mrs. J. G. Hepburn, *c.* T. Harris.

BRAMMAS.—Light.—1, H. M. Maynard, 2, M. Leno, 3, J. Bradshaw, *hc.* W. H. Gensh, *vic.* T. Turnour; G. Carvill; M. Leno.

COCHINS.—Cinnamon or Buff.—Cock or Hen.—1, C. M. Stickings, 2, G. J. Lenny, 3, H. Langwood, *Any other variety.*—1 and Cup, G. Shrimpton, 2, R. W. Beachey, 3, O. E. Cresswell, *hc.* R. S. S. Woodgate; Rev. A. W. Warde; Mrs. Brassey; Capt. F. G. Coleridge.

HAMBURGINS.—Golden-pencilled.—Cup, W. Speakman, 2, G. J. Lenny, 3, H. H. Thompson, *Silver-pencilled.*—1, M. Leno, 2 and 3, B. Norton.

HAMBURGINS.—Spankled.—Cup, N. Marlor, 2, W. R. Tucker, 3, H. H. S. Woodgate, *Black.*—1, R. S. S. Woodgate, 2, N. Marlor, 3, W. Cutlack, *jun.* *hc.* J. Foster.

SPANISH.—Black.—1, F. James, 2, Mrs. Tonkin, 3, H. Brown, *hc.* Miss E. Brown.

POLISH.—1, J. Horton, 2, Capt. F. G. Coleridge, 3, T. Deau, *hc.* E. J. Reeves.

GAME.—Black and other Reds.—1 and Cup, H. Ritchie, 2, F. Warde, 3, J. Jeken, *hc.* W. Foster; B. Hall; G. H. Fitzherbert; Harris; E. Wharton, *Any other variety.*—1, W. Foster, 2 and 3, R. Hall.

FRENCH.—1 and Cup.—1, G. E. Wank, 2 and 3, W. Dering, *vic.* J. Walton; G. W. Hibbert, *hc.* J. Walton; Rev. N. J. Ridley.

ANY OTHER VARIETY EXCEPT BANTAMS.—1, Rev. A. G. Brocke, 2, W. Wildey, 3, R. S. S. Woodgate, 4, J. Hinton, *vic.* Miss P. L. Blencowe; A. Ward, *hc.* E. Branford; J. P. Poyer; T. H. Smith; S. P. Broad; O. E. Cresswell; J. Walls.

GAME BANTAMS.—Black and other Reds.—1 and Cup, W. Boucher, 2, G. Gadon, 3, W. C. Haare, *hc.* T. Randall, *jun.*; E. H. B. Smith; F. James; W. S. Marsh, *Any other variety.*—1, T. W. Anns, 2, H. J. Symonds, 3, B. Mollet, *hc.* R. Hall.

BANTAMS.—Any variety except Game.—1, M. Leno, 2, J. E. Thirtle, 3, R. S. S. Woodgate, *vic.* M. Leno; Lady S. Turnour, *hc.* J. O. Pearson, *c.* Mrs. J. G. Hepburn.

SELLING CLASS.—Cock or Cockerel.—1, C. Howard, 2, R. Cheeseman, 3, G. Shrimpton, 4, Rev. G. Chilton, *vic.* M. Leno; J. Hill, *hc.* T. Gates; H. Humphrey; F. Harris; E. Hampton; G. J. Lenny; O. E. Cresswell; Capt. F. G. Coleridge; J. Ecken, *c.* T. Brown.

SELLING CLASS.—Hens or Bullets.—1, R. W. Beachey, 2, Viscount Tarnour, 3, M. Leno, 4, G. J. Lenny, *vic.* G. Ellis; T. Gates; K. Perry, *hc.* C. Thomas; P. Ogilvie; Mrs. Hey; G. Carvill; M. Leno; Capt. F. G. Coleridge; E. H. B. Smith.

SELLING CLASS.—Cock and Hen.—1 and Cup, Rev. T. Cochrane, 2, H. S. Fraser, 3, C. Howell, 4, J. R. Lanthier, *hc.* Viscount Tarnour; Rev. J. D. Peake; P. Ogilvie; W. H. Gensh; C. Howell; G. J. Lenny; R. W. Beachey; N. Edgill; Rev. J. Madell; Rev. G. Chilton.

ANY VARIETY.—Exhibited by a resident in Sussex.—1, C. H. Matthews, 2, Viscount Tarnour, 3, E. J. Reeves, *hc.* C. Cork; T. Brown; G. J. Lenny; Mrs. Brassey, *Exhibited by a resident in Leices.*—1, C. Beard, 2 and 3, G. J. Lenny, *hc.* A. Hooker.

DUCKS.—Rouen and Aylesbury.—1, J. Harvey, *jun.*, 2, T. W. Cowan, 3, F. Harris, *vic.* T. E. Arter, *hc.* P. Ogilvie; M. Leno; Rev. T. Cochrane; N. Edgill, *Any other variety.*—1, J. W. Kelleway, 2, J. W. Boucher, 3, M. Taylor, *vic.* J. W. Kelleway; G. S. Sansbury, *hc.* Mrs. W. Beeny; J. M. Taylor; M. Leno.

PIGEONS.

CARRIERS.—1, 2, and 3, H. M. Maynard.

POUTERS.—1, H. Sted, 2, Mrs. Ladd, 3, H. Yardley, *hc.* R. T. Barrett.

TUMBLERS.—1, R. Pratt, 2, J. Ford, 3, H. Yardley.

BARBS.—1, 2, and 3, H. M. Maynard, *vic.* A. Vander Meersch.

DRAGONS.—1 and 2, F. Graham, 3, H. Dwelly, *hc.* F. Graham; F. G. Moore; A. Vander Meersch; J. Philpott.

ANTWERPS.—1, E. F. Wilson, 2, Capt. G. Edwardes, *hc.* H. Yardley; A. Vander Meersch; J. T. Theobald; Capt. G. Edwardes.

JACOBIANS.—1 and 2, A. Vander Meersch, *hc.* T. G. Ledger; H. M. Maynard; G. Roper.

FANTAILS.—1, J. F. Loversidge, 2, A. Vander Meersch, *hc.* J. Walker; A. Vander Meersch; H. M. Maynard.

ANY OTHER VARIETY.—1, H. Yardley, 2 and 3, A. Vander Meersch, *hc.* E. F. Wilson; Rev. W. R. Tomlinson; E. W. Van Scuden; C. Roper; A. Vander Meersch.

ANY VARIETY.—Single Bird.—1, G. J. Lenny, 2, H. Dwelly, 3, E. F. Wilson, *hc.* G. J. Lenny; Mrs. Ladd; W. Gamble; J. Read; H. Dwelly.

SELLING CLASS.—1, 2, and 3, E. F. Wilson, *hc.* C. Cork; J. Ford; J. D. Ross; W. Gamble; C. Legnatt.

ANTWERPS.—Four Working.—Judged irrespective of colour or sex, exhibited by any resident in Sussex or Kent.—1, Capt. G. Edwardes, 2, G. J. Lenny, 3, W. Kennedy, 4, E. F. Wilson, *hc.* J. Longland; S. J. Ridley; A. Stennings; C. Thomas; W. Kennedy; W. S. Marsh, *Judged irrespective of colour or sex, exhibited by a Member of the Brighton and County of Sussex United Pigeon Flying Club.*—1, E. F. Wilson, 2, Capt. G. Edwardes, 3 and 4, G. J. Lenny, *hc.* J. Oliver; J. Woodhams; W. Atkinson; Capt. G. Edwardes; G. J. Lenny.

RABBITS.

LOP-EARED.—1, J. Cranch, 2, F. Banks, 3, F. Parsler & W. J. Mayell, *hc.* F. Banks; F. Parsler & W. J. Mayell, *c.* C. King.

ANY OTHER VARIETY.—1, T. Garner, 2, J. P. & R. Hackett, 3, J. Ellis, *hc.* J. P. & R. Hackett; H. Hancock, *c.* T. W. Cowan; C. King.

SELLING CLASS.—1, J. F. Ellis, 2, C. King, 3, J. Quick, *hc.* F. Banks; Parsler & W. J. Mayell; J. Cornford; H. Hancock, *c.* J. Garner; P. H. Dows; T. Garner & W. J. Mayell; Miss F. C. Blencowe.

Messrs. Teebay and Martin judged the poultry, Mr. Percivall the Pigeons, and Mr. Billett the Rabbits.

THE NORTH BRITISH COLUMBIAN SOCIETY'S GRAND ANNUAL SHOW AT GLASGOW.

A JOURNEY from London to Scotland is a solemn thing now-a-days, not to be undertaken without divers serious misgivings, and an insurance ticket, while one's better-half insists upon a telegram the very moment of arrival, with an earnestness never known before. As to the journey itself, that is how you take it. Weary and long it, of course, must be any way, and to catch the morning express from Euston, one has to get up, if living in the suburbs, somewhere about the middle of the night, when one can eat no breakfast, and feels badly prepared for the fatigues of a long day, during which little time for food, and less for recreation, is allowed to the victim by the thoughtful directors of the North-Western Railway. Such was our case. Among the numerous errors of our long and eminently useful life, no one, we honestly believe, can justly charge us with ever having "got up early"—voluntarily. Well has our great humorist portrayed the nameless horrors of that fearful piece of humbug, so falsely called a virtue. Well has he described the starting from sleep to see "if it is time to get up;" the gloomy miseries of the cold-bath by candlelight, the wretchedness of dressing, the hurried breakfast, the fear of losing the train, the stealing from one's house like a thief in the night (our suburb has no cabs), and numberless other minor miseries which need not be told. It makes us feel that Charles Dickens was, indeed, a man and a brother. But it had to be done, and we did it, for poultry and Pigeon fancy alike expect every man to do his duty. And there were alleviations. On a journey like that a man may pull the trigger of his pocket-pistol, not shamefacedly as at other times, but with dignified and open candour—we did. Then there was an interesting speculation as we neared every great junction, as to whose particular coal-waggons were shunting out of our way, and a fearful joy as each in turn was safely passed. There was the deep and almost personal interest with which the fatal Wigan points were approached, and a curious observation of the precise amount of oscillation as they were passed over (they are in good order now). There was the country—much of it beautiful country too. The game which could at times be described from the train; and what we never remember to have seen from a train before, a big barn-owl slowly flapping his way along within easy pistol-shot. Night was coming on now, and as it fell we entered the country of pig-iron, and were struck, as on our last visit to Glasgow, with the grandeur of the glowing furnaces on either side. Out into the night shone those yawning gulfs of fire with a brilliancy the eye could not bear, suggesting many an image from many a poet, and especially some which tell of horrid German legends, and of nameless deeds done by the rude forerunners of the Harz mountains. And so—even an express train must come in at last—we get to Glasgow, and are taken charge-of by our old friend, the Vice-President of the Society.

Next day at six o'clock was the dinner. Scotchmen like a dinner as well as their southern brethren. Of what passed at this one we shall say but little. At the head of the table, of course, was Mr. Montgomery's genial face, flanked on either side by Mr. Jones (one of the Judges), and Mr. Wallace. What we ate and what we drank; how various toasts led to various other toasts; how Mr. Buchanan (the Secretary), being called on for a song, delivered one which purported to record the experiences of an unhappy wight who partook of a bottle of the best Day & Martin under the impression that he was imbibing soda water; how Mr. Jones being similarly pressed, did favour us with one which must have been specially written for a Pigeon or poultry judge, since it consisted of divers encouragements to

"Do one's duty manfully,
And never mind the rest;"

how Mr. Huie, being struck with the fine quality of Mr. Fulton's tenor voice, did indite a message to the President, and pass it to him by the very hands of that unsuspecting brother Scot, which resulted in "Bob" being next called upon; and how the said Bob, after carefully adjusting the tension of his waistcoat, sung a medley, which terminated with the inevitable

"Should auld acquaintance be forgot
And never brought to mind?"

and what followed thereupon;—all this will live in our memory, but need not be repeated here. We need only say that Mr. Matthew Stuart, the Treasurer, reported a strong list of members, and a most satisfactory financial condition, and added, that if every member would during the next year introduce another member, the Society and the cash in hand would be better still. The astounding character of this latter piece of information naturally caused it to be received with enthusiasm. If anybody think that was the finish, however, he is much mistaken. The Show was at least two miles off, but we "loaded up" a tram—they have trams in Glasgow—and adjourned to the birds for an hour's "private view," till at ten o'clock we were turned out. They would not separate even yet. Back to the hotel went we, and into the small hours sat and talked of Pigeons, poultry, and other matters dear to the fancier—of the

awards—of the Show itself; and of the prospects of attendance next day.

"And so the Wednesday night
Saw Thursday morning born."

We have always admired Glasgow. It is a grand city, and the Scots have a good right to be proud of it. Miles and miles of streets which rival Oxford Street are there, and nowhere do the shops present such a high average of appearance. Far away to the west end, at the end of the noble City Road, are the Botanic Gardens, in which stands the "Kibble Crystal Art Palace," in which, again, is held this year the far-famed Pigeon Show of the north, and, indeed, of the whole kingdom. We think the name a mistake. Mr. Kibble is deservedly respected in Glasgow, but it does not sound grand, and a simple "Crystal Palace" would be better every way. But the building itself surpasses for its size every place we have ever seen as the site for an exhibition. It is all glass, the light unobstructed from a single square foot. Fancy a noble dome, or rotunda, 150 feet in diameter, connected by a corridor, also glass, 36 feet long by 25 feet wide, with a second smaller hall some 65 feet in diameter, and you have all that bare words can give of it. But the effect words cannot give. We have never seen anything equal to it. In the smaller hall is a cool fountain surrounded by shrubs and moss, and leading-out of one side is what they call a "mossery," or a series of arches and bowers covered with bright-green moss, surrounding miniature pools of water. Round the large hall are plaster casts of the most celebrated sculptures—one or two, perhaps, rather questionable in taste—intermingled with shrubs, and in this large hall were the Pigeons, not so numerous as at the London Crystal Palace, but in many classes even superior in quality, many winners there having now to retire before more perfect specimens. As a Pigeon Show it was simply perfection.

With all this the place was almost empty, and it was really painful to see such a Show so little cared for. We were not altogether surprised, for all through Glasgow, so far as we went, we saw nothing whatever to acquaint the public there was such a thing. A very small advertisement in the daily papers was all, and this very advertisement was a curiosity in its way, informing the public that the celebrated "English Letter-Carriers" (!) would be on view. No large bills about; nothing at the stations; nothing on the omnibuses—failure was inevitable. We question if, even had it been advertised, a Pigeon Show alone would ever attract a numerous public; but if the Glasgow folks could see their way to get-up a poultry show of equal rank with their Pigeon collection (for which there is ample room in the great hall), and add, perhaps, a show of Canaries and cage birds in the smaller hall, which seems, with its fountain and its moss, as if designed for the very purpose, the total would form an exhibition impossible to surpass, and which we can hardly think would pass unheeded if well advertised and carried through. With these observations we may proceed to our remarks on the collection of Pigeons itself.

It will be remembered that the London Committee had invited two of the best Scotch fanciers to judge at the Crystal Palace, and the North British Committee returned the compliment by requesting the services of Mr. Jones, who acted with Mr. Charlton. We are pleased to say that these gentlemen gave very general—even marked—satisfaction. Exceptions to their awards were taken, and we shall state such as general opinion pointed out—but such must always be the case. Critics have time—that all-important item in judging; many birds, too, will not show when first put into the pens; and some classes were terrible work to judge. In spite of all such exceptions, the general verdict was as we have stated.

The first fourteen classes, of some eighty odd entries, were confined to members of the Columbarian Society. The first class, for Blue Pouter cocks, contained nothing very extra, the cup bird being rather thick. The Black cocks, though only three entries, were better, first prize going to a bird $7\frac{1}{2}$ in limb and raven black, but rather heavy-limbed. The third prize went to the bird first at the Palace, rather bad in colour, but a splendid Pointer. The three Red cocks were all a poor colour, and in Yellows there were no entries. Both first and second White cocks were splendid birds, with as little to choose between them as could well be; third was but middling. In the Blue hens the cup was a splendid bird; very young, but will be almost perfect when grown. In the Black hens the first-prize was nothing particular, and second-prize was most decidedly the best in all essential points. Red hens had but two entries; first-prize being a neat little bird, but decidedly small, and second very middling all round. Yellow hens were but three—moderate in quality and well judged. White hens were a better class of nine, most of the birds being mentioned. In this class we consider second-prize should have been first, both second and third being half an inch longer in limb than the first prize bird. In the Carrier and Barb society classes both sexes competed. Black Carriers were an extra class, nearly all the birds being really good. The prize birds were well placed, but a very young very highly commended bird (pen 62) was in our opinion the

most promising of the whole lot. Duns were also a good class, and well judged, the first-prize being a very young but in every respect magnificent cock. Second was a good bird, but rather down-faced; third a grand hen. Mr. Massey's birds were fairly distanced. The class for Blue cocks or hens contained four birds, and the prizes were well placed; the third-prize was a Silver Dun hen, and undoubtedly the best Carrier in the whole class, but not being the standard colour could not win; it is indeed a question if she should have had her third prize, the class being for Blues, but it was hard to pass such a bird over. Barbs were rather middling, the cup bird only being really good.

The open classes formed the real strength of the Show. Not so numerous as at London, there were many more really first-class birds, which made many classes a rare treat to fanciers and the reverse to the Judges. First came Blue Pouter cocks—not so numerous as last year, but a grand class. The first-prize was the Palace winner, and showed the same grand form he did then. Second was a mistake, pen 92 being worth half a dozen of him, though it must be said that it was very difficult to get this bird to show. Pen 95 contained a bird decidedly bad in colour, but one of the very best Pouters in the class, and which we believe took first at Birmingham. Pen 94, also, was a bird which would be invaluable for stock. In Black cocks the Palace cup bird was here discarded for his bad colour, the first-prize being a raven black, but not so good a Pouter. Second-prize was also a good colour, and the Judges are evidently "going in" for this quality, which has been so much neglected hitherto in this splendid variety. Red cocks were mostly wanting in colour too, an unnoticed pen, 110, being about the only genuine red, though had in other points. In all else, however, Mr. Huie's first-prize bird left scarcely anything to desire, and deservedly took the cup for the best Pointer in the Show. Second was also a gorgeous bird. Yellows were a small class of three, and well judged. The cup White cock was a good bird enough, second prize going to the first-prize bird at Newcastle. Third was the largest bird in the class, and also longest in feather and limb, but too stout. A highly commended pen, 124, belonging to Mr. Rose, ought by rights to have been either first or second; but it is merely right to say that he only arrived just before the judging of the class was completed, and got no fair chance, as he could not be induced to "show." As soon as he had fairly picked himself up it was nothing to choose between him and the winner. Blue hens were a grand class—very hard to judge (nearly all were mentioned), and the awards could hardly be deemed correct after a mature scrutiny. Mr. Fulton's cup bird was no doubt fine, but not slender enough in girth; and either Mr. Gresham's highly commended pen 140 or Mr. Wallace's 145 ought, we think, to have had her position, 140 being a very extra bird indeed in all essential points. In Black hens Mr. Wallace's first and second were about equal, first being superior in colour (though both were lovely in this respect), while second was a little heavy in limb. In Red hens the judging was at fault; first-prize being a fine long bird, but deficient both in crep and colour. Mr. Fulton's second was on the whole better; but the best bird was "Bob's" highly commended pen 161, which was first at the Palace, and ought to have been first here. Yellow hens were uncommonly good and well placed, Mr. Huie again coming to the front. White hens were an extraordinary class—one of the best in the Show. Mr. Montgomery was first and third, but third-prize was the best and should have been first. Second has been a fine bird, but is now getting rather too matronly for a strong competition, and should have been displaced, giving in our opinion first and second to Mr. Montgomery's third and first, and third prize to a very highly commended pen, 173, belonging to Mrs. Ladd. It must, however, be said that the whole class was unusually even for one of Pouter hens.

In Black Carrier Cocks Mr. Montgomery won with a bird tremendously wattled, but rather heavy in neck. The winner at Birmingham was here third, being gone quite out of order, and apparently cankered. Both these birds were "prodigious" for the stated ages of one year, which were probably intended in a strictly parliamentary sense. Mr. Stuart's bird No. 190 wants age, but had this been allowed for by the catalogue, in real earnest, must have won: the stated ages in Carriers have always been a standing mystery to us. In Dun Cocks, the cup was of course won by Mr. Montgomery's champion bird (again entered as "one year"), which is too well known now to need description: the same gentleman took third, Mr. Fulton winning second with a cock uncommonly good all round. The Any other colour cocks were well judged, the prizes of course going to Blues. In Black hens, Mr. Fulton won with a bird known as the best black hen on: second was a hen of capital shape, but very bad in wattle and too much trimmed: third was good, but we thought the same gentleman's pen 213 better, had she not been out of condition; but for this we would have put her second in fact. The cup Dun hen was an all but perfect model in beak, wattle, eye, gullet, and skull: second also a fine bird, though some way behind, and we question, taking points all round, if Mr. Fulton's third-prize, which would have looked nearly perfect but for the cup bird, should not have changed

were the satisfactory result of our endeavours to keep the Show honest.

As Mr. Blakston has brought into question the now famous coloured birds, of which several were exhibited at Darlington, can Mr. B. assert that any exhibitor of Norwich birds violated the programme issued, either by exhibiting birds not their *bona fide* property, or of unnatural colour? As to us (the Darlington Committee) listening to bad counsel, or that an "organised attempt was made," we look upon these as unwarrantable assertions. We consider ourselves quite equal to the importance of the duties of a bird show, and notwithstanding the reproaches of Mr. Blakston, we are happy to say our late Show was conducted alike satisfactorily to ourselves and exhibitors generally, and in a manner to encourage us to further exertions.

Before leaving the subject we must assert that the programme giving "a clear stage and no favour" was strictly maintained, and that the Judges (of whom Mr. Barnesby has been alluded to by Mr. Blakston) received the thanks of the Committee.

Messrs. Bemrose & Orme's assertion that "those narrow and exclusive committees (naming the Darlington as one) who have endeavoured to burke our endeavours, who have been a stumbling-block in the way of advancement, and who have shielded themselves behind a restriction they cannot define," we (the Committee) look upon as an untruthful and flimsy vituperation. Of course, we answer for ourselves, and no doubt other committees can equally meet the censure so unjustly cast upon them.

As to a "stumbling-block in the way of advancement," we have only to compare the 532 birds entered for Darlington Show against the number entered for Derby, which amounted to 109, and of this number Messrs. Bemrose & Orme entered forty-one. In the first eight classes, Norwich birds, there were only forty-five entered at Derby, and out of that number Messrs. Bemrose & Orme exhibited thirty-six! So much for the assertion of a "stumbling-block in the way of advancement."

Our aim and endeavours on behalf of our recent Show were to make it worthy of the town of Darlington, not studying the interests of any individual fancier, but the interests of all who might patronise us. The issue was left in the hands of the Judges—men of long practical experience, and who performed their duties satisfactorily.—W. WATSON, JUN., W. J. STEWART, Hon. Secretaries.

BEE FOOD.

FEEDING bees with well-sweetened milk porridge, as recommended by your correspondent "A. T. W.," is something new even in the north. The most appropriate food for bees, next to honey, is the best "crush" or loaf sugar, in the proportion of one breakfast-cupful of pure water to every pound of sugar, boiled between two and three minutes. Beer, ale, or any farinaceous additions I have always looked upon as the remains of a former barbarism, causing the bees extra labour in getting rid of them.—A RENFREWSHIRE BEE-KEEPER.

OUR LETTER BOX.

BURLEM SHOW.—The first prize in the Any other variety class was awarded to the Rev. A. Brooke, Slrawardine, for Malaya.

FEEDING YOUNG CHICKENS (*Don Quixote*).—The "small boy" is not absolutely necessary. You can feed twice before eight o'clock in the morning. You can then put before the chickens bread crumbs, bruised wheat on the ground, some bread and milk in a saucer. Between twelve and one the juvenile can give a little chopped egg and some of the scraps from the luncheon table chopped fine. They might have some dry food before them as before, and you could feed on your return at five. This constant care is necessary only during the first six weeks.

SILVER-SPANGLED HAMBURGS (*H. F. C.*).—Hen tails have been out of date for years. We would not breed from any bird likely to produce them. The progeny of the cock with the deformed comb would surely take after him. White legs would disqualify any Hamburgh fowl, and from your description we should hardly consider your birds as Spangled Hamburghs.

FOWLS' COMBS (*Constant Reader*).—The single comb in a Hamburgh is a fatal defect in exhibition, and, like most other defects, more likely to be transmitted than any good point. In our experience of breeding we have hardly ever bred a single comb from double-combed parents. This rule holds good as to Hamburghs. In Schricht Bauhaus it is not unusual to have one or two single-combed chickens. They are generally very well marked, and for that reason we have sometimes bred from them; but we always reputed, for the single comb is always reproduced. Dorkings stand alone; they may have double, single, or cup combs, without even the suspicion of any but the purest percentage. In Spanish none but a single comb is admissible, and a double one is never seen. The cock's comb must be upright, and the hen's drooping. These requirements are easily met by all good breeders. Game again must have single combs; they are never seen with double. Hamburghs must be double, and we should not care to breed from any such as you describe. We should not believe they were from good, much more first-rate birds.

BRAMA HEN UNABLE TO STAND (*E.*).—Such appearances sometimes result from a hen being egg-bound and sometimes from an injury to the back, causing to the bird some such pain as the human subject feels from a sharp attack of lumbago. She should at once be treated with a table-spoonful of castor oil, and put in a small place on the floor filled with hay or very soft straw. You may repeat the oil every alternate day till there is relief, and give wormwood water to drink on the intervening days. The latter may be made

by pouring boiling water over the wormwood. Camomile flowers may be advantageously used for the same purpose.

PULLETS NOT LAYING—SECURING A CONSTANT EGG-SUPPLY (*Gullus*).—Your fowls have been laying badly, but they have, we think, laid more eggs than you mention. At this time of year you cannot expect continuous laying such as you have a right to look for in the spring and summer. We do not much approve your feeding. The early morning meal should be of ground oats or barley meal mixed with water, milk, or pot liquor, the evening meal should be the same; at midday you may give some whole corn, or you may substitute any scraps you have. Raw potatoes are worthless as food, and three meals are absolutely necessary at this time of year. Maize is not food for laying fowls, its tendency to fatten is too great. To get eggs from June to January you must depend on your hens in June, July, and August. After that you must have pullets arriving at puberty month after month. You will have to allow a month for weather. Thus, if you expect a pullet to lay in November you will do well to choose one that should lay in October, and so on. Your Ducks will do better on oats than on maize. You should have named the breed. They will in all probability lay in February.

POULTRY KEEPING WITH PROFIT (*A Female Reader*).—You may keep poultry profitably on the conditions given at length by us a short time since. You must not spend much on your houses, you must not give too much for your stock, and you must give some personal experience not only to the feeding, but to every matter of outlay. (*R. A. S.*)—In all pursuits where it is sought to make money by the production of food of any kind, it is essential to produce it at the most remunerative time. For instance, eggs in the winter, chickens in the spring. From November to the middle of January eggs should make at least 2d. each. Chickens in May should make 3s. each. These would alter your account. All allowing in food ends in disappointment. Those who feed should be able to apportion the food, and it was published, many years ago, by one of our oldest authorities, that fowls should have food thrown to them only as long as they run after it. If you have few soft eggs you do not want the bricklayers' rubbish. If they are kept in first-rate condition on 1½d. per week, you have nothing to learn in the way of keeping poultry. They cannot be kept for less, unless they have facilities for finding food. You will see that three eggs per week if they made 6d., and they might often make more, would soon pay the cost of keeping for a long time. The rest might be paid at any time by the same pullet rearing a brood of chickens. Those who breed for super-excellence in chickens breed from hens with a young cock, but those who wish to pay their expenses, and realise their profit as they go on, should keep almost all pullets. They lay earlier than hens but they are affected by weather, not necessarily frost, but continued damp, east winds, and absence of sun. They should have three meals per day, ground food, oats or barley slaked with water or milk, morning and evening, whole corn or kitchen scraps at midday.

THE BIRD CAUSE (*G. J. B.*).—You must write to Mr. Blakston if you need an explanation. We cannot insert mere personal recriminations and abuse.

HIGH-COLOURED CANARIES (*H. E.*).—There is no need to occupy more space on the subject. The cause of high colour is now published, and, if it was known before, it seems surprising that no one employed the feeding except Messrs. Bemrose & Orme.

EMBOSSED-WAX-SHEET MACHINE (*Nobis*).—I am not aware that plates for casting embossed wax sheets are procurable out of Germany. Those of my machine were manufactured specially for me by an ingenious private friend in Scotland, from one of the earliest sheets of embossed wax which found its way to this country.—A RENFREWSHIRE BEE-KEEPER.

METEOROLOGICAL OBSERVATIONS,

CAMDEN SQUARE, LONDON.

Lat. 51° 32' 40" N.; Long. 0° 8' 0" W.; Altitude 111 feet.

DATE.	9 A.M.					IN THE DAY.				Rain.
	Baromet. tor at 32° and Sea level.	Hygromet- er.		Direction of Wind.	Temp. of Shade at 1 ft.	Shade Tem- perature.		Radiation Temperature		
		Dry.	Wet.			Max.	Min.	in sun.	on grass	
1873. Dec.	Inches.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	deg.	In.
We. 17	30.166	43.4	48.9	N.E.	42.8	51.7	41.3	82.0	35.7	—
Th. 18	30.292	47.1	46.0	W.	44.6	57.7	45.5	56.6	42.9	—
Fri. 19	30.044	49.0	47.6	S.W.	45.3	59.8	49.8	53.9	47.7	0.059
Sat. 20	29.953	49.0	39.7	W.	45.3	47.3	38.8	70.3	34.2	—
Sun. 21	30.145	45.5	41.4	W.	43.8	51.5	39.0	68.3	31.6	—
Mo. 22	30.637	47.8	45.0	S.W.	44.2	50.9	41.9	61.9	42.5	0.013
Means	30.091	46.5	45.3		44.3	51.8	42.6	65.5	38.8	0.072

REMARKS.

- 17th.—Fair morning, and moderately fine all day; very bright sun at times.
- 18th.—The morning quite spring-like, lasting till about 1 P.M., when it clouded over for the remainder of the day.
- 19th.—Fine forenoon; but rather dull afternoon and evening.
- 20th.—Dull early; very fine about noon; rather less bright afterwards.
- 21st.—Fine forenoon, very bright in the early part, but clouding over soon after 1 P.M.
- 22nd.—Beautifully bright till 11 A.M., then dark and a little rain, but fair, though not bright, after.

A week with fine mornings and cloudy afternoons. Temperature much above last week—about 10°. The rainfall continues remarkably small.—G. J. SYMONS.

COVENT GARDEN MARKET.—DECEMBER 24.

PRICES rule the same as last week, with an upward tendency, and business is brisk.

FRUIT.

	s.	d.	s.	d.		s.	d.	s.	d.
Apples.....	1	0	10	6	Oranges.....	100	6	0	10
Chestnuts.....	bushel	10	0	2	Quinces.....	doz.	1	0	0
Grapes, hothouse.....	lb.	2	0	7	Pears, kitchen.....	doz.	1	0	2
Filberts.....	lb.	1	0	1	dessert.....	doz.	2	0	0
Cobs.....	lb.	1	6	0	Pine Apples.....	lb.	3	0	6
Lemons.....	100	8	0	12	Walnuts.....	bushel	10	0	16
Melons.....	each	1	0	5	ditto.....	100	2	0	2





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