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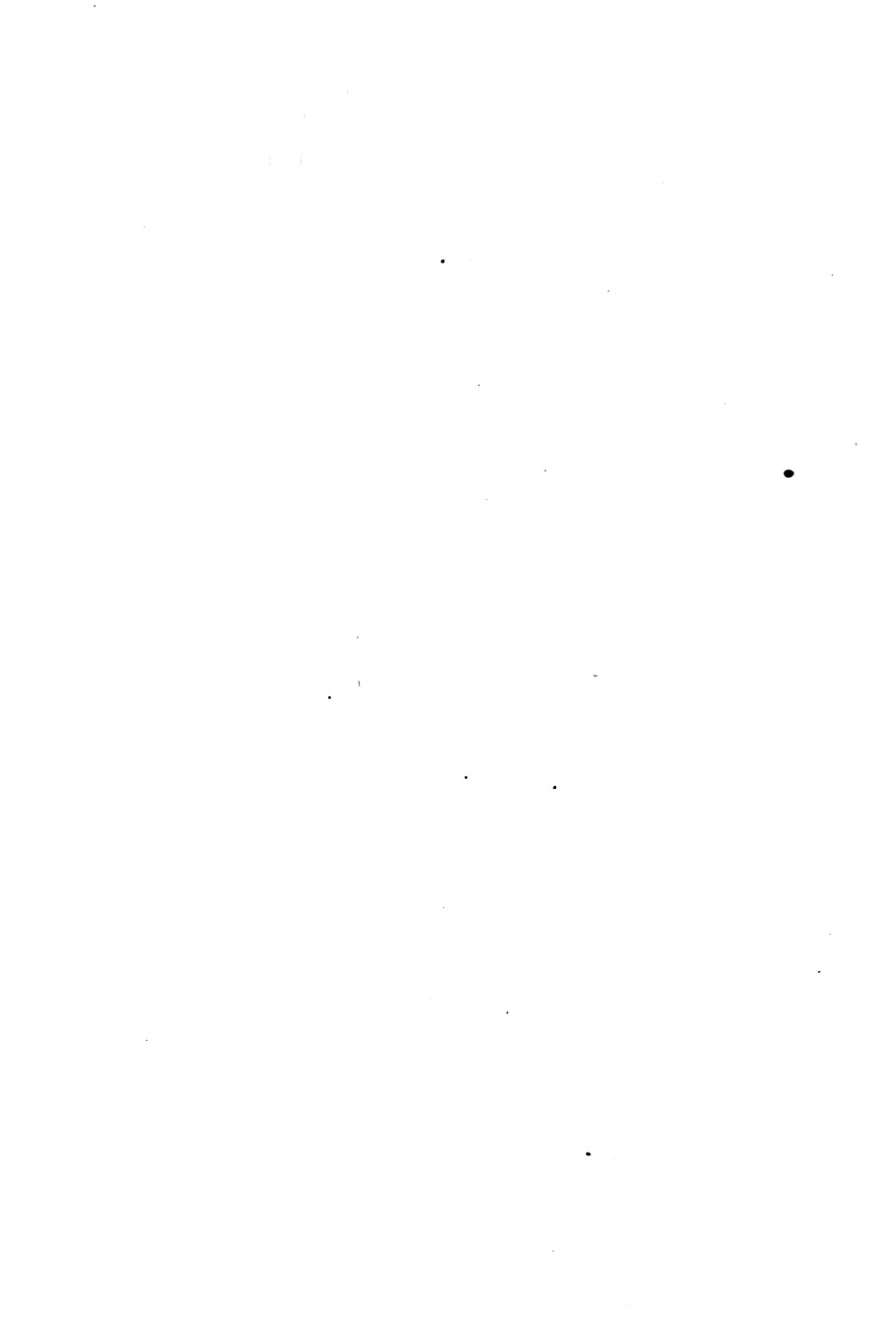
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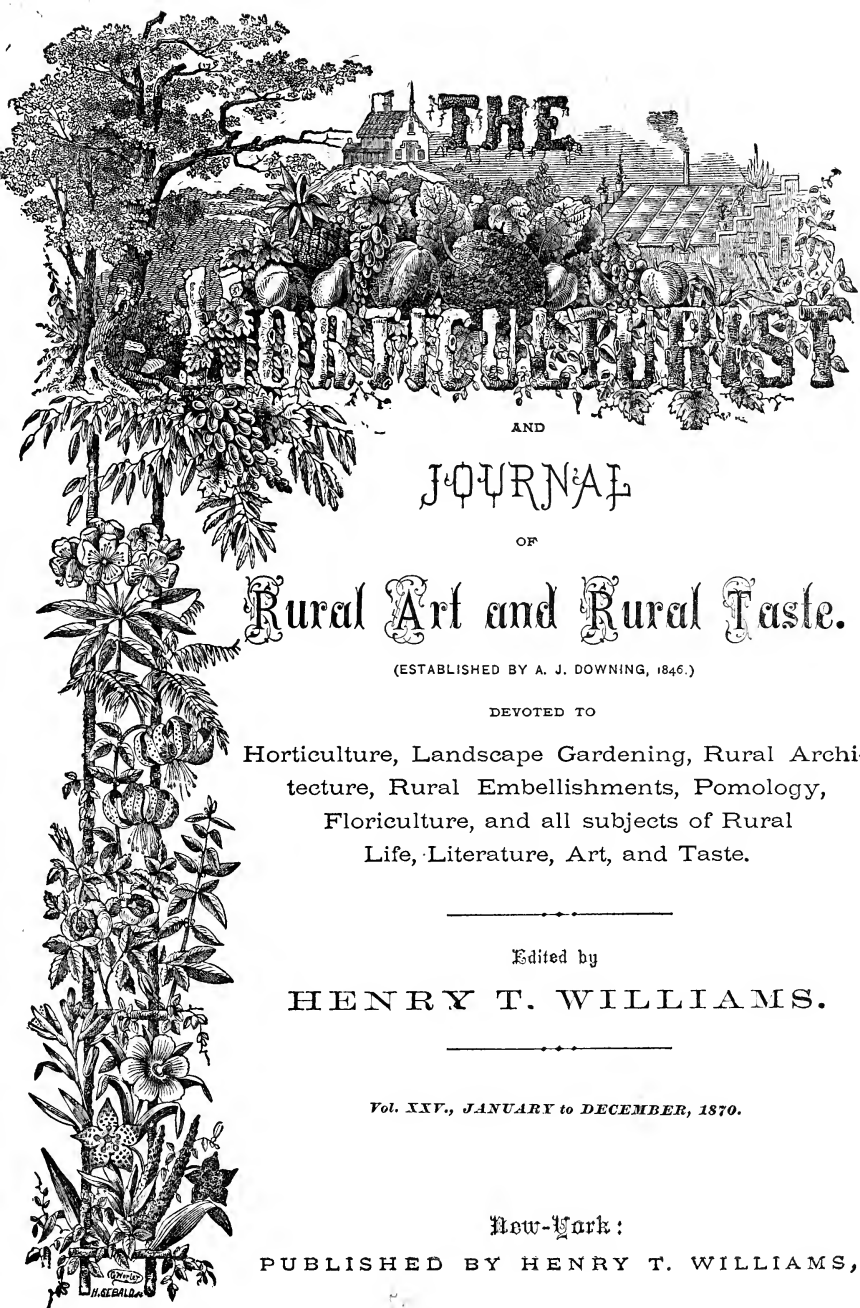
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Vol. 23.

JANUARY, 1870.

No. 233.

Among the Flowers; or, Gardening for Ladies.

BY ANNE G. HALE.

I. Parlor Vines.

WINTER is with us once more. Old Æolus, none the less boisterous, and not a whit more hoary, than when he first tossed the rose-leaves on Thessalian plains, has again sent his minions to sweep from field and garden all traces of verdure and bloom, and has sealed up the prophecy of the new year's beauty.

But all this lifelessness and desolation we set at defiance, for the subtle forces that sway the vegetable kingdom are ready to acknowledge the rule of science and art; so we gratify those nobler instincts of our nature, which, rebelling against inaction and decay, find charms in every thing capable of increase and improvement, and rescuing what we will from the havoc of frosts and tempests, still go in and out among the flowers.

This natural desire to possess something that is continually developing or gaining strength and beauty, that, while partaking of our mortality, by a wondrous attraction draws us heavenward—stimulates many to large endeavors in the culture of "the green things growing"—especially for in-door delight. But the mystery that is often thrown around the in-door management of living plants deters many more from attempting to make their homes beautiful by their presence. Science is, indeed, a great helper in the work; yet there is danger of being too scientific. Let us see how simple we can make it. In the chat about flowers, which the writer hopes to hold every month with the readers of *THE HORTICULTURIST*, many opportunities will occur for setting this matter right, so that those who can raise morning-glories and marigolds for July and August, may have whatever blossoms they choose for Christmas and the New Year.

The first thing to be considered in the culture of any plant is its soil. Bulbs require light and very loose soil. Short, fibrous roots need a firm, fine soil. Long and spreading roots, a heavier and coarser soil than others. For most plants, good garden loam—loosened when necessary by mixing with it street sand or gravel—enriched by the application of a liquid stimulant, answers very well. To make this stimulant, mix half a peck of stable or street sweepings with a quart of pulverized charcoal, in a three-gallon vessel, and fill up the vessel with soft water. After it has stood a week, the liquid will be ready for use. It should be clear, and about the color of green tea. Water plants with this three days, consecutively, once in three weeks, during their earliest growth and blooming. It should be perfectly odorless; if it is not, add more charcoal. As the liquid is exhausted, fill in more water. This quantity of fertilizing material will supply stimulant for two dozen large plants during six months.

If you can obtain leaf-mould—the fine, dark soil from the woods—or have any means of making it, (by collecting all sorts of decaying vegetable matter, and allowing it to become completely decomposed,) take this for a third ingredient of your soil—it will serve the same purpose as the stimulating fluid. All fertilizing liquids must be applied directly to the soil; but when water only is used, the whole plant should be showered with it, if possible.

A judicious management of the air and the water, given to house-plants, has much to do with their health. Never give them an excess of either; it is much safer to keep a plant a little dry than too moist, and with never a whiff of free air than too great a draught. A room, airy enough and warm enough for our own comfort, will suit nearly all plants. A little experience will soon show what species need greater heat, and it can be easily supplied them by allowing them more sunshine, placing them nearer the ceiling, or setting their pots on a slab of heated soap-stone. But there must be no sudden changes from heat to cold, or *vice versa*.

Plants flourish best in pots that will allow a free passage to all superfluous moisture—such as the common unglazed flower-pots of baked clay; the material being porous enough to admit air to the roots, and the hole in the bottom of the pot serving as an outlet for the water to the saucer below. If wooden pots or boxes are used, they must have several small outlets for superfluous moisture. Glass, metal, crockery, or glazed earthen pots, should serve only as receptacles for the common clay pots. Plants, requiring loose soil, should have a layer of pebbles, a piece of broken crockery, or something similar, in the bottom of the pot, to give them proper drainage, without waste of the soil. Bits of charcoal, or of old iron, should fill this place for those plants whose blossoms would be improved by a darkening of their hues. These few general hints must suffice for the present; others will be given from time to time.

Vines, while they are the most graceful of plants, are the most easily cultivated; hence they should be our first choice for in-door growth. And, chief of all, should stand the *hedera canariensis*, the Irish, or German ivy, as it is popularly called; for, no matter how low, or shady, or close, a room may be, it is sure to flourish. It receives its name from the Celtic *hedra*, a cord, (in allusion to its long cord-like branches, that twine and cling about every thing that comes in their way,) and from its native place—the Canary Isles. It is propagated by a slip or cutting. Take a young, tender branchlet, about three inches in length, and insert half an inch of its stem in wet sand, or wet sandy soil, under a bell-glass or a tumbler. Be sure that the sand is never dry, but keep it in the sunshine, or where it will be warm, for a week. Then loosen the sand, withdraw the stem, and, if rootlets have started, set it immediately into a pot of good garden earth, mixed with one third its quantity of gravel or coarse sand. Press the soil lightly yet firmly about this young plant, to the same height as the sand has covered it; cover it with the bell-glass again, and keep it in the shade a week, watering it meanwhile sparingly; then set the glass aside, and accustom it gradually to the sunshine.

Too great exposure to the sun causes the leaves of this species of ivy to turn purple, and to ripen too quickly; yet it will seldom blossom without sunshine. The flower, however, (of a pale yellow,) is rather ordinary; the elegant light green foliage which its luxuriant shoots throw out is much more desirable. It must be frequently watered, but not liberally—just enough to keep it from wilting. Suspend the pot from the ceiling, in front of a window where there is little sun, or set it upon the mantel or a bracket, where there is plenty of light, and let the branches droop or climb as they will; or gather them with slender cords into festoons about the window and walls; the plant is much handsomer thus than if trained to a frame. Early in June, trim off the longest branches, or give them some slight support, and set it with the garden shrubs, (having filled the hole in the bottom of the pot with a cork, so that no worms can enter.) In September, take it with new soil to a larger pot; keep it in a cool and very shady room for a month, and then gradually give it light and water and heat. Be sure that the soil is never dry, but do not over-water it—especially, never allow water to stand in its saucer.

Next to this comes the *hedera helix*, the English ivy. The same soil suits this, but it is a thirsty creature—drought is death to it. Cover the surface of its soil with pebbles; these will have a tendency to keep it cool and moist; and enough water may be given it to keep the saucer full half of every day. Take cuttings from the newest shoots, and root them

in bottles of water in the sunshine; or place a vessel, containing water, near the feelers, which it throws out for attaching itself to some firm object, and these will change to roots and seek the water. Cut these rooted branchlets, and then treat the young plants for the first month as you would the *hedera canariensis*. This plant seldom flowers. It grows freely out of doors in England, but it will not survive our winters without protection; so many persons, very sensibly, transfer the plants before the frosts of autumn to their parlors. It grows slowly—two feet in one year is considered a good growth out of doors—but, as its foliage is not deciduous, it is constantly increasing in density and beauty of appearance. It may be kept entirely in the shade, if light and good air and plenty of water are given it, with the best results. Give it the stimulant, the same as to the German ivy.

The Madeira vine, *basella chenopodiace*, is a very beautiful parlor plant, bearing fragrant white flowers. It must have a rich, moist, loose soil for its bulbs, which increase around the parent-like potatoes. Plant these bulbs in the garden in June, or take a strong branchlet, when only an inch or two long, and set it in the ground, and treat it like a garden plant till September; then accustom it slowly to the atmosphere of the house, and it will attain a vigorous growth. It needs the sunshine and liberal watering through the winter. In June, trim it slightly, and give it new soil; but abate its water, and keep it in the shade for rest during the hot weather. A light trellis may support it, or cords arranged upon the walls or windows near its pot.

The *maurandia barclayana* is a pretty climber for in-doors. Plant the seed, or start a slip in rich, light soil in June. Water it freely, and give it plenty of sun, and it will blossom profusely—elegant white, or pink, or purple bells drooping over the frame, that it covers for two or three months; this vine will wind about slender strings around a window with fine effect. It needs a fertilizer, once a week, from the time the buds first appear till blooming is past.

The smilax is another graceful and delicate parlor vine. It is propagated from the increase of its tubers. It delights in a shady, but warm situation; and must have a moist, rich soil. Water it frequently, but sparingly. Set the pot upon a bracket, and let its long branches twine around pictures or statuary.

The passion flower vine is desirable for parlor culture. It thrives best in fine light soil, where it can get a profusion of sunlight. It cannot bear great watering. Only be sure that the leaves will not drop from dryness, and it will flourish. Plant the seed, or start a cutting in moist sand. This, when in bloom, is a magnificent ornament to the walls of any apartment.

Beside these, may be mentioned the nasturtium, long branches of which cut from out-of-door plants in the autumn, and kept in glasses filled with soft water, will grow and blossom finely all winter. With these seven vines, we have sufficient variety for any room.

Saving Girdled Fruit-Trees.

IN the November HORTICULTURIST, there was some notice of a method to save fruit-trees that had been girdled by mice.

Believing that a fuller knowledge upon this subject would be of value to many, I will give a few facts from experience.

To save apple-trees, where the denuded surface is not more than a few inches in length, is comparatively easy, if not delayed until too late in the season.

I presume that the process therein mentioned, although not minutely described, is the same as mine, or similar to it.

I first cut back the bark both above and below the bared surface, to where it is healthy, and full of sap.

I then insert the blade of a small knife between the bark and wood, to form openings for the ends of the grafts.

I take the scions from the same, or the same kind of trees, and cut them an inch longer at each end than the distance to be bridged. The inch I make wedge-shaped with a sharp knife, and by bending the grafts at the middle until the points can be pressed beneath the bark, I spring them in.

In addition to waxing the ends of the grafts, I build a mound of earth about the tree ; taking the precaution to compact it carefully with my hands, so as not to get them displaced.

I have been thus particular in describing my manner of procedure because very much depends upon the skillfulness with which the work is done.

I find that not only the apple and pear, but cherry, and even our forest trees, may be successfully treated in this way.

It is important, however, particularly as regards cherry, that the operation is performed very early in the spring.

Three years ago I discovered, with no little dismay, that out of about a hundred maple-trees, that I had planted along the road-side, and that had been growing six years, about a dozen were ruined by the mice.

After spending a day in going some three miles for trees, and in replanting them, I found one more, that I had overlooked, that was clean girdled for four or five inches.

Although it was getting late, the buds having swollen on those not injured, I concluded to experiment in grafting this one tree.

In addition to the operation above described, I cut back the top very thoroughly, by shortening the limbs to within a foot or two feet of the tree.

This reducing the top, in order to lessen the draught upon the roots for sap, is a very important consideration, and one that must not be overlooked. I lost trees in my earlier experiments from this cause alone.

But to my maple. The result for a time seemed doubtful, but it finally leaved out, and even made something of a growth during the season. Last year, however, it gave every evidence of assured success, and this summer its growth has been quite remarkable, showing no sign of its past surgical experience, save in its somewhat truncated top.

I am now well satisfied that, with one fourth the labor of replacing those girdled trees, I might have saved them all by grafting, and with less of marring ultimately of the uniformity of the row.

I have had no experience with evergreens, but do not doubt but this method would be found equally successful with this class of trees, if timely and skillfully applied.

LITTLE PRAIRIE RONDE, MICH.

B. HATHAWAY.

Popular Cherries.

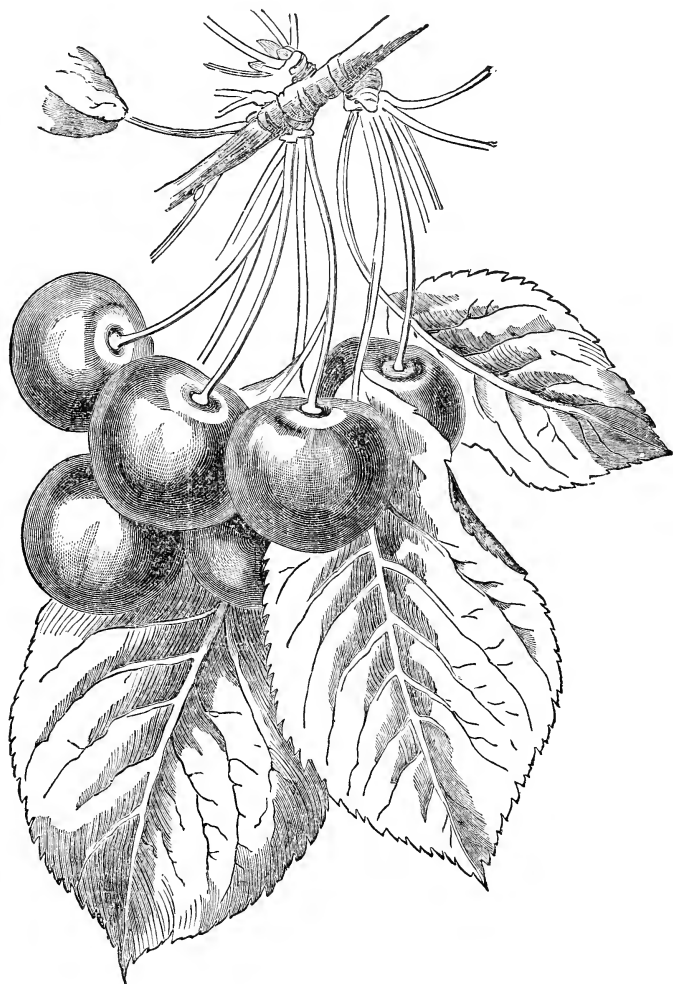
Knight's Early Black Cherry.

THIS beautiful variety, originated by Mr. Knight, of England, in 1810, has been handed down to posterity with well-deserved popularity, and the testimony in favor of its excellence seems to be everywhere unanimous. In shape it resembles somewhat the Black Tartarian, only a little more obtuse.

The fruit is of large size, with irregular surface, and obtuse, heart-shaped form ; color, at first, of a deep purplish red, but becomes quite black when fully ripe ; stalk of moderate length, stout, inserted in deep open basin. It ripens early, about the last of June, or a week earlier than the Black Tartarian ; flesh is tender and juicy, with a rich, sweet flavor, of high character.

The tree is a strong grower, stocky, with short jointed wood, and branches are somewhat spreading. This variety will be found especially suitable for the garden of amateurs, forming a tree of only moderate size, and has thus far been found one of our finest varieties in growth and uniform productiveness.

Cherries have become more and more profitable in late years, as their culture seems to have declined. We can remember a period of ten or fifteen years since when cherries were brought in such large quantities to the markets as hardly to be worth five cents per pound. This year, choice varieties, of finest quality, have commanded twenty to twenty-five cents per pound ; and only limited quantities produced. We recommend increased attention to cherry culture.



Knight's Early Black Cherry.

Popular Pears.

Beurre d'Anjou.

WE know of no new variety of pear better worthy of an unqualified commendation than this. It is of foreign origin; but first introduced and fruited in this country by Marshall P. Wilder, of Dorchester, Mass. Since that time it has been gradually making its way into the orchards and nurseries of the country, uniformly growing well, and wherever fruiting, held in the highest esteem. As an orchard fruit, it is exceedingly profitable; as a family fruit, far more enjoyable than the Duchesse d'Angoulême. Uniformly successful on standard stocks, it can also be grown as a dwarf upon quince roots, but is not so productive and not as strong a grower.

Mr. Quinn refers to it as follows: "Beurré d'Anjou may be termed an early winter variety, that is rapidly becoming a favorite among fruit-growers. It requires some time for the tree to come into bearing; but when it does, it bears regular crops of fine large pears, of good quality, that bring high prices in the market. In our orchard, the tree is a moderate grower. It has borne only a few specimens, until the trees were twelve years old; since then, they have become more fruitful each succeeding year."

Mr. Elliott also gives it high indorsement:

"The tree is a rapid but healthy grower, with strong shoots, forming a fine pyramidal shape until, loaded with fruit from the ends of its branches, it becomes somewhat diverging. So much is it valued by those who have grown it, that one man has one-fifth of his entire orchard of this sort. The wood of young shoots is short-jointed, yellowish olive color, with gray specks, large oblong leaves, rounded at the base."

The following description is by Downing:

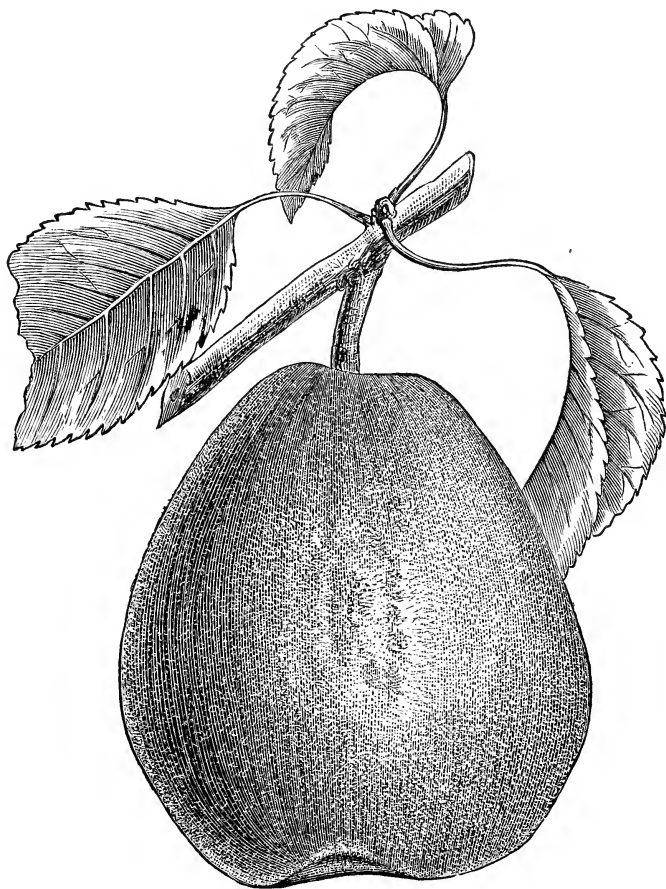
"Fruit large, obtuse pyriform; stem short, thick, and fleshy, inserted in a cavity surrounded by russet; skin greenish yellow, sprinkled with russet, sometimes shaded with dull crimson, and sprinkled thickly with brown and crimson dots; flesh whitish, not very fine, melting juicy, with a brisk vinous flavor; pleasantly perfumed; very good to best; season October and November."

We hardly think the description equal to reality. The specimens we obtained for illustration were of a fine yellow color, very handsomely shaded with crimson, while the flavor is simply *delicious*. The tree is quite productive, and wherever the fruit is known in the markets, very remunerative prices have been realized—this season, sixteen dollars to twenty dollars per barrel. The tree is an excellent grower in the nursery; but, when full-grown, the peculiar appearance of its hanging leaves on hundreds of branches, impart a unique and beautiful look to the entire orchard. We advise all pear culturists to grow it largely.

Fruit-Raising in Iowa.

HOW many there are who would like to change their occupation! Sometimes it should be done, and can be to advantage; but in most cases one can pursue their accustomed occupation better than they can do any thing else. It is true, the professional man and the merchant contemplate a change to rural life, to horticulture, or agriculture, after some years; but such a change should not be too sudden, nor too great; otherwise, disappointment is likely to follow. Our agricultural colleges are fit places for such to receive their education. Fathers, see that your sons make up their minds what occupation to follow; help them to make up their minds cautiously and wisely, and then impress them with the great importance of carrying it out. Young men, take the advice of your parents, and do not be changing from one occupation to another.

Horticulture is a great and growing business of our country. Let some young men choose this as their occupation, and go and *learn the trade*. Let no one undertake to run a



Beurre d'Anjou Pear.

locomotive, profession, store, farm, orchard, vineyard, or garden without some practical experience.

Sixteen years ago, I resolved to go into the nursery and fruit business. I joined myself with an experienced man in the business; otherwise, my mistakes must have been, inevitably, much greater. I was then over forty years of age. Had I learned the trade in my younger days, my advantages must have been far greater. But, again, I am surprised to see how much those who were the best of nurserymen and fruit-growers, sixteen years ago, have learned since. I think there is more to learn in this than in most occupations. And, again, there is a very great deficiency in our best guides and teachers. Our horticultural societies are doing much of late years in this instruction.

I think the best way to learn fruit-raising is to begin in the nursery, instead of the orchard. Apples may be a separate branch by itself, as this fruit can be safely transported a very great distance. In my location, I expect to be able to ship apples, north and west, from fifty to five hundred miles, for some years to come. If one is near a populous city, a general assortment of fruits can be raised to better advantage. Much depends on a proper location, as well as soil and climate. Our railroad transportation will carry our choice and delicate fruits forty miles in two hours, and this gives a wide field for selecting suitable fruit-lands. In the West, much of our farm-lands are too rich for fruit-trees. We prefer the second or third class soil as to richness; usually our high oak openings, covered with oak, hickory, and usually an undergrowth of hazel. But much of our open, dry, rolling prairie, with rather a thin soil, say six to twelve inches deep, with clay sub-soil; then plant trees for a partial wind-break, and we have a fruit-farm complete; *partial wind-breaks*, because trees, like animals, *must have free air*. Stout, growing trees, like the cottonwood, trimmed up high, so they will break the force of the high winds, and our wind-break is sufficient.

My fruit farm is three miles west of my homestead, on a 160 acre lot, sufficiently rolling for good drainage, on soil sufficiently poor for good fruit. I commenced my apple-orchard twelve years ago, and have been adding to it each year since, until it covers about sixty acres, and have about four acres more to cover, when I intend to call it finished.

And yet, I see, it will not be finished in my day; for I have got a great work, and not a very pleasant one—to *correct mistakes*. Several of my varieties, I find, ought not to have been set. While I read much on the subject, studied much, attended the horticultural meetings, took good advice, yet I set many trees which are proving far less profitable than others; and if I am wise and persevering, I shall now begin to either grub out or top graft, and probably both. The three first varieties condemned are, 50 White Rambo, 20 American Golden Russet, and 100 White Winter Pearmain—all very good fruit, yet unprofitable.

On the other hand, Duchess of Oldenberg, Benoni, Kentucky, Maiden's Blush, Fameuse, Striped Sweet Pippin, Jonathan, Hubbardston Nonesuch, Wagner, Domine, Ben Davis, Willow, are among the most profitable.

That which is giving me a good deal of satisfaction is a specimen orchard, where I set two trees of each kind, on trial; and several of these, I am sure, I shall be glad to adopt into the choice family—Fall Orange, Alison's Early, Jefferson County, Cracking, Iowa, and others. Then I have many in my specimen orchard, lately set, and not yet in bearing; the Warfield, a seedling which I introduced, is giving good satisfaction. The scions have been spread widely over the country, and the public will soon hear from it. It is not patented.

My mode is to set the trees twenty five feet apart each way; ridge up to the trees by several years of plowing; take a few crops of corn or potatoes off; and when the trees are large enough to bear, seed to clover, (no small grain, or other grass;) then make a hog-pasture of the orchard.

I have surrounded my orchards with osage hedges. On the north and west is a small country road; and outside the hedge, on the west, I set a row of apple-trees in the road-side, which I intend as a hint to the public that I have been generous, and they ought to ask no more. On the north, I left outside the hedge two rods wide, besides the road, covered with a young growth of oak and hickory, as wind-breaks. Near the tenant-house I have interspersed some evergreens; also, in the pear-orchard.

The whole tract, half a mile square, is a model in nature, though I have done but little as yet to improve its natural advantages. It is interspersed with springs of pure water, which are very convenient for hog-pastures. The south-east forty acres of it are covered with

oak and hickory, a grand park for the large and small hogs, where they seem quite at home, after they have done their morning work of picking up windfalls and destroying insects. Then, I assure you, twenty-five well-fattened, big hogs, to turn off the first of December, are a source of profit, when hogs are \$8 per hundred gross, as they are this year.

SUEL FOSTER.

The Grape Market of 1869.

THE Concord, the past season, has increased in popularity, and I think it has been better ripened and more carefully handled than in previous years, and the sales have given more general satisfaction. The more Southern grape-growing sections have not sent us as many as usual, which accounts for the healthy tone of the market during their season.

The demand for it this year was ahead of the supply, and even after the advent of the Isabella, its most successful competitor, the demand still existed in preference to them. There is one peculiarity about this grape that is overlooked by many, and I think is the cause of the difference of opinion in regard to its merit—that is, that the flavor or character of the fruit is governed by the soil in which it grows to a greater extent than any other variety; for, in comparing the fruit from different states and different sections of the same state, I have found some without the peculiarity of this fruit, and experienced persons have denied these being Concord, the flavor being so unlike those that they were acquainted with.

The demand for the Isabellas has been unprecedented; the crop has been large, the fruit good but not large, and prices within the reach of all—say from 8c. to 10c. per lb. wholesale.

The low prices of this variety have seriously interfered with the sales of the Iona, Catawba, and Diana.

The Israella has been proved, and found to be a good grape, prices ranging a trifle higher than the Isabella. The above includes the three principal black grapes in our market; the other varieties are scarce and not much known, and are frequently sold for the above varieties.

The Catawba has not ripened as well as usual, and has sold at lower figures than any former year, say from 9c. to 12c. Last season, the demand for Thanksgiving was for Catawbas principally, and few Isabellas. This season there is scarcely any demand for them, and not enough Isabellas in the market to fill orders.

This is a very singular state of affairs, not easily accounted for. The Iona has been quite plenty, but, strange to relate, there has been but little or no demand for it. A few crops well ripened were received, and sold at fair prices; but as a general thing this fruit has failed to ripen, and consequently was rejected by the consumers. The dealers say that it is no better than the Catawba when ripened, and resembles it so closely that consumers refuse to buy, for fear it might not be as good. There is a feature in this grape that I think worth mentioning—that is, a disposition to drop from the stem after being packed a short time.

The demand for the Diana has been very light. Last season the Eastern market consumed the whole crop; but this year there has been no demand from that section, although the crop is light and fruit good.

Owing to a break on the Erie Railroad, just as the Delaware crop was coming in, the bulk of this fruit was detained about ten days; the quantity that accumulated on the road during that time was so great that on arrival it broke down the market, and the dealers were compelled to sell large quantities for wine that had injured during the detention. And the Catawba, coming in at the same time, supplied the demand for a larger grape. Had this detention not have occurred, the entire crop of Delawares would have been disposed of at high prices, as the demand was much larger than any previous year.

The above are the principal varieties of red grapes in our market. White grapes are so scarce that we see but few of them. Dealers who sell a hundred tons of the above varieties in a season do not receive a hundred pounds of white fruit. We need a white grape more than any other variety, and they can be sold at higher prices.

C. W. IDELL,

328 Greenwich street, New-York.

Design of a Suburban Cottage.

COTTAGE architecture is always a pleasing subject; for in all parts of the country, the popular mind demands yearly more and more information as to the ornamentation of home grounds and more tasteful forms of rural architecture.

The taste which was stimulated by the hand of Downing we find now everywhere cultivated; and in the suburbs of all our large cities we find cottages and villas in reality far more graceful and beautiful than we generally are aware of. As we travel frequently on the lines of railroad travel, we see that the taste for rural embellishment is widely developing, and rural architecture is one of the most popular subjects on which to address the public mind.

We commence this month a series of designs of cottages, of suitable form, moderate expense, and outward ornament, that will commend them to people of moderate means everywhere. The design we present is one of pleasing beauty and great convenience.

Though the exterior is somewhat ornamental in its character, there is nothing about it costly or difficult of execution; no detail which can not easily be wrought by any ordinary house-carpenter.

It is designed to be of wood, and covered in the usual vertical and battened manner. The roof projects two feet and a half, and is supported on brackets. The house should rest on a foundation projecting at least three feet above the level of the ground. The first story is 10 feet high in the clear, and the second 6 feet at the eaves, and 10 feet high at the ceiling. The plan comprises—

No. 1, gallery, five feet wide. No. 2, hall, $7\frac{1}{2}$ feet wide, and 20 feet long, containing stairs to chamber and cellar.

From the hall, we enter No. 3, the parlor, 16 feet square, in the front of which, and forming its principal feature, is a bay-window overlooking the front yard.

No. 4 is 15 feet square, and may be used either as a bedroom or living-room. No. 5, the kitchen, is 15 feet by 16; it contains a large closet, and connects with a pantry, No. 6, which opens upon a gallery, No. 7, leading to the yard. Under this gallery is the outside entrance to the basement.

The second floor contains four chambers, each furnished with a large clothes-press; two of these chambers are lighted by dormer-windows.

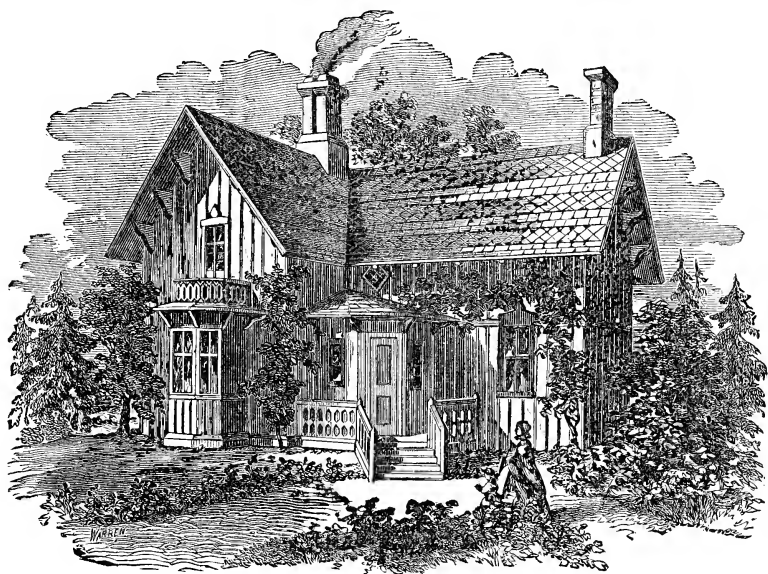
Previous to the advance in prices of building materials, the cost of construction, according to the above plan, was about \$1600, according to the estimate of George E. Harney, the architect; but now would not be less than \$3500.

The Monte-Bello Apple.

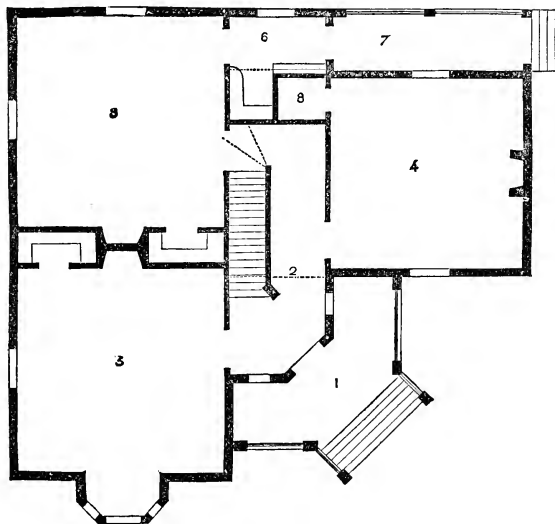
OUR attention has been called to a valuable apple, cultivated in the vicinity of Hamilton, Ill., known with the above name; and the following particulars are from the pens of President Hammond and Secretary Gregg, of the Warsaw Horticultural Society, at that place:

The original tree grew from the seed on the farm of Mathew Gray, Esq., at Riverside, in this (Monte-Bello) township. It was planted in 1833, and lived for about twenty years, when it was destroyed, being in the line of a proposed railroad track. It had previously been propagated from, in a few instances only, as we can hear of not over a half-dozen trees of it in the country. This, we think, very remarkable, as it is regarded now by all who see it as one of the very best apples of its class.

It has lately been brought to the notice of the Warsaw Horticultural Society, whose members unite in according to it a very high rank, and worthy of extensive propagation. We send you these samples, and also samples to *The Prairie Farmer*, at Chicago, with the view of having its merits brought more extensively to public notice; and hope that one or both of you may regard it of sufficient merit to *figure* it in your pages. The following is its



Design of a Suburban Cottage.



GROUND PLAN.

DESCRIPTION.

Tree of medium size, moderately vigorous, a rather upright grower, very healthy and hardy, an early bearer, and very productive; color grayish brown; leaves medium.

Fruit large, oblate, very handsome; surface smooth; color yellow, striped and splashed with dark red, with which some specimens are almost completely covered; generally covered with large white dots. Basin wide, regular or wavy; eye medium, closed; cavity wide, regular, brown; stem short, slender; core medium, regular, meeting the eye; seeds small, pointed; flesh white, tender, delicate, fine-grained, juicy; five red streaks from core toward the surface; flavor mild, sub-acid, sprightly, vinous; quality very best; season, September to December.

The Parks, Promenades, and Gardens of Paris.

THE recent volume by W. Robinson, with the above title, published in England by John Murray, and in America by Scribner, Welford & Co., brings to our sight a glimpse of many of the most beautiful public gardens of the great French city, and spreads before us a feast of horticultural literature, the real enjoyment of which can not be measured or expressed. We do not over-estimate the value of the publication when we state that, to our taste, it is the finest horticultural volume issued for the past ten years on either continent.

Horticulture, to be popular, must be *ornamental*. The popular taste can never incline to horticultural subjects, if confined to dry, practical details, with slow, unimpressive occupations; but throw in rural ornament and tasty embellishments, and neat rustic architecture, and horticulture is elevated from a lower to a higher range of life subjects, fit for people to love and patronize.

This fact Mr. Robinson has recognized in the preparation of his volume. As correspondent of the London *Times*, for the horticultural department of the great Paris Exhibition, he had ample opportunity to treasure up a faithful knowledge of gardening in the French metropolis, and describe the most interesting feature of the parks and public grounds that are so abundant there.

The entire volume contains six hundred and fifty pages, nearly one hundred full-page plates, and three hundred and seventy-five illustrations. The first part of the book is descriptive and illustrative of the public parks, and squares, and boulevards, with their peculiar forms of gardening; while the latter is more especially devoted to practical fruit and vegetable culture in the market-gardens in the suburbs. Great attention is paid to the novel and singular methods of training of fruit-trees, notices of useful horticultural implements, and notes of a horticultural tour in other parts of France.

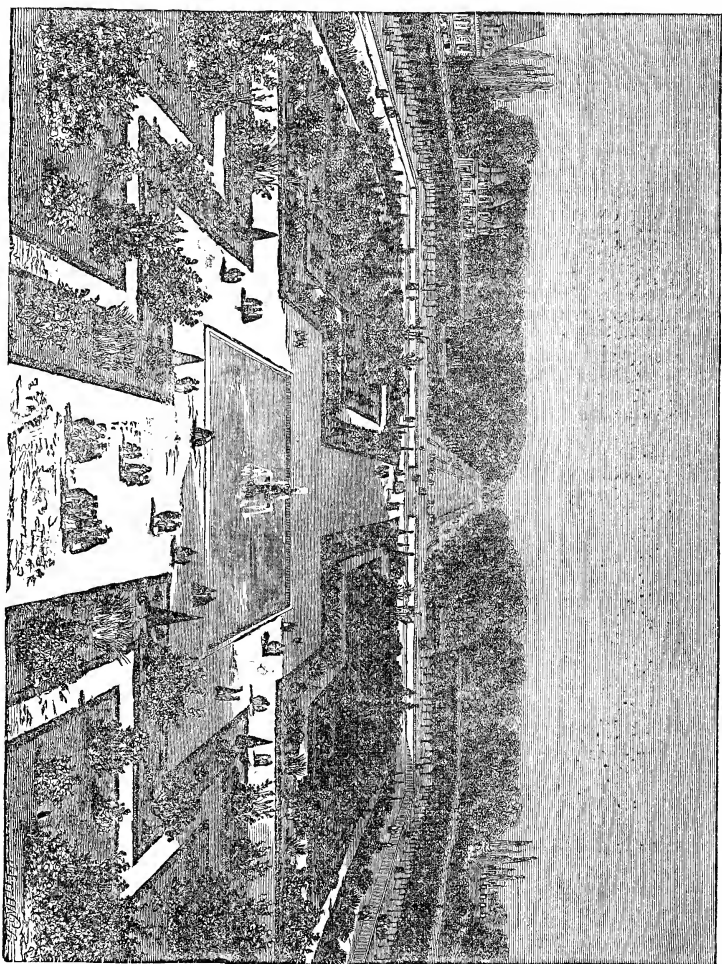
The accompanying illustration exhibits French gardening in detail. The fountains are formal; the avenues and line of trees are precise; the lime-trees, in which they so much indulge, are severely clipped, and look like long rows of sentinels, without a particle of natural grace. Their walks are straight, their flower and shrubbery-beds rectangular, and a degree of rigid order maintained which spoils all free and natural landscape gardening, and produces an effect of strict geometrical symmetry, yet lacking beauty.

At Fontainebleau, Mr. Robinson visited

The Gladiolus Garden of M. Souchet.

"It is by far the finest collection in the world, and a remarkable example of high cultivation. M. Souchet is the emperor's gardener, and has been so for many years. He has been cultivating the *gladiolus* for more than thirty years, and it was cultivated also here by his father. This is the most noble of our autumnal flower-garden ornaments, and one comparatively neglected with us. There is no flowering plant so well calculated to improve the aspect of the autumnal garden, of no matter what style.

"M. Souchet altogether occupies, with the culture of his favorite, about twenty acres of land. The first thing noticeable in this ground is, that about half of the land is unoccupied for the current year. That large portion is plowed and manured, and cultivated through-



The Gardens of Fontainebleau.

out the summer as well as in winter; and thus he has fresh land in capital condition for his bulbs every year. The idle ground is thoroughly tilled, plowed, or in some way disturbed six or seven times during the season; and he would like to do it a dozen times if time and labor would permit.

"Over the whole of the extensive grounds planted with gladiolus you could not notice a decayed leaf, and all the plants were in the highest health, some of the varieties growing as much as six feet high. In the early morning, when the dew hung upon the bloom, and every petal was braced with its freshness, the flowers were truly magnificent. The soil is a very sandy one, but with some holding power. It is well manured, and pretty rich and deep, from having been long used as kitchen-garden ground. Horse-manure is preferred, and that as well rotted as possible. The time of planting is perhaps one of the most important things to be acquainted with, and they do it here from April till the early part of June; the late planting is not often resorted to, however.

"They prefer the beginning of May, for the general and the safest planting. The medium-sized bulbs give the best flowers as a rule; the biggest often breaking into several stems, instead of giving one good one. To plant at various times will lead to a succession of bloom; the seedlings flower in their third year. The time of taking up is October; and from the great quantity to be stored, the process sometimes goes on to the beginning of November. The plants are mostly in beds about four feet wide, placed in rows across the bed, from fifteen to eighteen inches apart. The beds are all covered with short litter, to keep the soil moist; in very hot weather they are well watered. Each kind is numbered, the scraps of lead on which the numbers are stamped being wrapped round bits of vine-pruning, stuck in the earth. The beds are also carefully examined during the blooming season, so as to destroy all those not true to name. There are altogether in cultivation here between two hundred and fifty and three hundred varieties. Of these we first selected the under-mentioned as best, and then went over again, marking the very best of all. This second or choicest selection is indicated by an asterisk before the varieties:

Achille.	Lady Franklin.	Météore.	*Queen Victoria.
Anal.	Laquintinie.	*Meyerbeer.	Reverend Mr. Berkely.
Belle Gabrielle.	*Le Ponsin.	*Milton.	Roi Leopold.
Charles Dickens.	La Titien.	*M. Ad. Brongniart.	Rubens.
Cherubini.	Linné.	*Napoleon III.	*Shakespeare.
*Dr. Lindley.	*Lord Byron.	Newton.	Sir William Hooker.
*Duc de Malakoff.	*Madame Furtado.	Opbir.	Stephenson.
El Dorado.	Madame Lesclé.	Oracle.	Stuart Low.
Fulton.	Madame de Sévigné.	*Pénélope.	Thomas Moore.
Galilée.	*Madame Vilnorin.	Prince of Wales.	*Sir Joseph Paxton.
*Impératrice Eugénie.	Maréchal Vaillant.	Princess of Wales.	Vesta.
*James Veitch.	*Marie Dumortier.	*Princess Clothilde.	*Sir Walter Scott.
*John Waterer	Mazeppa.	*Princess Mary of Cambridge.	

"In France the gladiolus is cultivated much more abundantly than with us—a state of things which should not long continue, as nothing can be more worthy of general cultivation or more calculated to improve the general aspect of our ornamental gardens.

"Perhaps one of the best recommendations of this fine bulb is, that its flowers continue to open long after the spike is cut, and bloom in a vase of water as freely as in the open garden.

"I have never seen any thing more beautiful or effective than large Sèvres vases filled with the spikes of the finer kinds in M. Souchet's house. Many of his varieties grow five feet or more high; when cut, a yard or more of the spike is preserved; no other arrangement being needed, except to insert their bases in the mouth of the vase, and allow their heads to spread widely forth, placing a few branches of evergreens, or any verdure at hand, among the stems, just to give them a little relief.

"There is no one kind of flower that could make such a noble combination with other plants, while it may be safely said that it is the finest of all flowers for in-door decoration in autumn."

We shall recur again to this admirable volume in future numbers of *THE HORTICULTURIST*. The volume is sold by dealers at nine dollars.

Cultivation of the American Chestnut.

AS a means of economizing and rendering productive lands hitherto lying waste and unoccupied, we believe our native American chestnut is destined to play an important part in its proper sphere of forest planting.

The stripping of our country of its primeval forests, a source of natural wealth too hastily squandered, and now beginning to be sadly felt, is visiting upon our heads already the perils of a changed climate, severe disasters to the farming industry of the nation, and increasing the expense of fuel, and all manufactures dependent upon wood for material. The hills everywhere in our older settled States loom up with bare heads and cropped summits, while the sides, down to the very base, have been cleared of their forest covering, and stand out in naked relief, a butt for the whirling wind and fleeting storms.

The winds whistle in their shrill, chilly stride over the prairies of the West, and penetrate every farm-house and barn, or whirl across the fields, cutting to the marrow the very life of every living thing.

We must remedy all this; we must bring back the olden days of peace and plenty, when, with our tree-capped hills, we enjoyed an equable climate, and valleys made to smile once more for the ruddy farmer's industry. Let us plant trees, plant them everywhere, to protect our farms, to cover our hills, to make profitable our waste lands. Let us grow them upon the virgin soil of the West, and cause groves to shoot up, crowning our older years with blessings and honor.

The American chestnut is one of the few most suitable for general forest-tree planting.

As we remember it growing in the old New-England woods, it is at once an object of magnificence and beauty; while for use and profit, it is one most highly prized by every farmer.

For *light* soils it seems most admirably adapted, growing with great rapidity, and equal if not superior to almost any other forest-tree that could be named. Planted in some field unused for five or eight years, it shoots upward with vigor, and, ere we know it, the little sapling has become a *tree* of dignity.

We observe that a worthy firm in the West have introduced the subject to Western farmers and planters, to cultivate the chestnut for profit, either for *timber*, *nuts*, or for *protection*. Their object is so commendable that we invite attention to a few of their suggestions in its favor:

"The timber is light, strong, and durable; for fencing material invaluable, for grain-finishing lumber not excelled by any other native tree; and as a *nut-bearing tree* it is pre-eminently the best and the most profitable in America."

The advantages in favor of its general cultivation are as follows:

1st. Because it is a hardy, native tree, growing over a wide extent of country, embracing several degrees of latitude. Professor Gray states that it is found growing naturally from Maine to Kentucky.

2d. It is a beautiful tree, covered in early summer with long, pendent, tassel-like blossoms and rich foliage, and in autumn loaded with the choicest nuts.

3d. It can be grown on light, sandy, and rocky soils, that are unfit for farm culture.

4th. When nursery-grown, it can be transplanted with safety and success. It grows rapidly, making a large quantity of timber, and produces fruit in a few years from planting.

5th. The timber is most valuable, and the nuts always command a high price.

6th. We would name this great advantage in the chestnut as a timber-tree, in which respect it ranks preëminently above all other forest-trees, and that is the wonderful rapidity with which it will renew its growth after being cut down for timber. Sprouts will emanate from the stump, which will make a growth several times more rapid than when first planted; the saplings thus growing much straighter and taller than the original trees.

In England, large quantities are planted in this manner, sometimes as close as five by five feet; this produces long straight poles for hurdles, hop-poles, etc.; and in this country, where we require so much fence timber, and stakes and posts for grape-growing, what would be more convenient on a farm than a fine large chestnut grove, where the farmer could at any time resort for timber, with the assurance that from the apparently worthless stumps

left in the ground there would, on the opening of another season, spring up a growth, phoenix-like, more vigorous and numerous than the trees removed. In this manner they may not only be cut once or twice, but may be cut and renewed every few years for centuries, as the chestnut groves and forests planted in England fully demonstrate.

To those unacquainted with the habits of the chestnut, we would say, that it is unlike the locust in its character, cursing the hand that plants it and the soil in which it is planted with its innumerable sprouts from the roots; the chestnut only suckers from the stump, and is easily controlled.

PLANTING.

Yearling trees are most suitable, which, obtained from the nursery or grown from seed, can be planted in nursery rows in the garden or the field near at hand. From thence, when grown to a proper size, they can be transplanted with perfect safety, even after they are grown to eight or ten feet in height, by choosing a propitious time, on some damp and cloudy day; with careful handling, not one in a hundred need fail. By so doing, trees will be obtained in better condition and at much less expense than by selecting larger trees with higher cost of transportation.

It is best to procure trees in the fall, and give them the same care that you would Osage plants through the winter, heeling them in in some dry, protected place, or putting them in the cellar, with earth between and over them; no place can be safer than the cellar. Thus cared for, and planted in early spring, as soon as the soil is suitable, there need be no loss.

Then, we say, plant the chestnut, that you may enjoy its beauty and shade, its fruit and timber; and that you may leave a rich inheritance to your children. Plant it on the broad prairies of the West; plant it on the thin, worn-out soils of the East; plant it on the lanes and streets; plant it in orchards and groves; plant it about your buildings; plant it everywhere that you want a useful and valuable tree, and future generations will rise up and call you blessed.

PROPAGATING BY SEED.

John Grigor, the eminent Scotch arboriculturist, advises growing from seed after the following method:

"The seeds are frequently sown in October and November; when this is the case, the young plants generally rise through the ground in April, when they are in danger of receiving injury by frost, unless protected. In some climates where late spring frosts are apt to prevail, nurserymen preserve the seeds during winter on a loft floor, and sow them early in spring. By this method the young plants do not rise until the middle or end of May, a season when, without protection, they are more likely to be exempt from injury. The seeds are sometimes sown in drills, and placed two or three inches asunder, and the drills sixteen or eighteen inches apart; but the more common method is to sow in beds four feet wide; one bushel of fresh seed is sufficient for a bed thirty yards long. The cover on the seeds should be one inch deep. If the soil is very rich, it should be early and dry; otherwise the plants will grow to a late period in the season, and fail to ripen their wood sufficiently to resist the influence of frost; consequently they will lose their tops and become branchy.

"The plants are sometimes removed from the seed-bed and transplanted into lines, at the age of one, but more frequently when two years old. In removing them, they should be classed into two sizes, and have the extremities of their tap-roots pruned off.

"The plants in the lines should stand six inches asunder, and the lines should be about sixteen inches apart; where a greater space is allowed, they are apt to become crooked and branchy, and in need of pruning. After remaining two years in the lines, the plants are commonly from two to three feet high, which is the common size used for forest planting. Such plants are worth 40s. (\$20) per thousand. If required of a larger size, it is necessary to transplant them every second year, increasing the space between the plants and between the lines; and any time during open weather, between October and the middle of March, is suitable for their removal."

In previous pages of *THE HORTICULTURIST* we have referred to the fact that under

cultivation the nuts of the chestnut-tree have been doubled in size, while the tree enjoyed increased vigor of growth.

Upon the boundless acres of our Western prairies there is an open field to the sagacious planter to plant largely of this tree, gaining a double income in yearly production of nuts, and at maturity a wealth of timber of greatest value.

Test of Grapes at Newburg.

EDITOR HORTICULTURIST: In the November number of your valuable journal, you called the attention of your readers to the exhibition of the Newburg Bay Horticultural Society, and the display of fruits and grapes exhibited there. In this vicinity, the subject of grape culture is exciting a more than ordinary degree of interest, and is made a specialty by several of our horticulturists, prominent among whom is James H. Ricketts, whose display of fruits and grapes at the exhibition contributed so largely to its success.

Mr. R. has labored with care and patience, and we think with some measure of success, in improving the quality of our native grapes, both for table use and wine-making. We have thought that a statement of his progress in that direction might prove of interest to some of your readers. For several years past he has been hybridizing with great care, and at our last exhibition produced a few bunches of a hybrid grape, now in its second year from the seed, which gives promise of superior excellence for table use. He has also, now in its second year of bearing, a seedling grape, which we are inclined to think possesses unusual qualities for the purpose of wine-making.

This fall, after the grape had matured, he invited a number of his friends to meet with him while he pressed the grape, and tested the must. We were present, with Mr. Charles Downing and others, as witnesses. The must, pressed from this young seedling grape, registered one hundred and six and a half degrees. The wish having been expressed to see it compared with other grapes raised by Mr. Ricketts under similar circumstances, we proceeded to test the following grapes, with the following results, namely:

Rebecca.....	69 degrees.	Herbemont.....	88½ degrees.
Hartford.....	71 "	Diana.....	91 "
Concord.....	73 "	Iowa.....	94 "
Isabella.....	76 "	Lenoir.....	95 "
Maxatawny.....	76 "	Clinton.....	97½ "
Catawba.....	80 "	Delaware.....	113 "

The instrument used was Oechsle's must scale. The grapes were all raised by Mr. Ricketts, except the Clinton, and were in fine condition. The Delawares were especially well ripened, and considerably shriveled. The must of the seedling is a deep but pure bright red, comparing most favorably in color with any we have ever seen. Its promise is spoken of most favorably by experts who have seen it. S.

NEWBURG, N. Y., November, 1869.

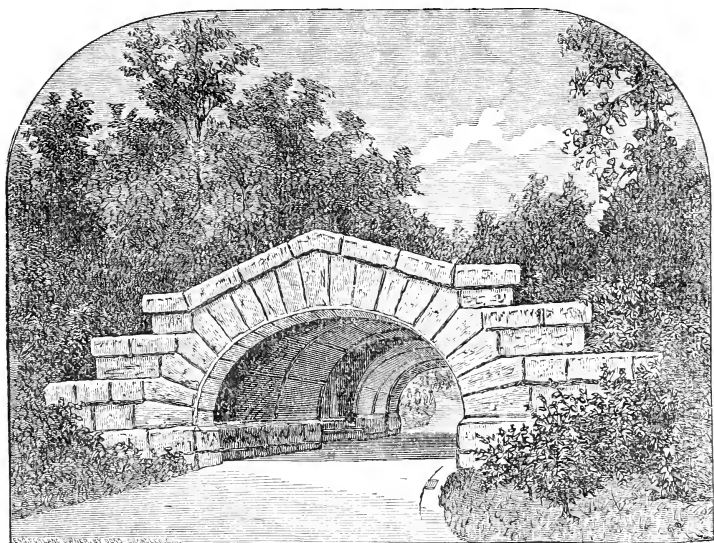
Norway Spruce.

I CUT down to-day, November 12th, on my lawn, two Norway spruce-trees, that were planted in 1841, when between two and three feet in height. The measurement, when cut down, was, height, sixty-four feet; diameter of trunk near the surface of ground, twenty inches. They were both perfect pyramids, the lowest tier of branches resting on the ground, and covered a circle about one hundred feet in circumference.

The annual growth in height averages a little over two feet. You may be sure I cut such trees down with some reluctance. I planted them myself. P. BARRY.

Rustic Archway, Prospect Park, Brooklyn, N. Y.

THROUGH the liberality of our *city gubernators*, waste commons become, in the hands of the skillful gardener, beautiful parks, and the paths, or cozy recesses, are daily thronged with enjoying crowds of visitors. Prospect Park, only five years ago, was a common pasture, a ball-ground for boys and rural sports. Since then it has changed, as it were, by magic, into a succession of pleasing lawns and coves; paths lead us on interminably through the long woods; rustic bridges are crossed; and we catch glimpses of the distant ocean from some elevated point, which overlooks the plain stretching away at our feet. Though far from complete, and by no means affording opportunity yet for fair comparison with our own Central Park, polished, as it were, with gems and jewels of rural



beauty, still we see much to betoken taste, and a disposition to improve opportunities for natural embellishments. The approach to the park from the avenue is through a circular rim of evergreen-sprinkled knolls, looking down upon a fountain of exquisite beauty. Up one path is seen a rustic-thatched summer-house, while, by another, leading between shrub-covered banks of living green, we reach a rustic archway, sketched in our illustration. The bridge is built of granite blocks, of delicate clearness, artistically placed, the interior lined with cedar, polished with utmost care, and seats on each side, in the centre, and at each end. The view on one side, as we approach the bridge, is like passing through a romantic dell, the banks being quite high, while, on emerging on the other side, a lovely lawn is beheld, stretching far away to the forest, and skirted with paths and roadway.

Grapes in Oregon in 1869.

EDITOR HORTICULTURIST: I have just returned from the State Fair at Salem, and deem it a good opportunity to give you some account of the grape culture this year in Oregon. The fair in all its departments was a grand success, and was attended by a vast concourse of people—estimated at 25,000. The show of flowers, vegetables, and fruits was very fine. Of grapes, I saw some thirty-five varieties, comprising the best native and foreign kinds, all grown in the open air, and thoroughly ripened. Magnificent bunches of Black Hamburg, Royal Muscadine, Chasselas Rose, and Chasselas Violet, hung side by side with Concord, Delaware, Iona, Israella, Hartford, Creveling, etc., all equally healthy and beautiful. Of course, the earlier kinds, as Allen's Hybrid, Black July, Hartford, Red Traminer, etc., were more or less shriveled, having been ripe fully two months. Chasselas Rose, Black Spanish, and White Muscat were barely ripe. I was particularly pleased with the Traminer, a grape somewhat resembling the Delaware, but with larger bunches and a great bearer; in quality it is first-rate. Of native varieties, the Allen's Hybrid with me is the earliest, and I think best; but it is hard to decide between that and Delaware. Tons of grapes were offered for sale on the fair-ground. I bought Black Hamburgs, averaging one and a half pounds to the bunch, for six cents per pound. The best vineyard in Oregon is situated near the Willamette River, at Butteville. It occupies the south-east slope of a high butte or hill, which rises out of the prairie. The vines, comprising about fifty kinds, all foreign, are planted about three feet apart each way, and are cultivated entirely by hand, and are trained to stakes. The pruning is very simple. Two or three canes are allowed to grow this season, and at the pruning season one of them is cut back to six or eight buds for fruiting next year; one of the others, with the cane which bore this year, is cut entirely away, and the remaining cane is cut to two or three buds, to grow two or three canes next year. The bearing canes are not tied up, but are allowed to lie on the ground with their load of fruit, and in consequence some of the grapes were damaged by our early rains. I visited this vineyard in September, and at that time the whole face of the hill was literally covered with the beautiful clusters, some of them weighing four pounds, and of all colors. It was a beautiful sight, and interested me exceedingly.

OSWEGO, OREGON, Oct. 30, 1869.

A. R. SHIPLEY.

Franconia the Most Profitable Raspberry.

WHEN one has made up his mind to engage in fruit-raising for profit, his first step should be to ascertain what varieties are most profitable on soil of the same character as his, and in a similar climate.

If there is any one in his neighborhood who has had much experience, he should consult *him*, learn what varieties he has tried, what proved unprofitable, and what were *most* profitable. Your neighbor's experience may not be an invariable guide to you; for he may be too conservative, or too penurious, to try *new* varieties that are costly, but it can hardly fail to be of value.

In most species of fruit, there are one or two varieties that yield better net returns than any others, and such should occupy the largest space in plantations for market, unless the soil or climate is specially unfavorable.

In this section, I find the Franconia the most profitable raspberry for market. Our soil is a strong loam, and our climate is somewhat modified by the proximity of Lake Ontario—about four miles distant—and, possibly, by Genesee River, a few rods distant. The thermometer never sinks so low in winter, nor rises so high in summer, by three or four degrees, as it does a few miles further south.

There seems to be considerable difference of opinion as to the merits of the Franconia, and I am confident that at least two varieties are cultivated, in this vicinity, under that name. I will describe the Franconia cultivated by us.

The *mature* canes are of a light cinnamon color, with a slight purple shade, and dark spines. Before maturity, the canes have a greenish hue, and the dark spines give them a grayish appearance. I fail to detect any difference between them and those of the Naomi.

The fruit is very large, obtuse-conical, dark red, flavor rich sub-acid. This is J. J. Thomas's description of Franconia, and it applies to those we grow.

The Franconia has two prominent defects: its foliage is liable to scorch in hot, dry summers, and the ends of the canes winter-kill in severe winters.

The first defect can be partially remedied by mellow culture during the dry season, or by *mulching*; and the latter, by covering the ends with dirt in winter. The extra cost will be many times repaid by the excess of returns over any other variety cultivated.

Its merits are, first, its great productiveness.

My plantations are young, but the canes were weighed down, the past season, by their large, beautiful berries.

A neighbor had two acres in full bearing, and he picked therefrom 9500 quarts, which he sold, in Rochester, at 16c. to 20c. per quart, and could have shipped them to New-York, and obtained from 50 to 75 per cent more for them. At the minimum rate, they amounted to \$760 per acre.

The Hudson River Antwerp, on the same ground, yielded considerably less.

2d. Its great size and beauty, rendering it a very salable variety, exceeded by none in price.

3d. Its firmness, which exceeds that of any other *red* raspberry of my acquaintance. I have kept boxes of the Franconia and Hudson River over night, in hot weather, and the latter would settle a great deal more than the former.

4th. Its quality, which is not quite equal to the Hudson River, but far excels the Philadelphia. The latter is a hardy, productive variety; but its smallness, and softness, and poor quality will prevent its commanding a high price in market. It only brought 10c. a quart in Rochester, last summer, and was not in eager demand at that; but the Franconia sold readily, and gave the highest satisfaction.

I think highly of the Clark as a family berry. It is a vigorous grower, hardy, of good quality, and quite productive; but less so than Franconia.

The Black-caps will succeed on poorer soil, and under more careless culture, and are probably adapted to a wider range of territory; but will not command so high a price.

The Franconia requires, to succeed, a rich, well-drained loam; whether sandy, gravelly, or clayey, does not matter much, if it be rich, and have good, thorough, clean culture. All superfluous sprouts should be cut up as soon as they make their appearance, just as if they were so many weeds.

Under such conditions and treatment, it will yield, in this neighborhood, larger net returns than any other raspberry that we have ever cultivated.

ROCHESTER, NEW-YORK.

P. C. REYNOLDS.

Dahlia Imperialis.

THE *Gardener's Chronicle* gives great prominence to this new dahlia, describing it as truly magnificent, growing upward of *twelve* feet in height, each of the numerous branches terminated by a grand panicle inflorescence of beautiful white flowers. As a late-flowering conservatory plant, this dahlia is a noble acquisition, its principal drawback being its great height.

"Mr. Alfred Salter, of the Versailles Nursery, Hammersmith, however, by grafting a young shoot of *Dahlia Imperialis* on a tuber of one of the liliputian kinds, has succeeded in materially altering the habit of the former. It will be remembered that, as usually grown, the *Dahlia Imperialis* sends up a long, naked, unbranched stem, more inconvenient than beautiful. Mr. Salter has obviated this inconvenience, as the scion at once branches out into a pyramidal head, the upper branches of which are clothed with flower-buds, not yet expanded. Mr. Salter's plant, in fact, looks as though the top of an ordinary *Dahlia Imperialis* had been removed and struck as a cutting. As comparatively few people can give this noble plant sufficient head-room under ordinary circumstances, this plan of Mr. Salter's is all the more valuable."



The Silver Wedding Trip of "The Horticulturist."

WITH this number a new volume—the twenty-fifth—opens to our view, and we may well call it *the Silver Wedding of THE HORTICULTURIST*.

Gathering around our table we find the names of friends, whose numbers we can not count, who have for years, yes, from the very commencement, followed quietly and appreciatingly the course led by the respective editors who have preceded us, and still are unflagging in their personal attentions and substantial patronage.

The circle of publishers and editors, from the commencement of the history of *THE HORTICULTURIST* down to the present time, has not been broken by death, save only that of its founder, A. J. Downing. Tucker, Vick, Barry, Smith, Saxton, Mead, Woodward, are all living, and doing ample justice, in their various occupations, to the spirit of American Horticulture.

From its start, *THE HORTICULTURIST* enjoyed a degree of popularity which nothing since that time ever received. The people everywhere seemed to recognize in it a congenial companion in their rural rambles, and as an agreeable means of gratifying their rural tastes.

Devoting itself to the ornamental side of country life, with designs of cottages and rural embellishments, it was enabled to occupy a field peculiar to itself, and be fitly recognized as a leader of rural taste.

The very first year, as Mr. Tucker, the original publisher, informs us, it attained to a *paying circulation*, and increased yearly; but at Mr. Downing's death, feeling that it had lost its chief support and attraction, it was disposed of to Mr. James Vick, of Rochester.

Mr. Vick at once, with Mr. Barry as editor, commenced a series of improvements of agreeable character, and inaugurated a vigorous management. Colored plates were introduced, which rendered it more popular than ever, while its circulation in a short time completely doubled. The public appreciated it highly, and in our review of all the back volumes of our library, none are more agreeable to us, or have been of greater service, than those they edited. But the demands of their growing business, together with the fact that *THE HORTICULTURIST* did not yield as great a profit as would permit an exclusive attention to it, induced them to part with it.

It came next into the hands of John Jay Smith and Robert Pearsall Smith, who, with genuine love of horticulture, threw around it many more genuine attractions and evidences of rural taste. *THE HORTICULTURIST* continued equally successful under their direction, and was only sold because of ill-health, to Mr. Saxton, who had ample opportunities of making it profitable in connection with the publication of rural books. The public are already familiar with its transfer to the hands of Mead & Woodward, and then successively to the hands of George E. Woodward and his brother, F. W. Woodward, who possessed ample abilities to render it attractive and influential. The feature of rural architecture, which was an original element of popularity, was revived, and the articles and illustrations that then appeared formed the nucleus for the production of many excellent, popular, and useful books on architectural and horticultural subjects.

The change in form of the magazine, and reduction of its pages, affected its circulation somewhat, and it fell off; but by vigorous advertising it rose again, and during the entire time it remained in their hands, together with the various other forms of business that gathered around it, it paid a handsome yearly profit.

With perhaps the exception of only one or two years, incident to unavoidable changes, *THE HORTICULTURIST* has enjoyed a good regular circulation, and paid a good yearly income.

Horticultural journals fill a peculiar field. Not being as popular as agricultural or family journals, nor having as wide a scope for entertainment, they are obliged to be content to devote themselves entirely to the interests of a special class of readers, namely, the horticultural trade, and

people of rural tastes, but only limited numbers. It ought to be different. Every horticultural journal ought to have as good a patronage and right to live as an agricultural one; but alas! the appreciation is lacking. The garden, one of the purest and most ennobling of all opportunities for occupation, seems to fail to draw out the sympathy of the people to support gardening journals.

There is practical ability enough in this country to-day to ably manage twenty good horticultural and gardening journals; but history repeats itself, and it will be the same in the future as in the past—many will share a death they can not help.

For nearly forty years, *Hovey's Magazine* served the country well; but there were none to support it adequately; and can new-comers hope for much better welcome, when horticulturists are so slow to stand by their own journals, and almost grudge the money they yearly spend for subscriptions?

When *THE HORTICULTURIST* commenced its career, there were not a hundred nurseries in the United States. To-day we have in our office a list of names of over *twenty-five hundred*, of whom not over *five hundred* take any horticultural journal whatever. Can horticulture flourish when those who ought most to support their own journals fail to do it?

In the most successful days of *THE HORTICULTURIST*, its total circulation never exceeded six thousand, while under the hands of Mr. Downing it did not exceed thirty-five hundred.

And to-day, of all the three or four purely horticultural journals published in the United States, not one has a *paying list of over five thousand*; and one of them, *The Grape Culturist*, announces that it can not continue unless more substantial patronage is given it.

Whose fault is it? Certainly not their own. They all strive to do their best, but *horticulture is not popular*, and hence their journals can not be.

The public must not expect too much of us—neither must they criticise too much. They should *patronize more, and help more*.

Horticultural journalism has at best only a limited field to work in—only limited incomes, and a limited circle of readers.

Horticultural contributors, instead of wasting their efforts upon other journals, however worthy they may be in other respects, should support the literature intended especially for their class. But they do not do it. Yes, even worse. We know of men who, in their earlier days, felt the glow of horticultural love, and wrote for their journals with unflinching interest. But long since they have gained honor, reputation, and fortune in their occupation, and to-day neglect their *alma mater*—neither write, neither read, nor speak on horticulture, neither take a horticultural journal, nor patronize it. Has horticulture lost its charms? God forbid!

Friends, if you wish better horticultural journals, *write yourself*.

The recent rebellion and civil war has seriously affected the success of horticultural pursuits; but the effects are disappearing and the future is bright. Heaven smiles, peace has come, and the rainbow of promise and plenty is still over our heads.

THE HORTICULTURIST to-day opens its new volume with double guarantees of excellence and success; and you, my dear reader, are welcome to our board, which shall be constantly spread with fruits and flowers and intellectual viands of highest rural tastes.

Join hands with us, *push us onward*, and we will make the journey—our *Wedding Trip for 1870*—a delightful one, worthy of your longest remembrance.

The Horticulturist.

A HOLIDAY number on the twenty-fifth anniversary of a useful publication strikes me favorably; and not to be quite left out, in my long retirement, from its pages, a few words of mine shall be at the service of a work in which I have always felt a warm interest. These words must necessarily partake a little of the autobiographical. When Mr. Downing issued his first number, it struck an unworked vein, and men of rural tastes, anxious to cultivate a love for home pleasures, at once declared they had found a prophet to love and admire; they rallied to its support, and contributed their experiences; these were to be guided by a master spirit, and all soon saw where to find him. This was almost an inspiration; he instilled and directed taste. In the matter of ornamentation and planting, all succumbed to him. In evergreens, he actually introduced the taste for these chief ornaments of a country place. He was a student at the same time, and was alert to discover the best of every thing. Steam communication with all the world had brought the fine trees of every country to England and France. China and Japan employed various explorers; Fortune's contributions came in rapidly, and our climates, like England, had to be tried for their success. In this, Downing was indefatigable, useful, and successful, and we owe him much on this score. There was a new science, that of pomology, to be discussed, its rules established, and followers must work hard to aid the leader. These he happily enlisted, and we have all seen the good results. What we owe him here we should be and are happy to say. Alas! that a life so useful and devoted should have been so brief.

At his death, Mr. Barry was undoubtedly the man to conduct the work. A good writer, taste-

ful, knowing, and anxious that the love of horticulture should be extended, he took the pen and faithfully chronicled the good that was doing, and what could be done.

At the time of his editorship, I was suffering under a chronic complaint, which took from the mind all good spirits. Nothing interested me but my garden and books; in fact, I was physically prostrated; when some friends, who wished me resuscitated, heard THE HORTICULTURIST might be bought. My son hurried to Rochester, bought its interests, and transferred the publication office to Philadelphia, saying, I must "get out" the next number. It was a flash of electricity, stimulated me, brought me to work at an interesting topic; and I was partially a sounder man, both bodily and mentally.

With what success I labored, I never knew; certain it was, however, that the old contributors rallied around the new editor, and I had a fancy we were doing the right thing. But there seemed to have been a little feeling that Mr. Barry had been conducting the work in his own interest as a cultivator—than which nothing could have been further from the truth—and that I, *not* being a practical cultivator, could know very little; so the *prestige* for both was probably curtailed. What was the circulation, I forget, or never knew; and but for the large advertising patronage, the work could not have been sustained.

Soon after taking possession of the editorial chair, I was ordered, by medical advice, to Cuba, and edited one or two numbers, by letters, etc., from that charming climate.

After some years of pleasant occupation, in which I had gained many valued and still retained friends among all classes of contributors, a change in business by the publisher was about to take place, and the work was sold for about cost to Mr. Saxton, who enlisted some sympathy for it in New-York City as its home. But it was again sold to Mead & Woodward.

Meantime, its original friends continued contributions and subscriptions, and still hold the work in high estimation, as the diffuser of useful knowledge. A complete set is now a valuable possession, and I hope there are many preserved. My own copy consists of every number, Downing's volumes, all presented, containing his autograph; Barry's, the same. The latter editor had introduced an edition of colored fruits and flowers, at a higher price than the uncolored; and as for its valuable information, it was a success; but it added little or nothing to the publisher's profits. This was abandoned soon after the New-York publishers became the owners.

This little story may have an interest to readers of the journal. It is still a welcome visitor to my crowded table of periodicals. Long may it live; long may its publisher find in it as pleasant occupation and as many friends as did

JOHN JAY SMITH.

Croton Elegans.

In this very particular class of plants, *Croton elegans* seems to be but little known. I have seldom met with it in my travels, and I can not call to mind ever seeing but one specimen, independently of my own, placed on the exhibition table. I have a pyramid upward of six and a half feet high, beautifully colored; indeed, I consider it one of the handsomest of the high-colored varieties I have seen. I do not include Mr. Veitch's latest introductions; for it is impossible to form a correct opinion of these from small plants, since with age, if properly treated, they improve in color. *Croton elegans* is smaller in the foliage than many of the other varieties, but equally free in its growth. Although, generally speaking, Crotons are free-growing plants, they require a little management to grow them well, and a good deal of skill to color them properly. I have seen large specimens very indifferently colored, and some perfectly green; plenty of light is essential to the development of variegation, and they should never be shaded unless the sun is very powerful; even then, if they could enjoy a free circulation of air around them, they would be better without shade. Too frequent pottings and imperfect drainage will also prevent them coloring well. I have two immense plants, upward of seven feet high, namely, *C. variegatum*, and *C. augustifolium*, that look like pillars of gold; the latter, with its beautiful drooping leaves, may justly be styled the golden fountain plant. These plants are fully exposed to the light, and receive as much air as possible; they are the admiration of every one that has seen them, in consequence of their high coloring. I have forwarded a branch of *C. elegans* for your inspection; I have also sent some of its foliage, as well as that of the beautiful *Sanchezia nobilis*.—Edward Bennett, in *Gardener's Chronicle*.

Timber Culture.

A CORRESPONDENT of the *Country Gentleman* refers to the comparative advantages of the culture of black walnut over chestnut, as follows:

"A new branch of industry has been started by a nursery firm in Ohio, which, in my mind will, within the next ten years, develop into grand proportions. The firm advertise for sale many thousand young chestnuts, from four to six feet high, and say that they intend to plant this fall one hundred and fifty bushels. If this firm confines its labors to the chestnut, I hope

some others, equally intelligent, will give their attention to black walnut, the butternut, the pecan, and, indeed, the hickory also. I have, of my own planting and transplanting, in my garden, the chestnut, twelve feet high, and about two inches in diameter; the black walnut, twenty feet high, six inches in diameter; and the pecan, not so large as the chestnut—all planted about the same time, ten years ago. The chestnuts have not borne, neither have the pecans, but the black walnuts have given two crops of nuts. I find the chestnut as easy to germinate as corn, and easy enough to transplant the spring it is a year old; after that, though it seems to have fibrous roots in plenty, it is difficult to make it live. The pecan is worse, in this regard, than the chestnut; but careful root-pruning, the year previous to removal, helps the matter. But the black walnut is my favorite. No tree is more easily grown from the nut, more sure to live when transplanted; none grows faster, bears earlier, has more desirable, handsome, and high-priced wood. Black walnut has recently become fashionable in England, and in continental Europe. It is looked upon as the equal if not the superior of mahogany, and our markets feel the influence of this fashion. All the dry black walnut in Indiana, I understand, has been bought up at prices ranging from five cents to ten cents a foot B. M., and sent east to the seaboard, and thence the best is taken to Europe. The original growth will, in a few years, have been cleaned out of the country. I would like to see it become the fashion (and the experiment of the Ohio men suggests as much) for farmers, and all land-owners in the prairie, to plant groves of the nut-bearing trees, and particularly of the black walnut, the chestnut, and the butternut; valuable, in my mind, in the order named. Here I ought to say that the black walnut, though so very hardy and indifferent to unkind treatment, is quite tender in one regard. It will not bear to have stock tramping over and about its feet. A very young tree does not seem to be so much affected, nor a very old one; but a thriving, vigorous one, between ten and twenty-five years old, will be killed in one season."

European Larch—Propagation from Seed.

IN reply to the numerous inquiries in regard to the cultivation of the Larch, I will say, through the columns of your paper, that with the greatest pleasure I submit the following:

First. Two prominent difficulties are encountered in this country, which, I believe is unknown in Europe; the hot rays of the sun having the double tendency to scald or heat the soil, so that it causes the plant to die at the collar, or, as the phrase has it, "damp off," as well as to scorch the tender plant as it emerges from the earth. These are overcome, first, by selecting a sandy, light, dry, though rich soil, for the seed-bed; and secondly, by a partial shading, the first season, which may be done best by nailing strips of lath one inch apart, and placing them one foot in height, over the seed-bed, so as to partially obstruct the rays of the sun. Any other material that will render the same amount of shade, will answer the same purpose.

Second. The soil should be as clean from weed-seed as possible, where the seed is to be sown. The usual time of sowing onion-seed, or from middle of April till first of May, is the time to sow Larch. It may be sown in drills four or six inches apart, or broadcast, and covered just enough to retain moisture, till it germinates. It may be sown without any preparation, as onion or other seed. Clean culture is indispensable. The shading may be dispensed with after the first season. The seedlings should be transplanted either at one or two years old, from the seed-bed. This should be done as soon as the weather and soil will permit, in the spring, in a similar soil (sandy) in which they were grown, and better at one year old than two. Transplant in beds, in rows six inches apart, and four inches in the row, and shade as seed-bed. The roots should be kept from the atmosphere as much as possible in transplanting. With good seed, a satisfactory success will be realized. This method will apply with equal success in propagating any variety of hardy evergreens.

ELGIN, ILL.

D. C. SCOFIELD.

Vineland Considered.

OUR recent remarks upon Vineland seem to have met with general acceptance. We aimed to be candid, for we had no feelings or prejudices to gratify. We knew of parties who had gone there, sunk their money, and were in a pitiable state of destitution and dejection.

We know that a large share of the fault of the failure of such people was due to their want of capacity to render such an occupation uniformly successful; but above all, we felt, in common with others, that Vineland had been *over-rated*, and we were supremely disgusted with the laudatory puffs which our exchanges contained upon this "remarkable success." These gave to the eye of the uninitiated only one side, and that always favorable. *The public needed the truth*, and we aimed to supply it, with strict honesty.

We have received a communication from a resident of Vineland, a person of considerable

influence, who, for one, seems to have met with moderate success, and although not sanguine of the future, still hopes for the best. We invite attention to his letter:

"VINELAND AS A REALITY."

TO THE EDITOR OF THE HORTICULTURIST: The article in your last issue under the above caption, I have read with great attention. You meant, of course, to be candid, and you certainly conceded some of Vineland's most prominent claims, namely, unqualified success in grape culture; a good prospect for success in pear culture; an excellent climate; a moral, intelligent population; good social privileges; pleasant drives and avenues; and a pleasant place for one to live who has "*means*," and wants to enjoy a quiet, contented life. Thank you for so much; and by the time you call again, you will concede something more, I think. We, who came here to stay, don't mean to be satisfied with any half-way success.

But, among your criticisms, you lay great stress on the statement that some people here are dissatisfied; that a great many places are for sale, etc. One might suppose almost, that you had never been out of New-York before—where the people are all happy and contented! You don't seem to be posted on the peculiar weakness of the rural districts. It is to "sell out," to "make a change." A Boston real-estate agent told me, some time ago, that it really seemed as if every body within twenty miles of Boston wanted to sell out. The Illinois correspondent of the *Country Gentleman*, B. F. J., (where land is inexhaustibly rich, and the people all happy,) says, in one of his letters, that eighty per cent of the farming population about him (Champaign County), want to sell, and emigrate "West." A gentleman, recently settled here, from Wisconsin, says that we "don't *begin* to know what hard times are; but if we *want* to appreciate the subject, to move there." He says, also, that if the land here could be colored black, four feet in depth, the doubters in its fertility would call it rich. This was not provoked by your article; still, it is a little hard on your judgment.

Should we infer, then, that Illinois, Massachusetts, and Wisconsin, are failures for farming; or that California is, which lured so many to ruin; or that Kansas is, which some dozen years ago put the whole north under contribution to keep her emigrants from starving? Not at all; the fault in each case is elsewhere than in the land. So it is *here*; but you failed to see where the real difficulty lay. It is in these complaining people themselves; at least, *it results from some personal circumstance which has no relation to the character of the soil*; want of energy, want of means, poor health, injudicious expenditures, want of tact and experience, or something of that sort. I have been here four years, and have had a good chance to see how these "For Sale" and complaining people manage; *you haven't had that opportunity*. Their modes of farming, generally, would cause them to fail *anywhere*. A few are lazy and shiftless; others are narrow-minded and penurious, "saving at the spigot and losing at the bung-hole." These are they who ship berries in worthless "gift" boxes and crates, and then complain to you about no profits. Others have no knowledge of farming, no tact or adaptation for fruit-culture, or any culture visible to their neighbors. Some make injudicious investments, put too much capital into buildings, and reserve too little for nursery-stock and family needs, until their places can become remunerative, thus showing lack of foresight. Not a few complainers are ex-professionals, some of them physically or mentally broken down. Now, when a man has spent the first ten, twenty, or thirty years of his manhood at doctoring, editing, preaching, painting, clerking, "lawyering," teaching, peddling, or perhaps dabbling a little at each, with no special success in any thing, if he fails in growing fine pears, or grapes, or strawberries, is it reasonable to jump to the conclusion that the *land* is at fault? If I attempt dry goods, and fail to make Mr. A. T. Stewart's fortune, will sensible people believe that the fault is in the dry goods trade? If a man comes to Vineland with very small capital, little or no experience in fruit-growing, buys a new place, prepares his ground very poorly, buys a dozen or two miserable specimens of nursery-stock because they are "cheap," and sticks them out anyhow, puts out a patch of small fruit on the same plan, all of which he neglects after planting, and then goes out to work by the day to earn "spending money," or else sits on a stump and howls about "the Vineland humbug," do you think *him* a competent witness in the case? Is his *land* at fault because it don't produce much except such seedy, weedy plantations as you saw? And yet, this class of people—the failing class—seem to be the only ones from whom you solicited information. The owners of the neat, tidy, handsome places which you saw—the growers of the fine fruit you saw at the fair—why didn't you question *them* about the land? A man in search of the truth shouldn't be content with hearing the worst side.

One important fact seems to have escaped your observation entirely. Though dwelling largely on the fact that many want to sell, you fail to notice that none *scarcely* are willing to sell except at a handsome advance! Property is in demand; many have sold, and made money by it, and this incites scores of others to try to sell; speculation is always enticing. A neighbor has, this week, sold a farm of thirty acres for ninety-five hundred dollars, which

cost him, six years ago, twenty dollars per acre. Other smaller places, with neat buildings and well planted to good fruit in full bearing, have brought from five hundred dollars to fifteen hundred dollars per acre, according to location. Is it any wonder, then, that slipshod, inconsiderate farmers, think their best plan is to sell out at a good price, and get fretful and impatient if they don't? I can cite you an illustrative case. I know a party here, who, four years ago, when I bought, asked thirty-five hundred dollars for twenty acres. During that year, he sold off the back five acres for five hundred dollars; has ever since had up a "For Sale" shingle; has made no improvements of much account, and though he could tell you a pitiable story, (perhaps he did?) as the result of the very shabbiest sort of farming, and stupid management; yet five thousand dollars is now the price for the fifteen acres, even though friends, at a distance, have to support him. The place is little else than a burlesque on farming. If I owned it, my first work would be to rip up the entire lot of grub-eaten and neglected trees and plants on the place, and burn them. Some inconsiderate purchasers have bought such for "improved" places, and they are sick, of course.

What you say about the commission men disliking Vineland consignments, is news indeed. We had supposed that, as they flock here every spring from Philadelphia, New-York, and Boston, to solicit consignments, and keep agents here, in some cases, all summer, who bore us half to death for patronage, that they must want it. But if they *don't* want it, they take a queer way to show it.

You think our soil is poor, particularly for the small fruits. Nevertheless, we raise something to sell, even with the drawback of much shabby cultivation by the class from whom you obtained so much distressing information. Here are our principal shipments for 1869: Strawberries, 209,844 quarts; raspberries, 39,962 quarts; blackberries, 132,353 quarts (with much of the crop made into wine); peaches, 7904 packages; melons, 629,470 pounds; grapes, 254,203 pounds; sweet potatoes, 5678 barrels, to Nov. 4th. Remembering that this is from a locality which produced nothing eight years ago, and that most of the cultivated land has not been tilled half that time, one might suppose this to be tolerably satisfactory.

You speak of the land as being "leachy." Those who cultivate it here don't think so—at least, I never heard any man make such a charge. Dr. Charles T. Jackson, the widely known Massachusetts chemist, while lecturing here once, answered "no," emphatically, to a question of this kind. Besides, could it be very leachy when much of the sub-soil, at the depth of from one and a half to four feet, is so compact as to yield only to the pick?

All that you say about the theoretical effects of the sun on small fruits, applies equally to all places south of us, where it is conceded that berries—strawberries, at least—are a success. The scalding you tell about, is exceptional—about as much so as frost in August, or thunder in winter. My own cultivation has been only fair with light manuring; and yet, from about three acres of small fruits, I sold seven hundred and forty-five dollars worth this year—some of the raspberries and blackberries producing only a partial first crop. Peaches, grapes, sweet potatoes, etc., yielded enough more to make my receipts about twelve hundred dollars for this year. The farm contains ten acres—not all productive yet from want of age, with four hundred pear-trees, and about one hundred and sixty peach-trees. Most of my vineyard, also, only bore its first crop this year. In two or three years more, with continued health, I mean to show you the figures for a total of two thousand dollars of receipts, an annual average of two hundred dollars per acre, and as much more as I can! I have no particular advantages over my neighbors to boast of—unless it be a pretty good load of debt, cheerfully carried, because I have faith in this Vineland soil. Others can do just as well if they would. Many, whose places are more advanced, are doing better. Be a little patient, and we will yet make even you concede that Vineland is one of the most fertile and beautiful and successful places in this country, blessing not its own people merely, but the world at large.

November, 1869.

VINELANDER.

EDITORIAL REMARKS.

WE saw a number of places whose owners had the "*weakness*" of holding their lands open for bids of sale at high prices. One place in particular, we saw, not far from the depot, on the corner of the avenue, containing five acres of land, a house worth one thousand dollars; no fences, and only a few blackberries out; no vines and nothing else growing, for which the owner had paid five thousand dollars, and was anxious to sell again for a slight advance. We thought that land to be thus valuable, must have something to make it so. What was it? We could not see any thing in the land to make it worth that sum. We are sure a family could not support themselves upon it. Where, then, is its value? If it will not produce a good reliable income, what is worth any thing at any price? We should judge that the "*weakness*" to sell, was a "*speculation*" rather than any intrinsic value of the land.

Dearf Pears.—We gave credit for what we saw, for we did not like thus early to croak about the future. At the address at the fair, after Dr. Warder had finished, Mr. P. T. Quinn

made a few remarks, stating that he had made examinations of their pear orchards, and he was obliged to confess that *dwarf pears* there, through a series of years for permanent culture, were a *practical failure*. *The entire audience applauded this statement*, thus admitting its absolute truth.

We spoke of *grapes* being a success; we were desirous of giving credit for those also, but we have since been told by a gentleman, in whom we have every confidence, that grapes are very successful for the first three or four bearing years, and after that, fail, drop from the vines, and are unprofitable.

Another gentleman, who lived near Vineland for over ten years, told us that it was money thrown away to cultivate such soil.

Another gentleman, who moved away from Vineland, said he did not care to stay in a place where *he had to draw manure to make the soil, and keep drawing to make crops grow, and after all, get nothing back for the trouble*.

We will refrain from any more quotations. If, after all, we allow Vineland all she claims for all her enormous shipments of fruit this year, and figure up the probable proceeds at fair prices, we find that upon that tract of ten thousand inhabitants, the fruit income this year is but little over one hundred thousand dollars, or only ten dollars to each inhabitant for his support one entire year. Is this making money?

The Botany of Oregon.

EDITOR HORTICULTURIST: Seeing that you take an interest in the botany of Oregon, I will tell you something about the evergreen trees which grow in the vicinity of Portland.

The most common among them is the red fir; yellow and white fir abound to some extent. As botanists widely differ in regard to their botanical names, I can not give them with certainty; all agree, however, that the red fir is *abies douglassii*.

It drops its cones entire, and each leaf of the cone has three peculiar bracts or sharp points. It frequently grows over two hundred feet high, and six or eight feet in diameter. Single specimens resemble in shape the balsam fir, but are more light and feathery. The yellow fir is also called *abies douglassii* by some botanists. It is quite certain that none but the most accurate and careful observers can detect any difference in the trees of the two kinds; but the difference in the color of the wood is very apparent; that of the one being red, the other yellow. Some botanists call this variety *abies grandis*, and say there is a difference in the cones of the two kinds; but from all the information I can get, I believe they are alike.

The white fir has smooth, white bark. Its leaves are in whorls, and in size and color resemble those of the yew; being larger and firmer than those of the red and yellow fir. Its cones are green, three or four inches long, being longer and of less diameter than those already mentioned, and destitute of their peculiar bracts. They break in pieces, and never fall entire. As an ornamental tree, I presume it would have that stiff appearance, so natural to the balsam fir. Some botanists call it *abies taxifolia*, which, I think, must be right. Others call it *abies grandis*.

The "Oregon cedar" (*thuja gigantea*) is nearly allied to the Canadian arbor vitae, but is larger in all its parts.

Our hemlock is generally supposed to be *abies canadensis*.

Our "Oregon pine" is called *pinus ponderosa*, on account of its heavy wood. It is very pretty as an ornamental tree.

The "Oregon yew" (*taxus brevifolia*) sometimes grows to the height of forty feet, and is eighteen inches in diameter. The small ones growing on our lawn are very pretty, and I presume it will make a beautiful ornamental tree.

We have a beautiful broad-leaved evergreen tree here, called *arbutus menziessii*. Its smooth, cinnamon-colored bark and broad, evergreen leaves render it very attractive, especially in May, when it is covered with wax-like flowers.

Mrs. S—.

The Country Gentleman.

WE are indebted to this good old journal for many valuable hints and ideas. We know of no newspaper conducted with more prudence and real wisdom, nor any so well supported by practical contributors in every department of rural labor. Every page is worth its price, for we have never found a waste line in it.

Label your Trees and Plants.

MANY cultivators and amateurs err greatly by not labeling their fruit or ornamental trees properly and *permanently*.

The old-fashioned way of tying a wooden label by a string to a branch of the tree is of no avail whatever. The marks soon wash away, and the string soon rots.

Other cultivators keep in their houses or offices a memorandum-book of the location of each tree, and its precise name; but it is often inconvenient to hunt it up, and refer to it, especially

if there are frequent visitors who like to examine for themselves, and do not wish to take up the unnecessary time of the proprietor. All this trouble and delay can be avoided, and made most simple, by using a plain slip of zinc, writing upon it the name of the variety in lead-pencil, and tying by a copper wire to the limb of the tree or branch of the shrub. The pencil-marks become more and more distinct with age, never washing out, while at all times the orchard or pleasure-ground bears upon the growing trees and plants the simplest and most complete directory possible to invent. We speak of these things from experience; for, in conning over the comparative growth of trees of different varieties near each other, *the label*, right before the eye, saves twice the time required to hunt it up in a memorandum-book.

Wisconsin State Horticultural Society.

THE annual meeting of this society will be held in Madison, the first Tuesday in February, 1870. The secretary is anxious that timely notice should be given, and horticultural correspondents have opportunity to prepare for an active participation in discussions, or, by sending fruit, add to the interest. We are pleased to see it in vigorous hands, and hope the meeting will be an enjoyable occasion.

Success with New Grapes in Seneca County, N. Y.

A CORRESPONDENT of *The Country Gentleman* has been trying many of the new varieties of grapes, and speaks highly of the Eumelan and Martha:

"The Eumelan vines have grown very strong and healthy, making good strong arms, and have ripened them to the tips of the vines. I have fifty-four Eumelan vines planted in the field. They are vigorous, and have shown no signs of mildew; leaves large, dark, and thick; wood short jointed; and I have no doubt that it will stand the cold equal to the Delaware or Concord. It is very firm and hard.

"I have the Walter grape on trial this season; it has made a good growth, but the leaves have mildewed; the wood has ripened about one third. It is planted by the side of the Eumelan vines, and has just as good a chance as they.

"I have about two hundred Martha vines growing. I think it the hardiest and best white grape we have; the wood will stand the winter's cold equal to Concord."

Downing's Fruit-Trees of America, Revised Edition.

WHAT a royal volume this is—eleven hundred pages—a perfect encyclopedia of our American pomology!

For many years we have all recognized the original edition as our standard work of reference; but now, with added honor and *increased dignity*, we, with greater joy, welcome this new edition as our well-nigh infallible guide. We find in it the name of nearly every variety of fruit cultivated in this country, or considered worthy of notice, and the various synonyms have been gathered together and reconciled with the utmost care and accuracy by Charles Downing, who has devoted his entire time with pleasure to the difficult and almost herculean task. We have no corrections or criticisms to make. The work is as full and complete as any living pen could render it; while the author's name, well known for honor and reliability, fully guarantees it to us for our confidence, and insures the high value of it for permanent reference. Published by John Wiley & Son. Price, \$7.50. No horticultural library, society, or active member of the horticultural trade should fail to have it.

Quinces.

GROW quinces by all means. Selling in New-York for *five dollars per hundred*, for first choice, and *three dollars per hundred* for second selection, they are to-day a more profitable fruit than either oranges, apples, or strawberries.

An acre, well planted, well cared for, kept free from worms or cureulio, is worth a yearly income of five hundred dollars per annum.

We observed in Central New-York this fall a noble crop of fruit on all the quince-trees; but, alas! how few were perfect. We would remind all those anxious to try their hand in orange culture at the South, that we have here at home, in our *Northern quinces, golden oranges* of still greater profit, and equally certain.

Wherever you have a running stream of water, line it with quince-trees, and there they will grow and flourish, returning interest upon interest, and adding capital to capital.

The Prairie Farmer.

DR. E. S. HULL, the new horticultural editor of *The Prairie Farmer*, throws in his vigor and practical knowledge to adorn the columns of our Western contemporary. Edgar Sanders contributes his mite of floriculture, always agreeable and entertaining; and hosts of other contributors combine to make *The Prairie Farmer* one of the best and most valuable agricultural journals in the United States. It improves constantly, and is ably edited.

The Small-Fruit Recorder.

ONE of the most valuable little papers that graces our table, thoroughly practical, timely, and abounding in useful information—it is one of our favorite journals. Its purpose and low price should commend it to every lover of small fruits. Published by A. M. Purdy, Palmyra, N. Y.

Floricultural and Arboricultural Notes.

A New Foliaged Plant.

THE *Gardener's Chronicle* records a new plant with handsome foliage, known as the *acalypha tricolor*, and presenting a striking and novel appearance.

"It is not only beautiful in itself, but it affords variety—a quality that is very often charming, and certainly is so in this case. The proper name of this plant is *acalypha wilkesiana*, and it is thus spoken of by Dr. Seemann, in his *Flora Vitiensis*: 'This shrub attains about ten feet in height, and its foliage has generally the color of our copper beeches; but very often the leaves assume a great variety of tints—pink, yellow, and brown, and then the plant is highly ornamental. It is often cultivated by the natives, (of the Fiji Islands,) together with other fine foliage plants, such as *dracena ferrea*, *codium variegatum*, *northopanax fruticosum*, etc.' The flowers are small, whitish, and borne on long, slender, feather-like spikes. What little elegance the flower-spikes may possess is quite eclipsed by the splendor of the leaves."

Victoria Regia—Power of the Leaf.

ALTHOUGH we are all familiar with the wonderful tales told by voyagers on the Amazon of the buoyant power of the leaf of *Victoria Regia*, now a common and well-known water-plant, I have not seen recorded the actual weight supported. It may therefore interest your readers to mention an experiment made here last week: A leaf was selected, the worst but one of eight on the plant, as we did not like to destroy the best; it was, however, pretty perfect, only a few holes within six inches of the margin; diameter, five feet six inches. On this leaf I placed a wheel three feet six inches diameter, with eight spokes made of thin wood, and a small foot-board, on which I stood and floated "high and dry." The wheel was necessary to distribute the pressure over a considerable portion of the surface, the texture of the leaf being exceedingly tender; (the footboard did not touch the leaf, but rested on the spokes of the wheel.) I have no doubt that if the wheel had been of the same diameter as the leaf, it would have served as a life-raft for a small family, as the next experiment will show. The wheel and foot-board were removed from the leaf and its surface left quite free. We then gradually spread over the surface shell-gravel previously weighed out in lots of half cwt. Basketful after basketful was shoveled on, up to three cwt., when the gardeners standing by would not believe their own eyes, and began feeling under the leaf, thinking there must be some other support than water; but no, the leaf floated quite free. Another twenty pounds, and another, and another, was thrown on, and yet the good ship remained seaworthy, and no signs of foundering. Four hundred and twenty-six pounds called, water began to leak in through the holes. The excitement, or perhaps the heat of the "stove" in which we worked, made us rather hasty and unsteady in loading the cargo, the weight of which was being augmented by the leakage, and an unlucky cast tilted the leaf on one side, the water rushed over, it crumpled up like a sheet of paper and sank in deep water, carrying with it a load of four hundred and thirty-six pounds, (besides water.) This is the greatest weight I have yet seen a leaf support, and the eight now on the plant may be considered equal to one and a half tons.—*William Sowerby, Botanic Gardens, Regent's Park, in Land and Water.*

Yellow Bedding-Plants.

I HAVE not yet observed in the discussions that have taken place concerning yellow bedding-plants, that any one has recommended for that purpose, the double *tagetes patula nana* or dwarf orange French marigold. This is certainly one of the best of all the yellow annuals for bedding or ribbons. It grows to an even height of about seven inches, commences blooming very early, and continues to do so until cut down by frost. It will also succeed much better on dry soils than will either the pansy or *calceolaria*. The dwarf-bedding *tropeolums* are also developing some new things; but the compactum section has beaten the Tom Thumbs out of the field, not only as regards habit, but also the quality and quantity of the flower. Golden King, of Tom Thumbs, might have made a showy bedder, but for the very undesirable habit it has (common alike to all the Tom Thumbs) of crowding up its bloom with foliage. Those who have grown it, and been disappointed with the result, should not allow themselves to be prejudiced against the plants of the compactum section, as they are quite free from that

defect. Luteum Improved is a capital thing ; and there are some fine orange colors also to be had. Indeed, one might make a flower-garden exclusively from dwarf tropæolums, so great is the variety of colors that occur amongst them. I heartily acknowledge the good qualities of the yellow pansy and *viola lutea grandiflora* ; but in arranging masses, different heights are necessary ; and to meet this want, a variety of plants must be resorted to.—*Alexander Dean, in Gardener's Chronicle.*

Hints for January.

Orchard and Nursery.

"FORWARD!" is the watchword of all progressive horticulturists ; and to progress, we must study and educate the mind and taste of the young as well as the older. If we would educate the young, we must do it by associating them with the refined and noble of nature as well as of art, rather than sending them among the coarse, sensual, and semi-barbarous ; for the nature of man is such that he is largely governed by, and partakes of the nature of, his surroundings ; if his surroundings and associations are pleasant, contentment is more sure to follow, and an interest is much easier excited.

The "work-a-day world" take less interest in their everyday life because he sees so little of Nature's works and their beauties ; his education has barely raised him to obtain his bread from day to day, with little further thought. How different is it with him who endeavors to develop himself fully while he gets his "living." Although he finds it hard work, he goes about it thankfully, feeling assured that he will receive his reward, without forebodings of famine and ruin. As he goes to his early labor, he sees beauties on all sides which seem to inspire him with love and veneration of the all-wise Provider and Protector. The general awakening of nature, the beauties of the rising sun reflecting his rays over the sky, the glistening dew-drops sparkling on each spear of grass and flower that meets the eye, the song of the birds meets his ear ; all these and much more tend to fill his mind, and speak of beauty and wisdom ; every thing seems to have a voice pouring out praise to the Maker of all. In every thing he sees some new beauty ; the "plodder" sees nothing to admire in all this : his education incapacitates him from realizing the beautiful in nature, and he does not believe in creating enthusiasm out of any such nonsense ; all labor with him is hard work, and that he accepts as his lot, with perhaps reluctance and murmuring ; all the beautiful of his nature has been so long hidden or covered up, that it can seldom look out of the windows of his soul.

We believe that the Creator has planted in the breast of every man a principle and sense of the beautiful, and that it is capable, by his own free agency, of being developed ; and if not thus developed, it is the fault of the individual, and the penalty thereof he must suffer ; he goes through life blindfolded, as it were.

The true appreciation of the beautiful is the result of much self-culture, added to natural quick-sightedness. All are not endowed with the same natural talent, and of course can not attain to the same standard ; but each can develop the "talent" he is intrusted with by education.

The most successful fruit culturist makes that his constant study : visits orchards and fruit plantations, far and near, comparing one with another ; notes excellencies and defects, and uses his information thus obtained as an aid toward advancing his own culture. When he first commenced, he knew but little concerning the apples, pears, etc., which were best adapted for his own climate, soil, etc. ; his first step was to look about him and see what had been attempted and with what success ; informed himself of the most successful practices of others in different localities, deducing therefrom what he thought applicable to his own case, visited horticultural shows, etc., of his near locality, or markets, to inform himself of demands, and to educate his eye ; he profits by all, and from it deduces much that he turns to his own account, adding from time to time to his stock of information, and increases, as it were, money at interest.

But the reader is ready to exclaim, "What has all this to do with hints for the duties of the orchard and nursery?" Much, in various ways. Every book must have, and is incomplete without, its preface. Unless we can moralize upon our every-day life, we are much less qualified to meet and combat our every-day duties ; but moralizing aside, we proceed to the practical.

Often a few moments' time devoted to careful examination around trees in the orchard and in the nursery, at this season of the year, will prevent injury sure to follow if mice, rabbits, or other vermin are suffered to commit their depredations undisturbed. Look among your trees often, and if any trees are gnawed by mice, etc., at once cover the wound by banking around the tree, if with nothing more than snow, tramping it down hard, till a favorable opportunity

offers to repair the mischief, which is well done, as we happen to know from observation, by inserting a suitable number of grafts, bridging over the wound, inserting one end in the bark of the stock below and the other above. Trees completely girdled we have known saved in this way when taken in season and carefully attended to.

Sometimes it is the case that there come rains and thaws in December, after the ground has once frozen. Where trees have been newly set, and the ground is soaked or overflowed with water, and perhaps puddles are left standing around the trees, which are often, by sudden changes, liable at this season to be frozen hard, and the trees are killed or suffer severely; to avoid this liability, see that all surface water is led away from the trees, and has a ready outlet; narrow channels may be cut with the hoe, often sufficient for ordinary purposes; a furrow turned with a turning-plow would form a more effectual surface-drain. Surface-drains are often essential to carry off water when the ground is frozen, even when the ground is well underdrained, which all orchard and nursery grounds should be, unless well drained naturally, and then it is an open question that under-draining is not beneficial. The whole principle involved in thorough drainage is too little understood by fruit-growers and cultivators of the soil generally in this country; but as experience is the best of school-teachers, it is becoming better understood, as fruit-culture increases and knowledge is extended.

It is said that "the man who makes two blades of grass grow where only one grew before is a benefactor to his race." If so, the individual who, by careful experiments, extending over a term of years, develops facts of great importance to horticulturists and agriculturists, is certainly deserving of the gratitude of all cultivators. Some one must be the pioneer in fruit-culture in every newly-settled country, and before success is met with, experiments must be made. There is less of a risk where these experiments have been determined for us; here, before planting, or about to renovate an unproductive orchard, it is of the greatest importance to know, and have determined on beforehand, the varieties that are best suited to the locality, bearing the largest quantities of the best kinds of fruit.

In looking over your orchard, you may, perhaps, see a small enlargement, apparently, of a twig; on looking closer, you will see it is of a shining, glazed appearance, and consists of numerous small eggs; they are the eggs of the "tent caterpillar," one of the most noxious insect foes that infest the orchard. Cut off and burn every one found, thus saving the defoliating of your trees next summer.

It is surprising what an amount of information can be brought out by a few individuals coming together of an evening and discussing in a free and easy manner fruit culture; and what an impetus it will give toward improvement in fruit-growing if such meetings are regularly held and attended, each member contributing from his experience both failures and successes, with modes of culture of particular varieties in different soils, etc.; and then if an abstract of these conversations be given to your horticultural journal for publication, a much greater amount of good is done by the greater dissemination of useful information; in that way thousands learn what the original few talked up among themselves. These long evenings of winter are just the time to favor the formation and meetings of horticultural clubs. Try it in your school-district, and observe the influence it will exert; but do not hide your light under a bushel, but rather let it shine by telling it to others.

Fruit-Garden.

ALL specialties need operators peculiarly adapted to them, and they must be educated in them to the standard in order to be successful; and adventurers in fruit-growing are beginning to become aware that the time-honored maxim, that "A man must understand his business in order to make money by it," is a true one. A hasty embarkation in any untried pursuit is usually a somewhat hazardous business, resulting most frequently in pecuniary loss and hasty abandonment.

A man to be successful in fruit culture must know what varieties best suit his soil, climate, and locality, essentials only found out in experience; he must understand the details of good culture and management, which are not learned by reading or observation even, but in connection with actual experience, requiring years of practice to master in full. Markets must be studied, in order to find the best, and how best reached. Fruits must be selected with honest care in assorting, packing, and handling, as well as suitable packages; and with all, the man must have the "gift" to know how to best dispose of it in order to obtain the best remuneration.

The lessons of 1869 in fruit culture will not have been without their effect if they be well studied and the lessons applied. Fruit culture has its disappointments as well as successes; it furnishes no more royal highway to wealth and ease than any other culture of the soil. Every branch of soil-culture has its care from seed-time to harvest. Weather, weeds, insects, etc., often destroy the anticipations of the too sanguine gardener and fruit culturist. Spring sometimes brings forth crops which summer fails to nourish, or summer may nourish, and fall

weather, etc., may destroy. Nothing is absolutely certain; but he who best performs his part meets with the best success, and he is the one who studies his profession the closest.

As we multiply and concentrate our fruits, just in that proportion do noxious insects, etc., multiply and concentrate; insects that heretofore have been pronounced entirely harmless are found, upon closer investigation, to be destructive to our interests, as witness the "Garden Millepedes," which all naturalists have pronounced as not destructive to fruit or vegetables; but Dr. Fitch informs us, through *The Country Gentleman*, that of late he has had his attention called to their destruction of certain garden products, and from closely watching and investigating their habits, he now finds them injurious to certain garden vegetables and fruits, among which are cucumbers and strawberries, where they are found in large numbers, as they are in some gardens.

Apples and pears, stored for family use, should be carefully looked over at this season, throwing out all rotten or specked ones; and if pains are taken to wipe the others dry and clean, they will keep all the better for it, especially if the box or barrel be also wiped out and dried.

Any stakes, trellises, etc., needing repairs, or new ones gotten, can better receive the needed attention now than in a more busy season. See that the trees, vines, etc., do not get overloaded or broken by snow or ice. A little attention may save some choice tree or vine.

Lawn and Flower-Garden.

EXTENSIVE grounds devoted to lawns and gardens, if properly kept, are apt to be found expensive luxuries, which but few feel disposed to invest in judiciously, however much they may admire their beauty. Much money is often spent on grounds which is an actual waste; too much is attempted, and expenses invariably exceed calculations, when we think we have made our estimates most liberal. It is best to have one acre well planned and neatly kept, than ten acres less thoroughly done.

The planning and ornamenting of grounds neatly and with excellence, is a task that only the experienced and practical gardener can do; the amateur is too anxious for immediate effect and overdoes, not taking into consideration that the small tree set to-day will in a few years become a tall and spreading one, or that however pretty the effect of numerous winding paths, that they are expensive to keep in repair; as a consequence, he introduces too many. He imagines that walks and paths winding here and there will add greatly to the beauty, not properly considering their cost, and that a walk not kept perfectly neat is at best but an unsightly object in any otherwise attractive grounds.

In planning any new grounds, before locating any walk or path, the question should be asked, Is such a walk or path absolutely necessary? All other questions should be subservient to this, for utility is the essence of beauty in arranging and ornamenting any grounds.

With a judicious selection of a few trees of different varieties of evergreen and deciduous, should be introduced a choice variety of shrubs, on which we should depend largely for ornamentation. Clumps of shrubbery often have a beautiful effect; and, once planted, require little further care for some years. The spiræas, lilacs, syringas, wygeloes, deutzias, forsythias, honeysuckles, japonica, etc., are among the desirable varieties to select from. Of trees, we have the various pines, spruces, firs, maples, ashes, oaks, lindens, magnolias, tulip-tree, elm, etc. Others there may be which would be desirable in extensive grounds; but we think that a selection can be made from these that would meet the desires of the fastidious for most grounds.

The manure-heap is the gardener's great bank of deposit and drafts, which appropriately is open to receive deposits at all seasons, and especially so during the leisure of winter. Without a plenty of rich compost and manure, very little success need be hoped for in any garden culture. Leaves gathered from the woods and grounds form one of the best of ingredients to add to the compost-heap, and especially if used as litter and mixed with the horse-manure are they excellent for hot-beds. For flowers generally, leaf-mould, leaves powdered by age, mixed with some soil, is very acceptable. For most kinds of flowers, manure, thoroughly rotted and fine, is the best, generally, and to have it the compost-heap must be turned over several times, lightened, and a little moisture given it to assist fermentation.

To keep walks and drive-ways in best condition, they should be rolled as often as the weather draws the frost to soften an inch or two of the surface, whether they be traveled or not during winter.

Good results may be expected if the lawn, flower-beds, borders, etc., are covered with a good dressing of manure, free of weed-seed, at this season. The roots of grass, plants, etc., are protected and strengthened, and come forward earlier and finer in spring, as a reward for such attention.

Broad-leaved evergreens, which are liable to have their leaves injured from the bright rays of the sun in winter, will be protected by having a shade from pine boughs set around to break off the direct rays of the clear sun.



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Among the Flowers.

BY ANNE G. HALE.

II.

Hanging baskets and their plants.

FOR the cultivation of low standard plants, especially such as are of spreading growth, and climbers and trailers, hanging pots or baskets are very desirable. Many of these are, in themselves, beautiful, and when filled with luxuriant vegetation are, of all floral embellishments, the most effective. They are also the most unobtrusive. Where there is no room for a flower-stand, or the lower part of a window is needed for other purposes, a basket or pot may be suspended above, out of the way of other arrangements, and its contents thrive and flourish better than their companions in the lower atmosphere. Throughout the cold weather, in every occupied apartment where there is a window, there is room and opportunity for something of this sort, which, while enhancing the charms of all inner appointments of the house, will lend great attractions to its outer appearance.

Nor is this beauty available only for cold weather and within doors. After a month of rest in the spring, these same baskets and pots, having been put in readiness for new growth, may serve as ornaments for the varendah or the garden all the summer; the frosts of early October being the warning signal for removing them to the parlor. This convenience and ready adaptability commend them to general use. But the amateur in floriculture prizes more highly the simplicity of management and the ease of culture which they afford. For basket plants are allowed to grow almost at their own sweet will, after Nature's own designs of grace and symmetry, seldom needing more than a touch of the finger-tip to direct their young shoots into lines of beauty; the basket itself requiring no more powerful agency to give all its contents an equal share of sunshine and shade. So any suspension arrangement for flowering plants is especially appropriate for those ladies who have little leisure for the training of standards, and neither time nor strength for the care and cleansing of their pots or the changing of their positions.

The salmon-colored pots—of slack-baked clay—which rest in deep saucers that are furnished with chains to hang them by, are the most suitable for holding single plants. They are also the healthiest; for, besides the hole at the bottom for draining, the material of which they are made is porous enough to expel much of the excessive moisture from the soil. Then, the saucer being admirably contrived for holding all drippings and drainings that would otherwise fall to the furniture and carpet of a room, makes them favorites with all lovers of neatness, which, of course, all flower-fanciers are.

The glazed pots, hung from their brims by strong cords, wear an air of great neatness, and for this, merely, are preferred by some persons. But the small holes drilled near the apology for a saucer that is attached to their base are of little use as outlets in case of over-watering, and yet by their almost continual dripping vex many a patient soul who, even among her flowers, must have a mind intent on tidiness; while the fate of most plants that are set directly in these pots is like that of the brothers immured in the castle of Chillon—one after another pines and dies, decay creeping from the root upward, because the soil becomes sour and corrupt. They will do very well to hold a smaller unglazed pot, with a good saucer, or if there is plenty of moss packed around this inner pot to absorb its moisture.

Large sea shells (nautilus or conch are best) will hold soil enough to support trailers, and are a tasteful window ornament. Drill three or four holes in them and insert cords to hang them by. The rind of the gourd and of the scallop squash, make elegant baskets for drooping plants. Cocoa-nut shells, whether in their natural state or embellished with rustic work, are pretty as hanging-pots. So also are the iron urns used upon stoves for the evaporation of water—and not unfrequently their covers; these are often of tasteful designs, and if painted green or brown look finely partially covered with vines or trailers.

Handsome baskets of rustic work and exceedingly pretty wire vases and baskets, having appliances for suspension, may be found at flower stores. These are generally rather expensive. Any one who can handle a jack-knife and a screw-driver, can make the first, and whoever can use a pair of pincers, the latter.

A simple and yet a pretty rustic basket may be made of three forked branches of any old tree—the more thickly bestudded with little branchlets, and the more gnarled and mossy, the better. Get those with drooping gray-beard moss, if possible. The sticks should be less than an inch in diameter and six or eight inches in length. Unite the three forks by their heads, winding them with very strong twine or pliable wire, and then with the same material fasten the branchlets here and there, to form a sort of lattice-work, and wind the gray moss over all fastenings. Then in the same way attach stout cord for handles. Set in this a common clay pot with its saucer, crowding around it all sorts of moss, and you have “a thing of beauty.”

A wooden chopping-bowl makes a nice large hanging-pot for “a happy family” of various standards and trailers. Paint this a dark brown, and bore in it a number of holes; these are to hold the screws that will fasten its rustic work. Get gnarled and crooked grape-vine roots and branches, or beech and oak boughs. Cut these into pieces of such length as will surround the bowl in basket form, and strip off the bark. Bore two or three holes in each piece with a gimlet or a red-hot nail or wire, and by means of these holes screw the branches to the bowl. In the same way, or with glue, fasten upon and among them fir or larch cones, or birch-burs and acorns in their cups, and then varnish the whole. Before filling soil into this basket, line it with a thick layer of moss to absorb all excess of water.

Wire baskets and vases may be made of any shape. Use annealed wire. Cut from this, with pincers, five or six pieces six or seven inches long; then tie around the middle of some well-formed bowl or vase a strong cord, and under this cord pass these wires, arranging them at equal distances, and bend them with the help of the pincers to the shape of the bowl or vase. Weave the long strip of wire in and out among these wires two or three times around the model, to keep the shape, and then cut the cord and continue the weaving till the basket is as stout as you desire, and at the last bend and twist the ends tightly to keep all fast. Twist handles of wire, or tie strong cords at the rim to hang it by. Place within this a lining of the soft, creeping moss that grows about the roots of old trees, and you have an elegant receptacle for a common flower-pot that holds either standard or creeping plants.

Moss baskets and vases may be made by taking for a foundation these wire baskets before they are closely woven, surrounding them with strips of paste-board, which is completely covered by pasting or glueing upon it gray and green lichens, with a few bits of the creeping green moss and a little of the coral or red-cup moss: if none of this last can be procured, heat red sealing-wax, and with it touch the rough edges of some of the lichens. By the exercise of a little ingenuity these baskets are very tasteful affairs, especially when occupied by pots holding thrifty plants.

Good garden soil is the best for hanging pots. Some plants need this slightly modified,

however, by mixing common sand with it ; others require leaf mould or bog earth, or the soil from the margins of ponds and woodland streams, in small proportions ; but where these cannot be obtained, garden soil, enriched by the fertilizer mentioned in the previous paper, gives very satisfactory results.

A fine low standard for a small hanging basket is the *Primula Sinensis* (Chinese Primrose), bearing white or crimson flowers. Soil—two parts garden mould and one part sand. Water often, but slightly. Raise from seed or division of the root in sandy soil. Take offsets from old roots in May, re-set them in fresh soil and keep the pots in the shade till September. *Gloxinias*—flowers of rose color or crimson—make a fine display in similar pots. They need the same soil as the *Primula*. Water scantily, except when in bloom. Propagate by division of the roots, or a single leaf set in damp sand. Just within the edge of the pot set *Lysimachia nummularia* (Money plant), *Nepeta Glecoma* (Ground Ivy or Gill over the ground), or *Coliseum* vines. These have yellow, blue, white flowers. They will throw out trailers three or four feet long. Twine some of these around the chains or cords that sustain the basket.

In the same sort of pots and soil, with the same drooping plant, *Cyclamen punctatum*, or *C. persicum*—flowers white, pink or purplish—are very pretty. When fresh soil is given, old bulbs start new ones, in September, after the summer's rest in the shade. Or a root or offshoot of *Mesembryanthemum crystallinum* (Ice-plant or Spangled bean), whose stems and leaves, when the sun shines upon them, glitter as if covered with pearls and diamonds. One of these plants will soon spread over the surface and hang prettily around the basket. The flowers are small—pale crimson or white. Or two or three *Verbenas*—white, scarlet and maroon, or white, pink and purple—spreading and drooping, and creeping and climbing as they choose ; they flourish much better thus than when trained and trimmed. Start new plants from seed, or small branches, every June. Keep them rather dry, and shaded, till September, then give them plenty of sunshine and increase the water, but never water them very freely.

In baskets of the same size—six inches ; but in good garden soil only—set a *Nierembergia gracilis*, with its slender stems and fine foliage and pretty white or lilac flowers, together with a *Mahernia odorata*, of similar habits and foliage, with blossoms of pale yellow, very fragrant ; and a *Lobelia cœlestina*, or *L. gracilis*, with its tiny leaves and delicate white or blue flowers, that will droop over the basket's rim. Start these plants and treat them like *Verbenas*. Or *Petunias* of various shades, giving them the same treatment and allowing them to grow as they choose, like *Verbenas*. Or three or four bulbs of *Oxalis*, which, if started in August, after three months of complete rest in a dry state, will fill and cover the whole basket with their foliage and flowers from November till April or May. The varieties bearing white, scarlet and yellow, make a pretty group, or pink and white and purple.

Baskets a foot in diameter, filled with the same soil, may hold a zonale geranium—*Tom Thumb*, *Fire King*, or *Mrs. Pollock* ; or *Mountain of Snow*, with its white-bordered leaves—and an Ivy-leaved geranium to climb up the handles ; with a *Maurandia*, a *Solanum*, or two or three *Vineas* to trail around the brim and about the basket. Raise these all from branches rooted in sand under glass in May. Water frequently, but sparingly, till in bud, then give the fertilizer mentioned in the previous chapter, and plenty of water.

"A happy family," to fill a very large basket of good garden soil, should have one of the geraniums above mentioned for its centre ; a *Euphorbia*, with silvery foliage ; *Cirsus*, crimson ; *Coleus*, maroon or bronze ; two *Begonias*, white and blush colored ; a *Bouvardia*, scarlet flowers ; a *Sanguinaria*, white flowers, and *mignonette* and *alyssum*, with money plant ground ivy, Irish ivy, *Madeira* vine, *Solanum* and *Maurandia* for climbers and trailers. Raise the standard plants from slips or branches rooted in wet sand, under glass, in May or June. Transfer them to the basket in September, and at the same time set with them cuttings of the vines. Keep the basket in the shade and water it scantily for a month ; then give it the full sunshine and water enough to keep the soil from crumbling. When buds appear on any of the plants, give it the fertilizer once a week for two months. Be sure that the air of the room in which it hangs is moist by the evaporation of water upon the stove or furnace, and open the window near by twice a week for a quarter of an hour, shielding the plants from the draught by newspapers pinned into cone shape around the basket. With this management the "happy family" will be your pride and delight.

Two New Pears.

BY CHARLES DOWNING, NEWBURGH, N. Y.

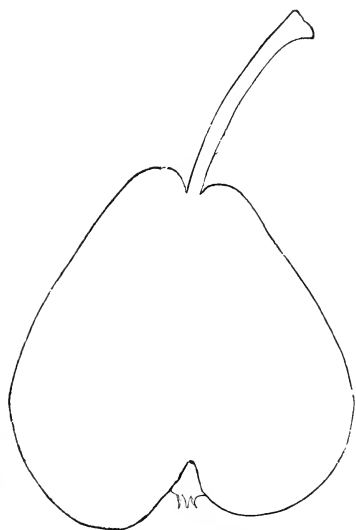
Summer Beurre d'Arenberg.

(Beurré d'Arenberg d'été.)

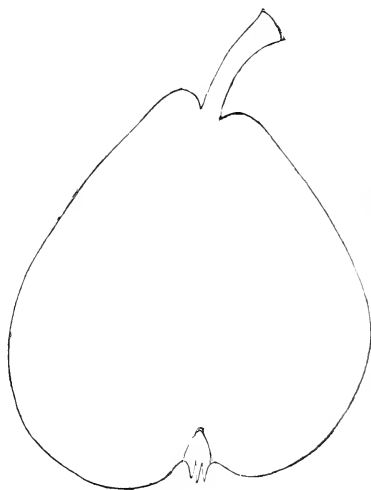
THIS new pear was raised from seed of Beurré d'Arenberg, by Thomas Rivers, of Lawbridgeworth, Herts, England, and fruited in the garden of James H. Ricketts, of this place, the past season, from a tree imported from Mr. Rivers.

The tree is a healthy, vigorous, upright grower, and judging from one season's fruiting, an early and abundant bearer.

Fruit, below medium in size, oblate, obtuse, pyriform; skin pale, greenish yellow, considerably netted and patched with russet, especially around the calyx, and pretty thickly sprinkled with russet dots; stalk long, rather slender, a little inclined, inserted in a small cavity; calyx closed, or partially open; segments short, erect; basin narrow, deep and much furrowed; flesh whitish, a little coarse, juicy, melting, sweet, slightly vinous and slightly aromatic; quality very good; ripens last of September and first of October.



BEURRE D'AREMBERG.

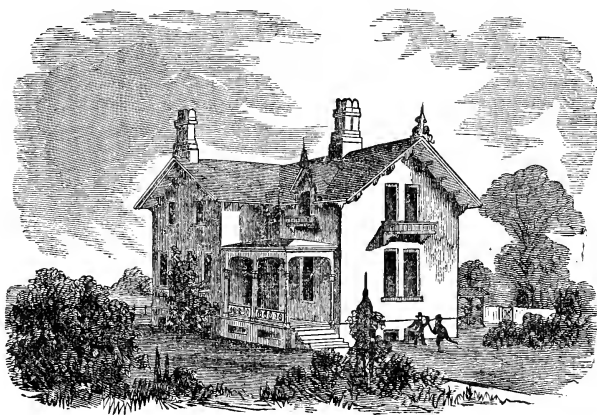


BRITISH QUEEN.

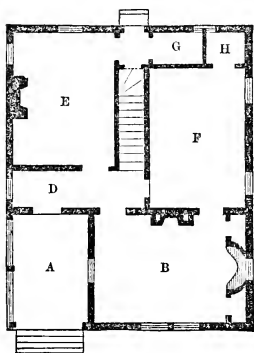
British Queen.

An English variety, which fruited here for the first time the past summer, and was of fine quality. It was raised by Mr. Ingram, of Frogmore, England, and said to be a seedling from the Seckel, crossed with the Marie Louise, and from what I have seen of it would think it a vigorous grower, an early bearer, and very productive.

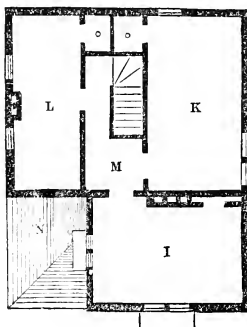
Fruit medium, obovate, pyriform, slightly obtuse; surface a little rough; skin yellow, mostly covered with a light cinnamon russet, sometimes brownish red in the sun; stalk rather short inclined, inserted in a small cavity; calyx half closed; segments short, narrow, erect; basin rather small, uneven; flesh whitish, fine grained, melting, buttery, juicy, sweet, slightly vinous and rich; quality very good; ripens in October and first of November.



A Convenient Cottage.



Ground Plan.



Chamber Plan.

OUR illustration of a Cottage this month is simple, yet attractive. With nearly every one just building a new house, the aggregate expense is usually so enormous before completion, that many a purse is sadly depleted, and the other improvements contemplated are necessarily deferred to an indefinite period in the future. The above design, in the hands of a tasty and competent architect or carpenter, can be erected in the suburbs of any of our large cities for less than \$4,000, or in the rural districts, where building materials are cheap and convenient, for less than \$3,000—perhaps \$2,000—and still permit a large amount of ornamental, but substantial work without and within. The dimensions are as follows:

House, 25 ft. by 32 ft.
 A. Verandah, 8 ft. by 12 ft.
 B. Parlor, 11 ft. by 16 ft.
 C. Hall, 4 ft. wide.
 D. Kitchen, 10 ft. by 14 ft.
 E. Sitting and dining room, 10 ft. by 15 ft.

G. H. Closets.
 I. Bed room, 11 ft. by 16 ft.
 K. Bed room, 10 ft. by 18 ft.
 L. Bed room, 7 ft. by 18 ft.
 M. Hall, 6 ft. wide.

The only noticeable peculiarity of the design is the parlor window, arranged so as to admit of its being used for the purpose of a window conservatory for growing flowers and ornamental plants.

Ornamental Trees.

Birch—American White.

THOSE of your readers who have crossed the large prairies of the West in winter, can readily realize the beauty there is in a grove of trees, and how only a "patch" of them "looms up" up in the distance, when viewed as far as the eye can see it, and how deceiving it is as you draw near, to find instead of a forest to travel in, it's only the surrounding of a farm-house. Yet, thoughtful farmer, we said, you have enlisted in the cause of HOME ADORNMENT. Trees, fruit and flowers will be sure to thrive in your hands, and the land owners and their families will, ere this generation passes, have cause to rise up and call you blessed. Here we are upon a forty-mile prairie in Iowa; no timber in sight save that which man has planted. Sure this is an oasis, where we will rest, and with a barrier between us and the north-western, we will think that this man's buildings and stock are well protected, and his farm the first to be sought for in market, and all is sheltered from the fierceness of the weather simply by clumps of trees judiciously planted. Reader, did you ever realize how little the cost and how changed the aspect. The one would seem a little paradise on earth, so cool and shady, and yet so mild and temperate at the season when zero tells the story to all surroundings. We often wonder, and express surprise, at the dilatoriness of the prairie farmer at so great a remuneration at so small an outlay. The one is a home where all will delight to dwell; the other a mere domicile, man's journeying place, lingering but a little while and then ready to move.

But I started out to say something of one of the best of our ornamental trees. The White Birch is found very common in the State, along the banks of streams and rocky cliffs; remarkably easy to transplant, and of rapid growth. There are many sorts; the white class being valuable and perfectly hardy and ornamental, and very vigorous, and seems to be well adapted to the soils of the West. The white, or, as it is sometimes called, the yellow, is specially desirable. The silver whiteness of the trunk, in contrast with its surroundings; its straight, spiral form, and, added to this, the long, dark, slender branches which, with a little age, become very drooping, and we can hardly name a tree that will give better satisfaction than the American White Weeping Birch, either in clumps or single specimens.

O. S. W.

MADISON, WIS.

Editorial Notes.

The *Cut-leaved Weeping Birch* (*laciniata pendula*) has now become the most popular of the varieties of the Birch for use in ornamental grounds. Combining grace with miniature stateliness, and peculiar beauty of bark, the slender drooping branches and delicately cut leaves enable it to become an almost indispensable ornament for the lawn or the shrubbery. The finest specimen we have ever seen is in the grounds of T. C. Maxwell & Co., Geneva, N. Y., the height of which, as nearly as we can remember, is about fifteen feet. The accompanying illustration is one of a tree standing in the grounds of Ellwanger & Barry, Rochester, N. Y. Undoubtedly there are many specimens in this country still larger.

John Grigor, the eminent Scotch arboriculturist, than whom we think there is no superior in England or America, gives a few notes on the birch, which we quote:

"The common tree, where wild, attains a height of about thirty feet, and the weeping variety about forty feet; but both sorts rise to a much greater height when formed in plantations, particularly when interspersed with other trees. Some of the finest weeping birches in Britain stand on the banks of the river Findhorn, near Forres, in Morayshire; these are sixty feet high, with trunks upwards of two feet in diameter, and display pendant masses of spray ten feet in length, adding a graceful variety of verdure to scenes in themselves of great beauty.

"In nurseries the weeping variety is the kind chiefly cultivated, and notwithstanding the disposition of the plant to grow wild, it is generally the most uncertain nursery crop of any hardy tree.



American White Birch.

"*The Weeping Birch* commonly attains the age of fifteen or twenty years, and in a cultivated state twenty or thirty feet in height, before it assumes a pendulous form. The extremities of the more vigorous lateral branches then begin to droop, while the top shoots generally hold on in an upward direction until the vigor of the tree subsides. The beauty of the tree, when embellishment is the object, may generally be much enhanced by a careful thinning out of the branches when they appear in a thicket in the top. Immediately after the lateral branches first begin to take a downward direction is the time for thinning them, at the same time giving the surface of the ground, for a few yards in diameter around the trunk, a coating of two and three inches deep of thoroughly rotted manure and decayed leaves, removing all surface vegetation on the ground before applying it. This adds vigor to the descending spray, the beauty of which, on well-grown specimens, is surpassed by no other kind of pendulous vegetation.

"*The Cut-leaved Weeping Birch* is one of the most elegant trees of its class in cultivation. It is propagated by being engrafted on the common sorts. Although it often produces shoots of great vigor when placed on strong stocks, sometimes three feet in one season, yet it only becomes a small tree, seldom in the north of Scotland exceeding twenty feet in height. It has the advantage of at once assuming the pendulous habit of growth; but the tree, though of great elegance in foliage and form, is not so robust and enduring as the native weeping tree."

Governor Wood Cherry.

THE horticultural world are greatly indebted to Dr. J. P. Kirtland, of Cleveland, O., for a large number of seedling cherries, the largest portion of which have proved to be of more than average merit, and one at least, the Governor Wood, hardly excelled in popularity and suitableness for general culture. At the late session of the American Pomological Society, after counting up the aggregate votes of the members in behalf of their favorite cherries, the Governor Wood, Coe's Transparent, and Downer's Late received the largest number. The general expression in favor of the Governor Wood admitted it to be successful in nearly every locality wherever tried, East, West and South, while its quality entitles it to rank as "*best*."

The following is a correct description by Elliott:

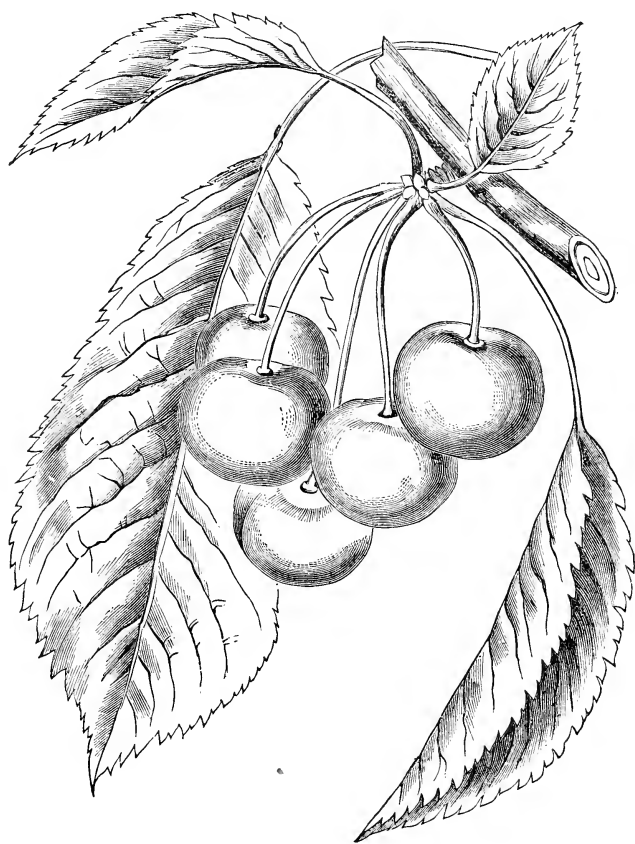
"Fruit, large, roundish, heart shape; color, rich light yellow, mottled or marbled with a beautiful earmine blush, and when grown fully exposed to the sun it becomes a clear red; suture, half round, followed on the opposite side by a dark line; flesh, light pale yellow, half tender, juicy, sweet, with a rich, high flavor; season, middle of June.

"*Tree*, a vigorous, healthy, strong grower, forming a round regular head, very productive; flowers large; foliage abundant."

In an early volume of *THE HORTICULTURIST*, notice was made of it by Mr. Barry, the Editor, as follows:

"In beauty of appearance, and delicacy and richness of flavor, we have seen none that equals the *Governor Wood*. We have had it in bearing some four or five seasons, and it has been uniformly fine; so it has proved in other places, as far as our knowledge extends. We said, the first year it bore, that it was one of the finest table fruits we ever saw, and to-day we consider it as having no superior. It will not be so popular in the market as the *Black Tartarian*, *Yellow Spanish*, *Napoleon*, or some others, but every amateur will desire to have it in his collection. Flesh is tender, like *Downer's Late*, and others of that class, juicy, sweet and fine flavored. The tree is an erect, handsome regular grower, hardy and very productive, the branches being literally covered with fruit, as though they were tied on; the fruit, we think too, is the least liable to rot, and hangs longest sound on the tree of any variety we know ripening at the same time."

Unlike many other commercial horticulturists, Dr. Kirtland has preferred to introduce his new seedlings to the world by the *free distribution of grafts* into all parts of the country, and we know of no honor more worthy to bear than to have one's name handed down to posterity as the *originator of a successful and popular new variety of fruit*.



Governor Wood Cherry.

The Cultivation of Small Fruits.

BY D. MCLAURY.

Read before the Middlesex Farmers' Club, New Brunswick, N. J.

MR. PRESIDENT: The constantly increasing demand for small fruits, and the idea that it pays better than general farming, has prompted many of the most active and enterprising farmers to devote much attention to this subject. There is at the present time, in our State and in this county, a large amount of capital invested, and much valuable land devoted to the culture of small fruits. Some have succeeded and others failed.

Too many appear to think it is all profit and no expense; but a large number, after a few years careless experiment, change their minds and think it is all expense and but little profit. It is by earnest perseverance that we succeed. The fruit grower who is successful must be wide awake, and keep himself posted with respect to the kinds of fruit for which there is the greatest demand, the soil best adapted to its culture, and the most economical way to cultivate.

This is a pleasant and delightful business for a person possessed of an inquiring and progressive mind; but he who would plod along in a careless way, without energy enough to use either his hands or his brains, both of which are necessary, had better let fruit growing alone, and devote himself to some business that does not require so much attention.

With respect to soil for strawberries, raspberries or blackberries, I prefer a clover sod on a heavy sandy clay loam, plowed in August or September, previous to planting the fall or spring, or else a corn stubble, which was a heavy clover or timothy sod the year before planting the corn.

Let the ground be as thoroughly prepared as for an extra crop of wheat. Night soil and good stable manure are perhaps the best manures to use. There is little danger of forcing the Wilson strawberry, or the Black Cap raspberry too much. Strawberries should *always* be planted in the spring, but raspberries and blackberries late in the fall or *very early* in the spring. I prefer fall planting, if each hill can be covered with a fork full of litter from the horse stable.

There are only a few varieties of strawberries worth growing for market. I think, at present, the Wilson is decidedly the most profitable strawberry for us to grow for market. It is the best to ship, the best to can, and the best to preserve.

I believe an acre of Wilson's, in good condition, will bring more money than an acre of any other variety not receiving better care than the Wilson. For the last few years the cut-worms and grubs have destroyed a great many plants; therefore I think best to let the plants run over the ground.

I set the plants every twelve or fifteen inches, in rows about three feet apart. The field can then be worked with the cultivator and hoe till plants interfere, late in the season, when the hoe only can be used.

The crop is often increased twenty-five per cent by lightly mulching, in November or early in December, with litter from the horse stable (which is the best), straw, salt hay, corn-stalks, or any material that will partially protect the plants during the winter, but which should be carefully removed from the crowns in spring.

As it generally costs less to cultivate a new field, than to clean out and keep in order an old one, where ground is in a high state of culture, I think it pays best to take extra care of the plants the first summer, picking off all the blossoms, which strengthens the plants and causes them to throw out more and stronger runners, and to form larger stools; and then, the next summer, pick the fruit and turn under the field. Those who raise small berries on poor ground, where weeds and grass are no trouble, do not have to re-plant so often. The demand now is for large berries, and there is no use in bothering with small ones. A quart of large berries, with the hulls on, will bring, in a good market, more money than a quart of small ones with the hulls off, while costing less for picking.

The next in order is the raspberry, which begins to ripen before the strawberries are gone. Some of the best varieties of the red raspberry are the Clarke and Philadelphia, and of the Black Caps, the Davison's Thornless, Doolittle, Miami, Mammoth Cluster and Seneca.

The Clarke is decidedly the best red raspberry, but the Philadelphia the most prolific.

Some claim that the Davison's Thornless ripens earlier than the Doolittle; if so, it will interfere with strawberries, and come into market too soon. It is my experience that it ripens about the same time as the Doolittle, but is no better berry, is a weaker grower and much less prolific. The Miami and Seneca begin to ripen about ten to fourteen days after the Doolittle, and are very strong growers, prolific bearers, and fruit of good quality. The color of the Miami is dark brown. The Seneca is jet black, flavor excellent, but I think the berry not quite so large as the Miami.

I doubt if the Mammoth Cluster, about which so much noise has been made the past year, is much, if any, superior to the Miami. I plant the Red raspberry about four by six feet, and the Black Caps about three or four feet by seven, according to state of culture. The second spring I prefer to set posts and draw a No. 10 wire two and one-half or three feet high over each row, and as soon as the young cane reaches the wire, fasten it and pinch off the top, which forces out the laterals near the ground, which I think a great advantage. In pruning these canes the third spring, I cut back the laterals from one-fourth to one-half the length. If the plants are large and fine when set, quite a crop may be picked the second summer. One of my neighbors, this season, picked about fourteen hundred quarts from an acre, by tying to stalks the canes of the first summer's growth.

Another had several hills two or three years old that averaged two quarts each. If a field averages two or three quarts when in full bearing, the crop is a very good one. There is, perhaps, no crop which pays better for mulching with salt hay, corn stalks or straw, than the Black Caps, but a very good mulching is thorough cultivation with the plough early, and then the cultivator and the harrow till the berries begin to ripen; as part of the raspberry roots lie quite near the surface, the ploughing and cultivating should be very shoal.

The ground should be worked up to the Black Cap canes, because each year new roots are sent out above the old ones. In this respect they grow very much like the strawberry. In setting the Black Caps, after the land is furrowed the wide way, and marked the other way with a chain or something else, the one who sets the plant should form in the furrow a little mound, like an inverted saucer, spread the roots over this and cover the crown of the plant only one or two inches deep, and so that the surface of the ground is left even.

Many plants never reach the light, because planted too deep. Set none but good, strong, healthy plants, for the first crop will often pay several times for extra expense.

I think the best blackberry for market is the Wilson's Early, which begins to ripen before late raspberries are gone, and matures before peaches are largely in market.

It is quite a prolific bearer, holds its color well, and is firm enough for shipping. As we have doubts as to the perfection of its blossoms, I think best to plant every fourth or fifth row with Lawton's. If my whole crop of blackberries, this season, had been Wilson's, it would have returned several thousands of dollars more. The Kittatinny is, perhaps, more hardy, and is a very rank, strong grower, but not a very prolific bearer. It ripens about the same time as the Lawton, and does well to market at home on the day picked, but is too soft to ship. There is no doubt but the Lawton is very profitable when not winter-killed, and when peaches are not too plenty.

I plant blackberries four feet apart, in rows eight feet wide. A row of vegetables may be grown between during the first summer.

When the land is rich and under high cultivation, the canes generally need support, which is best given by stretching wire about three or three and one-half feet high, to which the canes can be fastened. The top of the young cane should be pinched off when three or three and one-half feet high, which forces out laterals and gives the shape of a dwarf tree. In the spring the laterals should be pruned off from one-fourth to one-half, which is a work requiring much experience to do properly. If a very vigorous growth of cane is pruned too much, the fruit buds instead of throwing out a single fruit stem to bear one cluster, will often send out a small fruit lateral, the berries of which will ripen from ten to fourteen days after the first crop, and be of little value in the market. I could show you three fields of Lawton's near each other and owned by different men, which showed the difference in pruning. The first was well pruned and ripened well; the second, which was partially pruned, matured part, and the third, which was left nearly as it grew, perfected still less. The dry weather, while the berries were ripening, affected the comparative result.

Those who would be successful in growing blackberries, must be careful not to run to either of the extremes of pruning—too much or none at all. I usually prune in the spring, after the buds begin to swell, because the cane cuts more easily and dead wood can be more plainly seen. In the spring plow from the rows shoal, so as not to hurt the roots, and then, if the fruit growers will, each year, or every other year, apply broadcast to his raspberry and blackberry fields the same amount of fertilizer required to grow a good crop of wheat, he may expect much larger returns than from any grain crop. The ground should then be plowed back to the rows. I prefer a digging fork for working in the row among the canes to any other tool—a prong hoe is liable to go too deep and injure the roots. After the spring ploughing the ground must be kept thoroughly worked with a cultivator and a small harrow, till the fruit begins to ripen. The harrow and cultivator must not run so deep as to injure the roots. This work should be done only by careful men who understand it. We can't expect to grow a large crop of berries and a large crop of weeds at the same time. Those who try usually succeed best with weeds. We ought not to expect more than three or four large crops from a raspberry plantation, but it is difficult to tell how long a field of blackberries will last if they are well cultivated. I have one field, set in 1858, which bore a fine crop this last summer. The canes are more liable to winter-kill in an old field than in a new one.

Thinking it might be interesting to you, I have made an estimate—not by guess, but by net sales—of the average prices, per quart, of my berries for four years. By net sales I mean returns after deducting freight, commission, etc. In 1866, strawberries averaged $19\frac{1}{2}$ cents per quart, raspberries $24\frac{1}{2}$ cents, blackberries $21\frac{1}{2}$ cents; in 1867, strawberries $7\frac{1}{2}$ cents, raspberries 20 cents, blackberries $9\frac{1}{2}$ cents; in 1868, strawberries $7\frac{3}{10}$ cents, raspberries 31 cents, blackberries 32 cents; in 1869, strawberries 13 cents, raspberries $17\frac{2}{5}$ cents, and blackberries $4\frac{3}{5}$ cents per quart.

The average for the four years: strawberries $11\frac{1}{5}$ cents, raspberries $23\frac{2}{5}$ cents, blackberries $16\frac{2}{5}$ cents per quart. Omit the year 1868 for raspberries and blackberries, when the crop was light and prices very high, and we have for these three years, raspberries $20\frac{3}{5}$ cents, and blackberries $8\frac{3}{5}$ cents per quart. The average expense for growing a field of Wilson strawberries, per acre, is not far from \$150 to \$200. A good average crop is one hundred bushels per acre. By this average, after deducting all expenses, there will remain about \$113 per acre, net. If we pick only one crop, and as two years are required to grow it, the average is about \$56, net. If the berries sell well, and there is a call for plants, the net proceeds may be five or ten times the above amount. From seventy-five to one hundred bushels is, I think, a large average for raspberries, and the same for blackberries, unless the canes are badly killed; each costing about \$80 per acre for cultivation. According to these estimates, for three or four years past, raspberries average, clear of all expenses, about \$300 per acre, and blackberries have netted about \$125 per acre. I have here given you the average price, per quart, for which our crops have sold during the last few years, but the average net profits per acre I have intended to make rather low, as many of you are perhaps aware, by the figures, hoping not to make the fruit-grower anticipate more than he may realize.

I think it is wrong to convey the idea to those who are just starting in the business, that they may always expect large crops. In 1866, several acres of my blackberries netted me nearly or quite \$400 per acre, but this year will not exceed about one-sixteenth as much, which was caused partly by the large crop of peaches. Therefore the fruit-grower should not be too much elated with a large crop, nor discouraged with a small one, but if he will persevere year after year, he may expect to be well compensated for his labor.

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Dr. Brete Currant.

THIS new French variety, imported into this country and cultivated by William S. Carpenter, seems to be quite an addition to our list of varieties already favorably known. Mr. Carpenter has fruited it four years, and it will be seen, from the illustration, that it is a prolific bearer, with the characteristics of a long stem, but short bunch, with very large berries; fruit is stated to be of excellent quality. We hope to see it well tested.



Dr. Brete Currant.

Popular Pears.

The Flemish Beauty.

FOR an acceptable place in every pear list we would name, without hesitation, the Flemish Beauty.

An observer of the markets for the past two or three seasons cannot have overlooked the fact that this variety has been both more abundant in quantity, while the demand has been greater, and price higher than ever. We have seen them occasionally outsell the Bartlett and Duchesse at very satisfactory prices.

Like many other of our finest varieties of fruit, it is imported from Europe, and supposed to have originated in Belgium. Description as follows:

Fruit large size, oblong, obtuse, obovate form, pale yellow *color*, mostly covered with patches and marblings of light russet, and in the sun rich reddish brown; *stem*, one to one and a half inch long; *cavity*, narrow, deep; *calyx*, short, open; basin, round, small; *core*, medium, with oblong capsules; seeds small, oblong, pyriform, pale brown; *flesh*, yellowish white, not very fine grained, juicy, melting, sugary, aromatic; season, last of September.

As a tree it is one of the most luxuriant and hardy, and bears both early and abundantly of its large fair fruit, often when but four to five years of age. It succeeds best on the pear root, for in the majority of instances it has proved a failure on the quince. A few successful instances are on record where it has proved profitable as a Dwarf, but hardly unimportant enough to warrant it as a general practice.

Like many other of our most excellent pears, the fruit must be gathered early from the tree, even if not parting readily from the branch, and must be ripened in the house. If permitted to mature on the tree it becomes soft and flavorless, and is apt to decay speedily.

The tree requires a strong rich soil to become permanently thrifty, and will continue, if well cared for, vigorous and healthy for many years.

For the West and North-west it seems admirably adapted, proving as successful as the Bartlett, and even more hardy, and in many sections greatly preferred.

There is no doubt as to its value in the markets, for few varieties exceed it in popular demand.



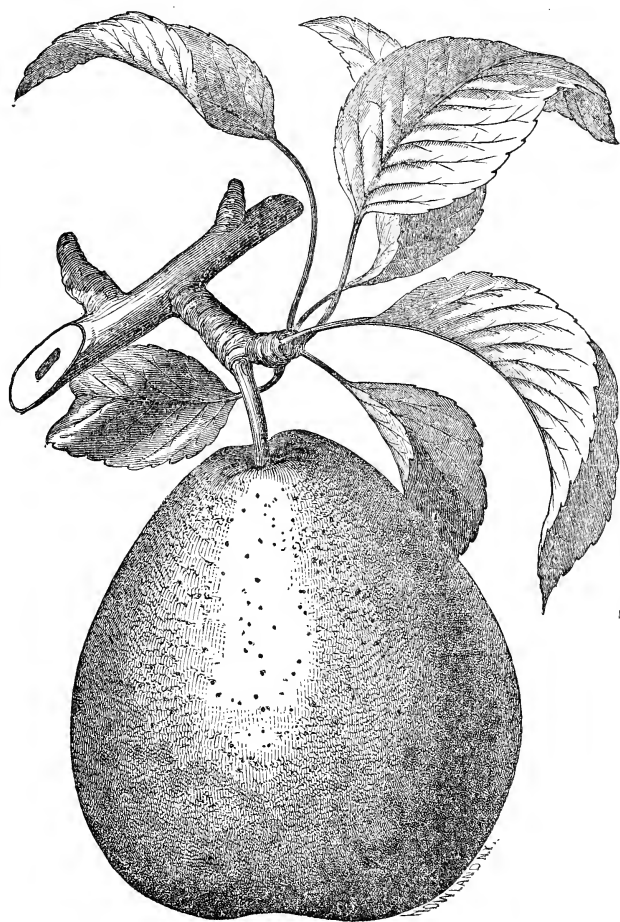
The Best Blackberry to Grow for Market.

WHICH of the varieties of Blackberries would you advise the farmers to plant for the most profitable one in the New York markets?

I would reply by saying that there are so many circumstances to be taken into consideration, that I am at a loss to give any advice on the subject, but will state some of the peculiarities connected with this fruit. The most important item to take in consideration is the peach crop. If this is early and large, the blackberries should all be marketed before that fruit is received in large quantities, as the sale of this berry is seriously injured and eventually destroyed, for the peach is the king fruit in this market, and controls all the others. In the absence of this fruit there is but little danger but all the varieties will be wanted and sold at fair rates. The whortleberry arrives at the same time with the blackberry, but does not injure the sale of them, unless they are very plenty and cheap.

During the past season I received a large quantity of the Wilson from the farm of Mr. Parry, which were very large and sweet, and sold well; the demand increased as the dealers became acquainted with the fruit, and on the arrival of the other varieties, they preferred the Wilson, as being the larger and sweeter; they were also marketed before the other varieties arrived in large quantities.

In regard to the marketing or carrying qualities, I do not hesitate to decide in favor of the Wilson, as I received at the same time, from the same farm, three varieties, which I consider a fair and just test; the Lawton second, and the Kittatiny the poorest. The Dorchester, from another farm, was equal to the Lawton. This I found to be the case in every shipment that I received during the entire season. This may not be the general experience of dealers or growers, yet I give it as one of the features of the trade coming under my observation.



Flemish Beauty Pear.

I presume that all are aware that this season the peach crop was large and prices very low, which accounts for the low price of the blackberry. Another season this may not be the case, and the later varieties may sell better than the early ones. The fact is simply this, that every season develops some new feature in the fruit trade, and no one is able to say in advance what that peculiarity may be.

Old dealers well understand this, and, consequently, hesitate about giving any positive advice to growers, for fear of creating disappointment.

C. W. IDELL.

Fruits the Past Season.

BY HENRY T. HARRIS.

HERE, in Central Kentucky, and in other parts of the State, so far as my information extends, fruits, the past season, except the berries, cannot be called a success.

Apples were not near a half crop; peaches but little, if any, more. Pears, especially Dwarfs, gave a better yield than ordinarily. Cherries, of the Morellos, were an utter failure; while the "Hearts" and "Biggereaus" were nearly a full crop on matured trees. Grapes, in many "spots," were a success; in others they wholly failed. On closely pruned vines the failures were more frequent, while on those partially pruned and those left to run at random, nearly a full crop of choice fruit matured. Why the difference? While I have my own views upon the matter, I leave the discussion of the question to those more intimately acquainted with the habits, characteristics and "*mysteries*" of the vine.

In my own small vineyard of Catawbas, Isabellas, Clintons, Delawares, Madciras and Dianas, I observed the following facts: The vines all set finely with fruit; by far the heaviest I ever saw. In fact it would have been impossible for the vines to have matured over half the quantity. When they were fully grown, a long rainy spell set in, which continued until about the 4th of July with only brief interval of sunshine. At this time a dry rot appeared—on *all alike*—beginning with a small brown speck, and so continued until over half the grapes dried up and fell from the bunches. The remaining fruit seemed to grow larger, and did become finer, richer and sweeter than we ever knew them, and we gathered as many pounds, or more, than we ever did before. We had no rain at all after the 10th of July until September, when the "Hartfords" began to ripen.

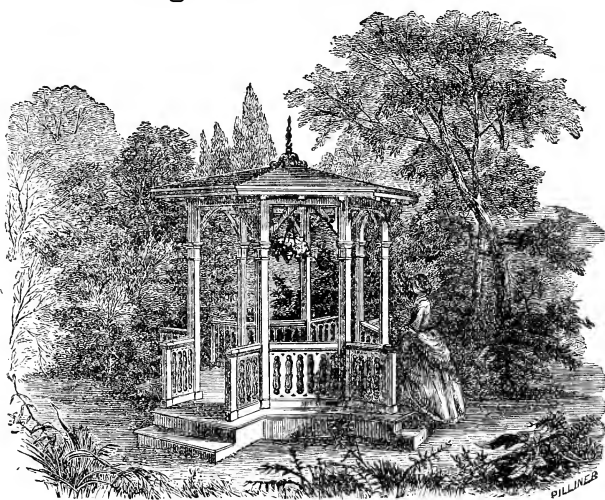
This dry weather undoubtedly added saccharine matter to the grapes, and I predict a superior wine from them. Take it all in all, the Catawba is the grape for Kentucky. My vines are eight years old, and are principally Catawbas, and a sweeter, more aromatic, juicy grape does not have a place in my vineyard, save alone the Delaware; and, all things considered, the Catawba is its superior, and were I planting a vineyard for wine, or a few dozen for table or market purposes, *here*, I should, *unhesitatingly*, plant more largely of them than any other well tried sort, notwithstanding the report of a Western Horticultural Society to the effect that "the Catawba is worthless." I opine that in less than a half dozen years the members of that committee will repent in tears, and again plant of this choice old variety quite extensively. I have no vines of any kind for sale, nor do I ever expect to have; and this is written purely as a defense of a grape which has infused more life and hope into vineyard culture in the West than any half score of high-priced and pretentious vines that swell the list of modern nurserymen.

Currants and gooseberries, strawberries, raspberries, blackberries, etc., all did amazingly well the past season, as their crops were gathered before the dry weather came.

Here, in Kentucky, a newer life of fruits and fruit growing has possessed our people. The dissemination of new and rare plants, trees, flowers, etc., together with a wider dissemination of such choice, practical magazines as the *HORTICULTURIST*, have inspired us all with a fresher love for all that is useful and beautiful; and we hope to learn that your charming *Monthly* has found its way to many a pleasant "Old Kentucky Home," in 1870, where it never went before; and, if so, we feel assured that everywhere it may go, *that* household will be better, and wiser, and purer for its coming.

STANFORD, KY.

Design for a Summer House.



THE above design for an ornamented summer house, which appeared lately in *Sloan's Architectural Review*, will be found very useful in the grounds of some of our fine suburban residences.

It is to be constructed of wood neatly carved and put together in a workmanlike manner. The floor may be of ornamented tiles, or inlaid with vari-colored woods.

The whole should be stained and varnished, not painted.

The Borer.

EDITOR HORTICULTURIST: Having been an amateur culturist of fruits for a dozen years, and having long since learned in the school of experience and observation that "eternal vigilance" was the price of success therein, I herewith give you my observation relative to the peach borer. It will not be necessary for me to tell your intelligent readers that this is a destructive worm which infests fruit trees—especially the peach—under the bark, just at the ground, and always leaves visible evidence of his noxious presence by the exudation of a gum-like substance, something like jelly, at the ground around the bark.

No peach tree of any age is free from their ravages. Even little one year old seedlings, in the nursery row, are often infested with them. We are often told that the only remedy for them is cutting them out, or by tracing them up with a sharp wire. We admit the utility of this remedy, which is positive and entirely satisfactory, although a little troublesome, because it *must* be attended to promptly twice a year, in June and September, in order to keep them exterminated. But I have another remedy, less troublesome, if not quite so efficacious at all times and in every instance. However, if our remedy is thoroughly applied once every two or three years, we have found by experience that fewer trees, on an average, are either temporarily or permanently injured by this pest, than where the other plan is followed; and we have also found that the trees receive a positive benefit from the application, aside from the fact of their being secured against the injury which the borer would inflict.

It consists simply in cupping out the dirt several inches deep immediately around the

tree, and then applying ashes and lime—either or both; better to use *both*—around the tree, in the cup, patting and pressing it down *quite firmly*, and then scattering a half gallon or so around the tree over this, loosely. It is better to do this at time of planting; but if it has been neglected, see that the borer is cut out, and then apply the ashes and lime. I have many trees treated in this way, from which I have not found it necessary to cut out a dozen borers in five years, and the trees are thrifty, healthy and free from this troublesome grub. I do not give this as an original remedy, but as the result of my individual experiments. Some may suggest that strong ashes and lime might burn the bark. Such has not been the results of my observation; and I should not hesitate to apply it freely in any instance. If, however, any one is doubtful about it, let him first apply some tough, hard clay around the tree, then the other.

I notice, in a portion of my own orchard, where I put the sub-soil of clay around the trees, on top, that not a single borer had entered the bark. I account for this from the fact that the clay formed too hard a surface for the pests' comfort, and before they were large and strong enough, from the egg of the fly, to penetrate this rude covering, they either starved to death or were destroyed by the sun and rains. How this may really be, however, I do not profess to say positively, but have as much right to give a "guess" about it as any other "Yankee."

WOODMAN.

STANFORD, KY.

Protecting Trees Against Mice.

ON reading the article, in the December number, page 375, to protect trees against mice with tarred paper, it brought to mind another method, which I have tried, which serves two purposes. Put a mound of earth, as large as a bushel basket, well packed around the tree on the approach of winter; the mice will not interfere with it, and the earth keeps the tender bark at the roots healthy and vigorous, and when winter passes off take the earth away; and to keep the rabbits away, wind the tree with a small band of straw from the ground to the limbs. This also serves two purposes—it prevents rabbits from girdling the tree, and holds the moisture and protects the tree from the hot sun, and gives free circulation to the sap. The bands may remain on the trees till they fall off. As you worthily observe, high, rolling land is the best for orchards. Clay land should be ploughed deeply the fall previous to planting the orchard, and in the spring manured with coarse straw, decayed wood and leaves manure, to keep the land from baking too hard. Light sandy land should be prepared the year before planting the orchard, and manured with muck. Rich loam soils require less manure, as the trees grow too much to wood. During a few of the first years the land may be cultivated with light crops, to shade the soil from the sun. I have planted small corn and potatoes, and grown barley and sometimes wheat; and after the trees begin to bear, stop cropping and use the harrow, and mulch the trees with straw manure. This method of treatment has always proved successful with me in Massachusetts, New York and Michigan. The spring is the best time to take up and plant apple trees. Great care should be used both in taking up and planting trees. To plant trees in a deep hole, on land not cultivated, is death to the tree if it is filled with manure. The tree should be set one or two inches deeper than it grew in the nursery; planted in land prepared in advance by deep tillage, will do well, as in a dry time the roots will find moisture and have free play to extend themselves, but on shallow ploughed land the roots will dry up, or in a wet time drown, and the tree stunted.

Trees should not be trimmed or pruned too much. Our best grafted varieties do not run to limbs so much as the natural trees, and bear fruit generally every other year; hence, by letting the limbs grow out and above four feet from the ground, and rubbing off the sprouts in the spring with the hand, they will not sprout again in the same place; and cut the cross limbs. By this mode the tree will form a round, low top, *without shortening*.

PLYMOUTH, MICH.

J. S. SHEARER.



Horticultural Notes.

Double Diadem Pink.

THIS variety, which we figured last year under the name of *Dianthus Heddewigii Diadematus flore pleno*, Mr. Vick says is a "marvel of beauty," and "altogether the most desirable acquisition of the year." "Only about one-half the plants produced from seeds are true, or at least give flowers equal to the description, but these are so good that no one will mourn over those that fail."

Bugmaster General.

THIS is the euphonious title jocularly bestowed by Western horticulturists (irreverent) on the State Horticulturist of Illinois.

The Fruit Growers' Club, New York,

HAS sunk into oblivion, like many other associations mismanaged. The refusal of its Treasurer to pay the premiums awarded by the official committee, and which were endorsed by the club, and payment authorized from funds in hand, sufficient for the purpose, no doubt hastened its demise. "Good riddance to bad rubbish."

Vick's Catalogue for 1870

IS highly embellished with a new *title page*, and hundreds of engravings within, chief among which is a portrait of "the good looking man" who sets half the women in the U. S. crazy on flowers. A flower-garden without Vick's guide as a companion is hard to find.

Gen. Grant Tomato.

IT will be remembered that this was sent out as a new variety last spring, and few knew of it, or seemed to interest themselves in it. It has, however, done very well, as will be seen by the statement of H. A. Terry, in *The Iowa Homestead*:

"This variety of tomato was, I believe, first sent out last spring, and having grown it the past season, I will say that I consider it one of the finest sorts in cultivation. It is medium early; fruit of large size and very smooth and fair; flesh solid, with but few seeds; color dark crimson; very productive and of most excellent flavor—one of the very best for marketing or home use. I had, the past season, some twenty other varieties in cultivation, but none that would compare with this."

Trophy Tomato.

GEO. E. WARING, JR., has another remarkable tomato, so unusual in its characteristics, that it has been named The Trophy. We shall probably hear more from it the coming season, as it is not yet widely disseminated.

Immense Nursery.

THE Evergreen Nursery of Robert Douglas & Son, Waukegan, Ill., contains 5,000,000 European Larch, the best timber tree known; also as many Norway Spruce and other varieties, making a total of between 15,000,000 and 20,000,000 of trees.

Mexican Ever-bearing Strawberry.

THE evidence is rapidly accumulating against this variety, and the original eminent supporters are feeling very doubtful and cautious. It appears to be of very little value, whether it is new or not

and the majority of cultivators have had little success with it. Those horticulturists who called it *The Old Red Alpine*, WITH RUNNERS, are not far out of the way.

Delaying Mulching.

SOME cultivators delay applying their mulch until too late; the winter comes upon them unprepared and then there are regrets.

If there should be a good fall of snow, covering the entire field and lasting until spring, this is a good substitute and will be of no harm; but where snow falls, then thaws, leaving the ground bare, then freezes and thaws again, and so continues during the entire winter, the cultivator's strawberry bed or trees *must suffer*, there cannot be any help for it. The plants are thrown up out of the ground, or out of a good sound bed, the roots are affected and trees are seriously injured.

Mulching should always be applied as soon as the ground first freezes. *Do not delay a day longer.*

But it is better late than never. If omitted during the winter, by negligence, it should be applied as early in the spring as is safe. For its presence around the plants, keeping an abundance of moisture in the earth, tends to produce more vigorous growth and more abundant fruit, which also will be of larger size and better quality.

If there are any strawberry beds now unmulched, we recommend all, as soon as the snow disappears, to strew some along the rows between the plants, and satisfy themselves of the soundness and excellence of our mode of practice.

Downing's Fruit and Fruit Trees of America.

SOME idea can be gained of the progress of American Horticulture, when we make a comparison of the original volume issued by A. J. Downing, in 1845, and the new volume issued, in 1869, by his brother Charles Downing.

The former, considered even voluminous in its day, contained 600 pages, with lists of 200 varieties of apples, 230 of pears, cherries 77, peaches 79, plums 97, apricots 16, currants 10, nectarines 18, raspberries 14, strawberries 36, foreign grapes 35, native grapes 12, gooseberries none, blackberries 2.

The new edition fills *eleven hundred pages*, with an index alone of about a *hundred*, containing lists.

Apples, varieties described	1,840	Nectarines, varieties described.....	31
Pears, " "	1,000	Raspberries, " "	87
Cherries, " "	192	Strawberries, " "	252
Peaches, " "	220	Foreign grapes, " "	42
Plums, " "	227	Native grapes, " "	145
Apricots, " "	45	Gooseberries, " "	6
Currants, " "	27	Blackberries, " "	52

Even since the publication of the volume, a dozen or more new fruits have come to our notice, and scarcely a month passes but a regiment of names appear of new varieties. Like Mrs. Partington, of old, we hold up our hands in amazement, and wonder when the end will be.

Proud as we may well be of the development of the fruit interests of our country, it is a thing to be regretted that so large a proportion are worthless, or so capricious in cultivation in the different States as to make them practically useless. How *few varieties* of each class are really successful and generally deserving extended cultivation.

An encyclopædia like this is valuable as a record, as well as a guide to the practical horticulturist.

The Tribune.

THE *Tribune* has added to its numerous excellent departments, a new one, "*Horticulture and Market Gardening*," in which our friend P. T. Quinn is to appear regularly. We are pleased to see horticulture becoming thus popularized by the addition of competent practical horticulturists to the editorial staff of our largest agricultural and rural journals, and this new branch in *The Tribune* will "*bring forth good fruit*."

Pear Culture for the South.

The editor of *The Southern Horticulturist*, in an estimate of the profits of pear culture in the Southern States, gives the following figures for a dwarf pear orchard of one acre.

Dr.		Cr.	
To land, trees, interest, etc., at end of fourth year,	\$530	By 100 bushels pears, 5th and 6th year	\$500
Interest on same, six years, at 10 per cent	336	" 200 " " 7th and 8th "	1,000
Cultivating, manuring, etc., six years	304	" 400 " " 9th and 10th "	2,000
	<u>\$1,200</u>		<u>\$2,500</u>

This is a calculation for *ten years*.

Now, we would not like to disturb our worthy friend's figures, but we candidly believe not *one orchard in a hundred* ever do yield such profits.

We have some friends in Western New York, who have been growing dwarf pears for eight years, and they are sorry they ever planted them. During this, the *eighth* year, from *five acres* of *Beurre d'Anjou*, only twenty barrels of pears were gathered, which realized \$20 per barrel, or \$400. This does not look like \$1,000.

We have seen pear orchards of the Duchesse d'Angoulême, south of Philadelphia, where we never could count either a bushel or a half bushel to an average of trees over an acre. We believe pear culture to be *profitable*, some years more than others, and sometimes returning prodigious revenue, but we have never found any one yet either able or willing to give a *good reliable estimate*.

However, the editor, Dr. Swazey, gives capital good advice concerning the *varieties* most successful in the South, and these we commend to general attention.

"The first good market pear of the season is the Doyenne d'Été, ripening, it is true, a few days after the Madeleine, and is perhaps a trifle smaller, but the tree is a healthier and a handsomer grower, and bears a good crop at an earlier age. The fruit also is more prepossessing in appearance, and of better quality, and what is of equal importance, keeps in good condition longer after being gathered. With market men this latter item is a matter of prime consideration, for they have no especial fancy for fruits that are liable to die on their hands before selling.

"The *Doyenne d'Été* can be gathered in this climate (Miss.) by the 10th of June, and will bring from eight to ten dollars per box, of three pecks, in the New Orleans market, perhaps more in Northern ones. Should be planted as a standard only, as the fruit is finer than on the quince.

"*Second* in season, but among the first in profit, comes the old *English Jargonelle*, a splendid market variety that has almost been lost sight of in the rage for something *new*. It should not be planted in light soil, nor in extreme southern latitudes, as its habit of early blossoming renders the crop liable to be killed by late spring frosts. The tree is a strong, healthy grower, and bears early and abundantly. Ripens about the 20th of June, and should be gathered early to prevent rotting at the core—its only fault. Better on pear stock than on quince. Makes a large tree and should be planted from twenty to twenty-five feet apart.

"The *Bloodgood* and *Early Catherine*, ripening about the same time, are also among the most reliable and profitable varieties. In fact for an early variety, to come in before the *Julienne*, we should take the *Early Catherine* in preference to any other variety that we know. Both this and the *Bloodgood* should be planted as standards only.

"After these comes the *Julienne*, ripening from the 20th of June to the middle of July. An early and immense bearer of the handsomest and best pears of its season, by long odds. Sells readily at \$8 per bushel, however full the market may be of early apples and peaches.

"Few varieties are more healthy, either in tree or fruit, and few will bear gathering so early and keep so well. It is also about the only early variety that can be eaten in the highest perfection right from the tree, although it will ripen up finely if picked when two-thirds grown. Best as a "*dwarf*," but excellent as a "*standard*."

"For the *greatest profit* we must close our list with the *Bartlett* and *Duchesse d'Angoulême*, either on pear or quince, the former being in good shipping condition from July 10th to August 10th, and the latter following it all through August and first half of September.

"The *Doyenne Boussoch* is a splendid market variety, ripening about with the *Bartlett*, its only drawback. For October and November we know of nothing superior to *Lawrence*, *St. Germain* and *Winter Nelis*—all first rate."

Bignonia Radicans.

How rarely one sees this fine old climbing plant now-a-days! There is a plant of it here, growing against the wall in the kitchen garden, at the end of a range of vineries. It is an old plant, and has been in its place for a number of years. The only attention that is given to it is to prune it to an eye, like a vine, every autumn after the fall of the leaves. It is perfectly hardy, having stood the severe frost of December, 1860, without protection, when hundreds of common *Hollies* were killed to the ground.

This plant is a beautiful object every year during the months of August and September, when it is covered with large bunches of its orange-colored, trumpet-shaped flowers.

The *Bignonia Radicans* is a free and rapid grower, and when encouraged will spread to a great distance and rise to a great height in a few years.

It is freely propagated by cutting or layers. Old plants also throw up suckers from the roots, which may be taken off and planted at once where they are wanted. When established, the only attention they require is, in the autumn or winter, to cut away all the small, weak shoots of the former year, and shorten the strong, leading ones to two or three feet. When the plant has filled the space required, all that is then necessary is, after the fall of the leaves to spur-prune like a vine. It is surprising that this fine old plant, which will stand our severest winters in the open air against

a wall without the slightest injury, should now be so little grown. No garden should be without it.
—*M. Saul, in Florist and Pomologist.*

Pruning Grape Vines.

MR. QUINN, in *The Tribune*, gives a few plain directions for pruning, which should be taken advantage of at once:

"In case the young vine was planted last October and November, then the single shoot should be cut back, leaving only three eyes. The first year it is better, under ordinary circumstances, to allow only one shoot to grow, so as to ensure a strong vigorous growth of wood, that will be well ripened at the end of the season. This single shoot should be cut back to four eyes, and the second year only allow two shoots to grow. These should be fastened up during the growing season to posts, wires, and the laterals pinched off two or three times during the summer.

"The system adopted for training the vines after the second year's growth, will, to some extent, govern the use of the pruning knife. If the horizontal or arm system is decided upon, then the two shoots are cut off, leaving two or three feet of wood in each. These two arms are then fastened permanently to a slat or wire placed in a horizontal position, about eighteen inches from the surface. Each eye on these arms will push forth a shoot in the spring of the third year, and these upright shoots will produce the first crop of fruit. The quantity of fruit should be regulated according to the strength of the vines. At each annual pruning these upright shoots are cut back to two or three eyes, and never more than one shoot permitted to grow from each of those spurs. The arms can be increased in length each year until the spaces between the wires and the rows are filled up.

"With such rapid growing varieties as the Concord and the Hartford Prolific, they require more room, as they grow older, than is usually allowed to them. Close planting may answer while the vines are young, but when they are a dozen years old, 6x6 or 8x8, will be found too close for strong vines of vigorous habits."

Vegetable Manure for Fruit Trees.

It is remarkable how much vegetable matter will add to the growth of a tree. This is especially the case with the grape vine. A mere covering of leaves in the fall will have an influence that is almost astonishing. Such is our experience. There is, however, a difference in soil, we find, so as to cause a variation. A stiff clay soil will not show the effect so readily, and it seems to fail in showing a full effect, perhaps because it keeps the strength on the top, as clay is an absorber and retainer of fertility. But in a sandy or leachy soil—any soil that will let the strength down—we think nothing better for fruit trees of all kinds can be used than the simple application, in the fall, of vegetable matter in the form of leaves, cut-weeds or grass, grown the same year.

It will afford a protection during the winter. The fall and spring rains, and the heat at the opening of summer, will prepare it for food, and continue to feed the roots the most of the season.

Now, if a mulch is applied when the heat commences—of the same material, vegetable matter—with some deliquescent covering like ashes, plaster or lime, there will, unless the soil is quite deficient in fertilizing matter, be a good growth—such a growth as is wanted—not extravagant, nor the opposite. In a quite ordinary soil it will be sufficient. It will grow fruit; it will continue to grow it healthfully, remuneratively, not in premium crops, but in a permanent abundance; and that is what is wanted.

Let us apply our light manure in the fall, and use it also as a protection from the heat, as well as food for the trees. Where the soil is a strong clay, it is best to remove some of it, and get down to the roots; then replace the ground. A few broken bones, added while the ground is open, will sometimes be of benefit, and be a lasting one. And we think it will do no hurt in any case.

Do not use for one year alone; try for several. In ground disposed to let down the strength, there will be an effect almost at once. In such case the two applications are just the thing—one in the fall and one in the spring, or the commencement of the heat, thus keeping up a constant replenishment, just what the tree wants. If the roots of the tree are near the surface, nothing can be finer than this application. The forest has been teaching this lesson from time immemorial.—*F. G., in Rural New Yorker.*

Apples for Wisconsin.

L. L. FAIRCHILD, of Rolling Prairie, recommends the Red Astrachan :

"This apple makes a splendid appearance ; is large, crimson in color, covered with bloom, juicy, acid ; it is productive, and last, but not least, it seems entirely hardy in this State. It ripens here in July ; is one of the first ready for market. It is juicy and rich ; good for eating and cooking. It has our vote as standing first on the list of summer apples.

"The tree is a stout grower, though not as rapid as some. My trees were transplanted when three years old from the graft, and commenced bearing the third year after setting, or six years from root-graft."

Charles Waters, of Springfield, writes to the *Western Farmer*, in behalf of the Fameuse :

"In answering L. L. Fairchild's question, 'What variety would I choose if restricted to one apple,' I would say the Fameuse. Although there are harder kinds, yet get a Fameuse tree started with a suitable top, and it is all right. The question is how to get it started right ; choose a tree with a straight stem.

"I think all nurserymen ought to cut the Fameuse down to the ground at one or two years' growth ; and when grown one year, they will be four to six feet high, and then there will be no difficulty in forming the top with a succession of limbs, by rubbing off part of the buds as they start growing. They should be sold from the nursery in the fall after cutting off, and buried over winter.

"There is a variety here under the name of 'Hoss' that is the hardest apple in this county. They were first introduced here by a tree-peddler, and I have heard of but one of them dying, and it was killed in Viroqua by the great tornado. The oldest trees bear fifteen bushels of fruit per tree, at about fifteen years of age. The quality of fruit is only second-rate. It is a fall and winter variety. There is more call for 'Hoss' trees than any other apple. They are good to dry ; a splendid cooking-apple, and it is one of the most constant bearers I am acquainted with ; and, in absence of Fameuse, my little one says, 'Give me Hoss apples.' And I can worry down a few of them myself after dinner."

John M. McLees, of Harmony, writes for four varieties, as the best to plant.

"I would take for four kinds, the Golden Russet, Perry Russet, the Fameuse, and the 'Horse' or 'Hause' apple. The best is the Golden Russet, as it is a good bearer, a strong and healthy tree, and can stand the winter as well as the burr oak. It is better than the Fameuse, on account of having naturally better growth. The Fameuse is given to rotting in the crotches more than any of the other three varieties. The 'Horse' apple is probably the second hardest tree, and is certainly the earliest and best bearer of any of them. The red Romanite is a great bearer, but the small twigs are tender ; the body stands well ; after once fairly started it bears every year. This is my experience."

Large Sales.

MESSRS. PURDY & JOHNSTON, of Palmyra, N. Y., and South Bend, Ind., shipped to market the last season, from both places, eighteen hundred bushels of strawberries, and eight hundred bushels of blackberries. At the same time they sold \$16,000 worth of plants. Probably no fruit-farm or nursery in the country can equal or excel these figures.

Ornamental Shrubs.

ROBERT MORRIS COPELAND, in a very valuable article in the *Country Gentleman*, makes note of the valuable effect of combinations rather than single specimens.

A single clethra is beautiful as a specimen, or in a group where its white blossoms or rich dark leaves may contrast with plants unlike it ; and yet a mass of clethra in August, filling a bend of a river, fringing a path or a copse, is one of the finest effects which shrubbery can be made to give. Similar results follow the use of the rosa Carolina, a large, strong growing swamp rose with very fine dark foliage ; when planted in a mass, its profusion of pink blossoms and delicious fragrance are delightful, and as a single plant it challenges the admiration of every one.

There is a yet more common but little appreciated shrub, the spirea tormentosa. This shrub seems more valuable for its rusty green leaves, which contrast well with other foliage, than for its blossoms ; its flowers form a dense pink spike, which turns brown as the seed ripens. Planted in a mass or group of fifty or more, when in blossom the rosy purple effect of color is very fine. For specimens, shrubs must have beauty of form, leaf, and flower to give them high rank ; and if finely-colored berries can be added to good form, foliage, and flowers, we get all that can be hoped for. Besides the special merits of individuals, shrubbery, when massed, should offer a variety of beauty at different seasons of the year, to have lasting interest. If the whole of any plantation comes into blossom at once, say in June or July, and then the flowers disappear and are not replaced by berries or by any rising mass of herbaceous bloom, the interest dies away, and we look at the bushes with no more satisfaction than a row of cur-

rants or raspberries would give when their fruit had been gathered. It should be the aim of every planter, therefore, to gather into his group such a combination as will be sure to present something new in form, color, or fruit through the year, and rarely to be contented with any single effect, however grand.

A very valuable list of ornamental shrubs is appended, which we consider so valuable for reference that we copy it here entire. The figures 1 2, 3 represent different orders of excellence, 1 being highest, etc.:

EVERGREEN SHRUBS.

1. *Andromeda floribunda*—probably *Cassandra calyculata*—altered in English nurseries, white, April or May—6 inches to 1 foot high.
2. *Andromeda catesbii*, white, May—2 feet.
3. *Azalea*, (introduced,) pink, May—2 feet.
2. *Arctostaphylos uva ursi*, white and pink, May—2 inches.
1. Box, golden and silver, creeper, striped leaves, (introduced,) 3 to 10 feet.
2. Broom, (introduced,) yellow blossom, May and June—2 to 10 feet.
2. *Epigaea repens*, creeper, pink, April—2 inches.
1. Holly, American, berries, winter—low trees.
1. Holly, English, with variegated varieties—trees.
2. *Mitchella*, creeper, white, (not reliable,) June—1 inch.
1. *Loniceria Japanica*, *Aurea reticulata*, vine, pink and white—June to August.
2. *Juniperus communis*, spreading, low shrub—3 feet.
- Juniperus*, several other varieties, foreign.
1. *Kalmia latifolia*, pink, June—2 to 7 feet.
2. *Kalmia glauca*, light pink, June—2 to 3 feet.
2. *Kalmia angustifolia*, red, May to July—2 feet.
3. *Linnaea borealis*, creeper, pink, June.
3. *Ledum latifolium*, pink, June—2 to 5 feet.
1. *Mahonia aquifolium* and golden-striped, May—3 feet.
1. *Rhododendron catawbiense* and *maximium*, white, pink, and rose colored, June to July—3 to 10 feet.
- Tujia*, 10 varieties, native and foreign—1 to 20 feet.
2. *Taxus baccata* and *variegata*, (introduced)—3 feet to trees.
2. *Taxus canadensis*, creeper, red berried, winter—8 inches.
1. *Thujopsis*, 2 varieties, (introduced) 3 feet to trees.
1. *Retinospora*, 2 varieties, (introduced)—3 feet to trees.

DECIDUOUS SHRUBS.

2. *Amorpha fruticosa*, violet, June—5 feet.
2. Alder, swamp, orange, April—5 to 20 feet.
2. *Azalea nudiflora*, pink, April and May—2 to 6 feet.
1. *Calendulacea*, orange and flame color, May—3 to 10 feet.
2. *Arborescens*, rose-colored, June—3 to 10 feet.
1. *Viscosa*, white, July—4 to 10 feet.
2. Almond, double flowering, (introduced,) pink, May—2 to 4 feet.
1. *Aralia spinosa*, white, July and August—3 to 15 feet.
3. *Althaea*, many colors, August—3 to 12 feet.
1. *Barberry*, common, yellow, red berries, June—6 feet.
- Barberry*, red-leaved, (introduced,) June—5 feet.
- Barberry*, yellow-berried, (introduced,) June—5 feet.
2. *Blueberry*, high bush, white, May—5 feet.
3. *Blueberry*, low bush, white, May—1 foot.
1. *Bayberry*, semi-evergreen, fine shrub, blue berries—2 to 4 feet.
2. Button bush, wet places, white, July and August—3 to 6 feet.
3. Bladder nut, flowers white, May—3 to 10 feet.
2. *Caragana*, (introduced,) yellow, June and July—3 to 15 feet.
1. *Cornus*, 6 varieties, all conspicuous and fine—May to July—4 to 20 feet.
3. *Choke berry*, white, May—4 feet.
1. *Clethra alnifolia*, white, August—3 to 7 feet.
2. *Ceanothus*, white, July—3 feet.

2. *Colutea*, orange, (introduced,) June to August—3 to 5 feet.
1. *Crataegus*, white and pink, 8 varieties, May and June—6 to 15 feet.
- Crataegus*, hawthorn, several varieties, (introduced,) May and June—6 to 15 feet.
3. *Cotoneaster*, white and pink, (introduced,) May and June—2 to 5 feet.
2. *Currants*, Missouri, yellow, May—6 feet.
2. do. red flowered, May and June—3 feet.
1. *Calycaanthus*, purple, June and July—2 to 5 feet.
2. *Cinquefoil*, shrubby, yellow, July—2 feet.
1. *Dentzia*, white, 4 varieties, (introduced,) May and June—2 to 4 feet.
2. *Daphne mezereum*, pink, April—1 to 2 feet.
3. *Diervilla trifida*, yellow and orange, May to July—3 feet.
2. *Euonymus*, red and white berries, September to January—5 to 12 feet.
1. *Forsythia viridissima*, yellow, May—3 to 6 feet.
2. *Hypericum*, shrubby, yellow, July—3 feet.
3. *Hazel*, English, variegated, nuts, October—5 feet.
3. do. American, nuts, October—5 feet.
2. do. Witch, yellow, May to March—5 feet.
2. *Horse Chestnut*, dwarf, white and pink, June—6 feet.
3. *Hydrangea*, 3, hardy, variegated, July to October—2 feet.
2. *Lilac*, six varieties, white, red, and pink, May and June—5 to 20 feet.
3. *Leucothea paniculata*, white, June and July—3 feet.
1. *Magnolia soulangeana* and *conspicua*, white and pink, April and May—5 feet.
1. *Privet*, American, English, white, June—3 to 6 feet.
2. do. yellow berried and variegated, June—2 to 6 feet.
1. *Prinos verticillatus*, scarlet berries, September to February—5 feet.
1. *Pyrus Japonica*, pink, white, and red, April and May—3 to 6 feet.
1. *Roses*, 12 varieties, many colors, throughout the summer—1 to 6 feet.
2. *Rhodora*, purple, April and May—2 feet.
2. *Rubus odoratus*, purple, July to September—4 feet.
3. *Rhamnus catharticus*, black berries, September to January—6 to 10 feet.
1. *Spiraea*, 10 varieties, all colors, June to September—3 to 6 feet.
1. *Sambucus*, Elders, 3 varieties, red and black berries, June to October—6 to 10 feet.
3. *Spice bush*, yellow, April—10 feet.
1. *Shad*, white, May—12 feet.
1. *Smoke* or *Purple Fringe-Tree*, purple, June to September—3 to 12 feet.
2. *Snow-Ball*, white, June—8 feet.
3. *Southern Wood*, good for foliage, summer—4 feet.
3. *Shepherdia*, red berries, August to December—10 feet.
2. *Syringa*, 3 varieties, white, June—8 feet.
2. *Tamarisk indica*, purple, July—3 to 6 feet.
2. *Tartarian honeysuckle*, red and yellow berried, pink and white blossoms, June to October—8 feet.
1. *Viburnum*, 7 varieties, white, May to July—3 to 10 feet.
1. *Wiggle rosea*, white and pink, June—4 feet.
2. *Willows*, 5 varieties, good for foliage, summer—4 to 12 feet.

Irish Fences or Hedges.

In Ireland, where land is becoming more and more valuable yearly, attention is being directed to the great space occupied by their system of fencing or hedging. Nearly every stranger at first sight is struck with their peculiar character, and a farmer, on first beholding them, expressed himself as follows:

"Such large fences are hardly necessary for agriculture. Every person who had the pleasure of hunting near Dublin looked with horror at the gigantic fences. There is a wide dyke separating the field from the bank which is large enough to engulf both man and horse. There are gentlemen here who tremble in the saddle when approaching some of these large fences, covered by men who are ready to drag out the unfortunate man who falls on the other side, and they go by the name of 'wreckers.' As a farmer, I can not see the necessity for such large fences, or why so much land should be taken up with them. I made some inquiry from Mr.

Baldwin regarding the excellent institution known as the Model Farm, near Glasgow, which I frequently visit. I was told the amount of land which a fence occupies on that farm, which is one hundred and eight acres in extent. The Education Commissioners leveled thirteen acres of fences, and it was found that two acres of fences would be necessary to divide the fields, and they thus gained six per cent of land on their small area. On a neighboring farm of eighty-one acres in extent seven acres were occupied by fences, and eight per cent instead of two lost to farming."

The Beet as an Ornamental Plant.

DURING the last fall, we observed in the rooms of *The Agriculturist*, some ornamental beets exhibited by William Chorlton, of Staten Island. We were at once impressed with the idea that as an ornamental plant for lawn or flower-garden borders, it might be made of great beauty and desirability. The leaves were beautifully tinted with spots of purple, and delicate crimson veins ran the entire length of the leaf; while in size they could favorably compare with any of our low-growing shrubs.

As an aid to ribbon gardening, they would be very valuable and ornamental, and certainly nothing could be cheaper.

Ornamental Hedges.

A CONTRIBUTOR to the *Rural World* discusses the above subject in a very interesting manner, and indorses the Japan quince very highly. We appreciate the Japan quince quite as highly as he; but we notice in the majority of plantations it becomes sadly neglected, is not well pruned, and becomes very ragged and irregular at the bottom, thus spoiling the uniformity and symmetry which should always be the beauty of a successful hedge.

"There are many kinds of shrubs that are capable of being converted into an ornamental hedge—in fact, almost any kind can be so converted, with proper care and attention in planting, pruning, etc. But, if there is one shrub that is better adapted for that purpose than all others, in our climate, in my opinion, it is the old and well-known favorite, Japan quince, more commonly called fire-bush.

"In Mr. Shaw's botanical gardens are numerous examples of ornamental hedges, made of the different hardy shrubs. Among them are several kinds of the *spirea*, the wigelia, mock-orange, privet, or prim, (the favorite garden hedge plant in Europe,) and several others; and from most of them can be made very pretty hedges. But the great defect with all these is, that they can not be relied upon to remain perfect and intact through a series of years; small and large branches, even whole plants, die out here and there, after the hedge is grown, making great and unsightly gaps, which can never be filled up even and perfect so as to look like the original, even with the utmost care and pains. The privet appears to suffer the worst of any in this respect, dying out in dozens and hundreds, after being well established, and for some unaccountable reason. The *spirea reevesii* is almost as bad, while the *S. prunifolia* is one among the best of the above named, and is capable of being trimmed and made a really pretty hedge.

"The numerous advantages the Japan quince can lay claim to, as an ornamental hedge plant, may be enumerated in part as follows: Extreme hardness—a single branch never gets winter-killed here; infinitely more hardy than our common domestic quinces, and all that can be asked or desired in this respect. It is a moderately rapid grower, fast enough for a garden hedge, and at least as fast as the famous English hawthorn, which it also considerably resembles in habit. The fire-bush is essentially a shrub, and not a tree, and its habit is just right for a good hedge plant, namely, dense and compact, even without much trimming; then it is somewhat thorny and its branches quite stiff; when old, also, strong and tough; not brittle and easily broken. There is no plant that will bear clipping and shearing better than it will; but I am satisfied that when once started into proper hedge form, there are few plants that will require less attention, in the way of clipping, to keep it in good form, than it will; it is so susceptible of management that any form that a hedge can be made to assume can be made of this plant. As regards beauty, while it is true that an untrimmed, neglected bush has a rather ragged, rough appearance, a neatly-trimmed bush or hedge of it has exactly the reverse; and during spring and summer, when in foliage, few shrubs are prettier. The foliage is dark, glossy, and beautiful, while the leaves on the points of the young shoots are of a reddish purple, affording a pretty contrast to the dark green of the older foliage; and last, but not least, its large and brilliant crimson blossoms in earliest spring—that which gives it its name and its popularity as an ornamental shrub—are not surpassed in beauty by any shrub we possess; and it is difficult to sum up more attractions or more good qualities for a hedge plant, in any one shrub, than in this. Finally, however, it bears transplanting well; is easily propagated—any one having a stock of old plants can extend them rapidly by dividing it up, tearing off the suckers that spring up around its main stem, and also by cuttings of the root; but by shoot cuttings, or layers, or from seed, it is very slow of propagation, and a person must

have some rather large, old stools, to work upon to increase it very fast. Speaking of suckers, they may be regarded as an objection by some, but it does not spread all over the ground and throw up suckers, like the alanthus or the silver poplar; but what suckers it has come up immediately around the stem and inside of the spread of the branches, and if not wanted or are any way objectionable, can easily be removed."

The Wilson Strawberry.

WE doubt whether, among average cultivators, the Wilson Strawberry is really a profitable variety. It is true, there is no strawberry that will succeed as well on varying soils as this, nor any that can be depended upon for a certain crop, year after year. But when we see how much labor is necessary to set out an acre of strawberries, to manure it, to keep it in prime order, to provide baskets for marketing, and then to find that there are only two crops of the Wilson worth having, the first light, the second the best, and the third poorest of all, it must be admitted that strawberry culture is, after all, an expensive and often unsatisfactory operation.

Some of the most prominent members of the American Pomological Society at Philadelphia, last September, expressed the opinion that the true reason why strawberry culture was not more profitable, was simply *because the people grew only the Wilson*. Everywhere the markets are filled with Wilson. Sometimes it is good, more often small and poor. But where fancy strawberries of new varieties appear in the markets, the disparity between the high prices obtained for them and the moderate prices given for the Wilson, show that if we desire to make strawberry growing truly successful we must have some variety better than the Wilson.

We think that the remarks made by these gentlemen are truly correct.

If we were asked by a beginner just starting strawberry growing what varieties to cultivate, we would say: first, take the Wilson to start with; at the same time, select twenty-five of the best varieties you can find, and plant on your soil. Your first crop of Wilson will be only moderate; your second crop will be your best; and then your plantation should be renewed. During these two years your specimen bed will show you what varieties do best, and if you can find any of the new varieties growing well, and firm enough for market, plant that out, and stick to it, as if your fortune was in it.

Another thing; growers have long since settled down upon this important fact, that *new seedling berries do best in the native region where they were originated*.

And it is almost a waste of money to invest in new varieties largely, originated in distant sections of the country. There are a hundred chances of failure against one of success.

The most valuable requisites needed now in new strawberries are: 1st, firmness, as good as the Wilson; 2d, uniform crops of uniformly large fruit; 3d, adaptability to different soils, as well as the Wilson; 4th, flavor fair, but neither too acid nor too sweet. In the first and third particulars the Wilson strawberry is unexcelled; but alas! for its *failures*. Its crops are irregular, and flavor uncertain.

We have hopes of the many new varieties—Barnes, Monmouth, Charles Downing, Michigan Seedling, and some others; but we are obliged to retain the Wilson. Gladly would we yield it to some more successful competitor, but where can it be found?

Cost of a Screen of Norway Spruce.

A YOUNG planter inquires the cost of a good screen made of Norway spruce-trees, intended to form both a screen and a barrier—not for the exclusion of rampant cattle, but to prevent the ordinary passage of men and animals.

For this purpose, trees set three feet apart would probably answer the desired end completely in the course of six or seven years, and partially in four or five years, or even sooner—especially if the soil is kept clean, mellow, and well cultivated for several feet on each side of the line. The trees, if they have been carefully taken up, and set out well, will recover from the check of removal in a year or two, if two feet high—say one year is entirely lost by transplanting. If three or four feet high, they will not recover quite so soon; but much will depend on the care and skill of the operation, and on a moderate cutting back in the spring when set out. They will grow about three feet a year, (only one and a half if not cultivated,) and in six years will be fifteen feet high if desired, or if not shortened down any. Plants from one to two feet high may be had for about fifteen dollars per hundred, of the larger nurserymen—of some, cheaper, and a hundred will set out three hundred feet, or eighteen rods. The plants, freight, plowing, setting, etc., will cost with the trees, about one dollar per rod, if of this size, but they may be selected of smaller size, so as not to come to more than sixty or seventy-five cents, set out. Cultivating the ground for a few years, till the trees are well under way, so as to keep them clean, and the necessary cutting back, need not cost more than twenty-five cents a rod, if repeated five times a year for three years, and twice a year for two additional seasons. By repeating it often, the work will be less expensive, and be of much more use, than if done at remote intervals. With interest, the screen, when seven years old, will not cost two

dollars a rod, and will not exceed in expense a good post and board fence. The screen must not be sheared, but projecting and obtrusive limbs shortened back. The side limbs and shoots will form such a barrier that neither men nor animals will be disposed to go through, unless some great and special inducement invite a hard effort.—*Country Gentleman*.

Removing Evergreens.

The St. Paul Press thinks November is the best time to plant evergreens:

"We consider November, or any time after the ground is frozen hard, by far the best time to remove large evergreens of most kinds. In this list we include the Norway spruce, balsam fir, arbor-vitæ, our native spruces, and white pines, if they have been properly grown in the nursery. The Scotch, Austrian, and Norway pines are exceptions to this rule.

"Our plan is to dig around the trees just as the ground is about to freeze up, leaving a neat ball from the size of a bushel-basket upward, according to the height of the tree to be removed. After a few cold days, the ball is very easily loosened with a pry, when from two to four men remove it from the place where it grew to the wagon or sleigh.

"Any one who understands how difficult it is to get the roots of evergreens established in the soil, will readily admit that this must be the best plan.

"In this way the tree is taken up with the roots in the earth, just as they grew; hence the secret of their not rotting when removed, or being killed by exposure to the sun and winds, as most evergreens are that are sold in the spring, especially if they come from a distance.

"Mr. Bennett, of St. Paul, set out some forty evergreens in this way during one of those dry seasons when so many trees were lost of all kinds. Out of the entire lot only one failed, and to-day it is the best collection of evergreen trees about the city. No doubt, the beautiful Norways, pines, balsams, etc., had much to do in the way of selling the place, for all who are in search of a pleasant home, do like to see it surrounded with evergreens, that are delightful to look upon, not in summer alone, but doubly beautiful in winter."

We could not advise this mode for the climate of New-York, however suitable it may be to that of Minnesota. The only evergreen we have succeeded in transplanting, in late autumn, has been the hemlock spruce. For this we would prefer the fall to the spring, but in all others we find the months of May and June most preferable, and uniformly most successful.

The Ailanthus as a Timber-Tree.

THE editor of *The Agriculturist* throws in a plea in behalf of the ailanthus for timber purposes:

"Its rapid growth, utility of timber, its hardness, and the readiness with which it adapts itself to unpromising soils and localities, are points which should strongly recommend it to planters.

"For small posts, stakes, or other uses, for which trees too young to have blossomed will answer, they may be raised from the seed. Experiments, made in France, show the wood of the ailanthus to have less density than that of the oak, and greater than that of the elm, while it is superior to either of the two in elasticity and tenacity.

"A French writer states that he knows of ailanthus planks which have been exposed to the weather for twenty-seven years, without shelter or paint, and that the wood is perfectly preserved. The same author quotes instances in which the wood has been used for agricultural implements, etc., and it neither warps nor cracks. The wood saws readily, and afterward acquires great hardness under exposure to the air. It has also been used for cabinet-work, and Mr. McCullough has found it one of the most available materials for vineyard stakes. A small plantation will keep up a supply of stakes, as, when cut off, a new growth springs up from the root. With all these facts in favor of the ailanthus, and only one against it—that of its unpleasant odor when in flower—we suggest to those about to plant trees, to give it a share of consideration."

Strawberries in Michigan.

THE most prolific sorts I have are Wilson, Russell, Green Prolific, and Downer's Prolific. French Seedling, Fillmore, Jenny Lind, and Hovey are good bearing kinds. The Wilson has better resisted the rot this year than most other varieties. But as to quality, when I wish strawberries to serve with tea, or to eat from the vines, it is the most natural thing in the world to pass the bed of glowing Wilsons, the luxurious Green Prolifics, and magnificent Russells, right on to the bed of moderate bearing, medium sized, but delicious Hookers. I have a variety obtained from Mr. William Prince, of Flushing, named the Welcome—not as splendid as recommended, but of good flavor, and quite early. The Belle Bordelaise, also from Mr. Prince, a Hautboy variety, is quite remarkable this year, bearing abundantly. Its flowers are large and conspicuous, almost entitling the plant to a place in the flower-garden. The fruit has a peculiar rich, sweet flavor, (not much liked by some, however.) I shall retain

this variety for my own personal use. The Green Pineapple is utterly worthless. The Alpine Red is of but little consequence with the treatment it receives from me. The Wilson is the berry for productiveness, solidity, and endurance. It bears many small berries, but then it bears many large ones, too, especially at the first picking. Its faults are want of flavor, and bearing its fruit too near the ground. The handsomest berries I have are the Le Baron Pine, a dark glistening crimson of good shape, fair size, and flavor. I am not sure that they are different from McAvoy's Superior, or Bonte de St. Julian. I once thought the Napoleon III. and Austin were identical, but I have since seen the true Napoleon, growing in a neighbor's garden on rich, sandy soil, where it was a splendid sight to behold. With me the Metcalf proves to be a pretty good early kind.

Last year I received the Charles Downing, Durand, Philadelphia, and Jucunda. The Charles Downing is a promising, vigorous variety, the berries nearly all large when ripe, of good flavor, borne on long stems, and quite prolific. Some of the berries are very large, of rather rough, triangular form. In my garden, the Durand amounts to nothing; but on a neighbor's ground, with whom I divided plants, they make a very fine appearance. His were set on new, black, sandy soil, mine on heavy clay—otherwise their chances were equal. In the Philadelphia, I think I gained an acquisition in early kinds. The Jucunda promises good things when it is fairly established.—*Country Gentleman.*

Fruit-Culture at Richeview, Ill.

A COMMITTEE of the Richview Horticultural Society, at the above place, lately made an interesting report of the present state and development of fruit-culture in their vicinity.

"In this immediate vicinity we find there are planted, peach-trees, 95,000; apple, 20,000; pear, 7500; cherry, 2500; quince, 3000; grape, 16,500; gooseberry, 1800; currant, 2000; blackberry, 10,000; raspberry, 20,000; acres of strawberries, 21.

"Of the above number of trees and plants, the great majority is not yet in bearing condition. The number of peach-trees which actually bore the crop this season is about six thousand. Four thousand produced three fourths of the crop.

"With slight exception, the high ground has yielded the most. The varieties which have been the most productive this year are, the Hale's Early, Serrate Early York, (both rotting badly,) Tillotson, Galbraith Seedling, George the Fourth, Kensington, Yellow Rarapies, Portermixon, Oldmixon, Orange Free, Red Cheek, Melacaton, Heath Free, Ward's Late, Scott's Nonpareil, Smock Free, Heath Cling, and a nameless variety by Mr. Wilgus. But few Troths or Crawfords could be found.

"The peaches have been remarkably free from curculio, and have brought prices for most of the season in advance of quotations.

"The apple-trees which are in bearing condition are productive, this year's crop being mostly on the trees. Cherries were good. Grapes have rotted badly. Currants and gooseberries have produced a good crop. The strawberries were very productive. In one case 250 bushels were grown from one and one third acres.

"We find, upon inquiry, that sales of peaches have reached 30,000 boxes; apples, 1000 barrels; pears, 1000 boxes; cherries, 500 cases; strawberries, 22,000 quarts; tomatoes, 10,000 boxes. There have also been put up about five hundred dozen commercial cans, and five hundred one-gallon cans of peaches, by Mr. Wilgus, our largest orchardist. In addition to the above-enumerated articles, there have been shipped large quantities of melons, squashes, cucumbers, and other garden productions."

The fruit interest and production of the West are developing at a rate of unparalleled magnitude, and exceeding, we fairly believe, any similar section in the entire world.

Propagating Plants of Raspberries, Blackberries, etc., by Root-Cuttings.

THE *Small Fruit Recorder* has a practical little article on the subject, which we commend to the attention of cultivators:

"The roots may be taken from the ground as soon as the leaves have fallen, and the plant has ceased growing for the season. Cut them in pieces from two or three inches in length; those varieties which naturally produce suckers from the roots more abundantly, will allow of the shortest division of the root. If the cuttings are obtained or received before the ground is clear of frost, and suitable for planting in the spring, pack them in layers of moist sand in a cellar, or the ground secure from intense freezing. This enables the callousing or bark-healing process, (a cellular growth of cambium or healing of the inner bark,) to be effected, which precedes the formation of the young roots, for if the cutting does not callous, or heal, it decays and dies. If received after freezing weather is past, pack as before in a warm situation, in open air, in a heap layered with plenty of sand, shaded by boards or litter to prevent drying, (by no means let them get dry.) In about two weeks they will callous, and buds begin to be visible, more or less, on the surface; from this they (the blackberry particularly) may be planted direct in garden or field, in well pre-

pared ground, in shallow drills, or furrows, eight or ten inches apart in the drill, and in field culture the drills three feet or more apart; cover about three inches deep with fine earth; if the ground is not already rich, use mild fertilizers in the rows; avoid using long or unfermented manure in contact with the cutting, but apply on the surface as a mulch. It is important after planting that the ground does not get hard and dry. Give good culture through the season, and fine plants may be confidently expected.

"Some kinds of raspberry develop root-buds very slowly with ordinary care, and are not adapted to out-door planting at once, but require a little forcing. Where a propagating house is not available, an ordinary hot-bed may be used, and a slight under heat, by forest leaves and stable manure well mixed; pack smooth, about four inches deep in the bottom; cover this with fine earth one inch deep; place on the cuttings; sift on clean white sand, till covered evenly one and a half inches deep. White sand radiates and transmits the sun-heat more evenly, and preserves a more constant temperature and moisture. Keep moderately moist all the time, and the sashes over them, and a moderate temperature, till leaves are forming at the surface; then move the sashes enough to give ventilation, particularly while the sun is shining. When the young plants are sufficiently grown, transplant them in moist weather into the field or nursery-row.

"This course, with care, produces excellent plants for sale or future propagation."

The Walter Grape.—Report of the Committee.

HAMMONDSPORT, NOV. 3, 1869.

The undersigned, a sub-committee appointed by the New-York State Grape Growers' Society, have this day made a thorough test, with the saccharometer, of the Walter Grape, presented by Ferris & Caywood, of Poughkeepsie, N. Y.

One and a half pounds of the grapes were mashed, and the must marked 104 degrees on the scale. We consider it one of the best, if not the very best, wine grape of America.

J. LARROWE,	} Committee.
J. D. MASSON,	
GEORGE W. NICHOLS,	

The American Aloe.

A CORRESPONDENT of *The Tribune*, accompanying the Seward party in their visit to Mexico, has had a funny experience in drinking the liquor of the Mexican Aloe:

"A bottle of the fiery liquid distilled from the mescal plant, otherwise called the 'American aloe,' or 'century plant,' which blossoms in this latitude once a year, instead of once in a hundred, as is commonly believed at the North—called '*mescal*,' or '*tekela*'—is sold at the little wayside stands for six and a quarter cents, and it will produce as much drunkenness as a barrel of North-American whisky. I took one drink of it, under the supposition that it was *annisette* or some other light liquor, swallowing possibly about an ounce, druggist's measure, before I smelled the burning flesh as the lightning descended my throat. As I sat down the glass, my head began to increase in size so rapidly that I saw at once that unless I got outside immediately, the door would be too small to admit of my passing through it. Seizing my hat, which appeared to have become of about the size of an ordinary umbrella, I turned it up edgewise, and succeeded by a tight squeeze in passing through the door; the street then appeared funnel-shaped, and I remember an odd fancy that I was to resemble the man who 'went into the big and came out the little end of the horn.' Curiously enough my legs decreased in size as my head enlarged, and my last recollection of the affair is that my person resembled a sugar-hogshhead walking off on two straws; body I had none. No more *tekela* for me, please! The teamsters and muleteers drink this clear, colorless, harmless-looking concentrated lightning with apparent impunity; but a single bottle of it will cause a rebellion among an entire regiment of soldiers, and very likely result in a *pronunciamiento* on the spot."

The Grape Season in Ohio.

F. R. ELLIOTT communicates to the *Germantown Telegraph* a few paragraphs in reference to the last grape season near Cleveland, Ohio:

"Here around Cleveland, within say twenty miles each way, (forty miles,) the Catawba and Concord, Hartford, Telegraph, Ives, Norton, and some few others, even Maxatawny, have ripened, but the bunches have been irregular and loose, and in the Catawba many single berries entirely green, causing labor to clean them before packing. In some localities, the Catawba, and even Concord and Martha, have rotted. Delaware has ripened very irregularly, some vines ripening perfectly, while at a distance of only twenty feet they only faintly colored. Iona has only ripened in a few localities; in most vineyards, it partially colored early and there remained, so that, side by side, it has not matured as well as Catawba. Isabella also colored early, gave good compact bunches, but the fruit was so sour that all passed by them for Concord or Hartford. Crevelling, (syn. Laura Beverly,) as usual, good in quality, but poor bunch. Adirondack only second. Alvey good, but very poor bearer and small.

"We had no frost until the 20th of October, but from that to the present it has been quite cold, and, as I write, ice is near an inch thick, the ground frozen two inches or more, and all the crops of grapes that were not gathered and really unripe are valueless for any purpose but making of wine by aid of Gall's or some other artificial method of additions of alcohol. All, or nearly all, of Rogers's hybrids have behaved badly on the Lake Shore this year—mildewing, losing foliage, setting poor, broken bunches, and not ripening."

Gingko-Tree.

A FINE specimen of the gingko-tree is now existing at Whitfield, Herefordshire, England, known as the Woolhope Tree. It measures seven feet two inches in girth, at five feet from the ground; is fifty feet six inches in height, and has a diameter spread of foliage of forty feet. It is graceful in form, resembling a beech in outline, and is supposed to have been planted about 1776, and therefore is about ninety-six or ninety-seven years old.

The finest specimen we have seen in the United States is on the former grounds of Charles Downing, at Newburg, N. Y., which is about twenty-five feet high.

Foote's Seckel Pear.

MR. A. FOOTE, of Massachusetts, has grown a pear from seed of the Seckel which seems to promise well. The tree is said to be more vigorous than the Seckel, and equally hardy and productive; the fruit is larger and broader, with flesh much like the Seckel. It ripens in September, but will keep through October.

Fruits for Delaware and Maryland.

A CORRESPONDENT of *The Country Gentleman* gives his notes as follows for Delaware:

"Pear culture is receiving some attention, and promises to be remunerative where a proper selection of kind is made. Dwarf pears have generally proved a failure, with the exception perhaps of the Duchesse, Bartlett, Buffum, Anjou, Boussock, Lawrence, etc. Standards succeed with the same management that the peach requires. Blight in the pear has not been serious thus far, and some varieties appear to escape entirely, among them the Lawrence and Duchesse, and most varieties begin to bear on pear-stock in five or six years from the bud."

The Rural Gentleman gives the following selected list for Maryland:

PEARS.

Manning's Elizabeth, Lawrence, Bartlett, Seckel, Belle Lucrative, Columbia, Winter Nelis, Duchesse d'Angoulême, Glout Morceau, Flemish Beauty.

PEACHES.

Hale's Early, Large Early York, Troth's Early, George the Fourth, Crawford's Early, Heath, Melacoton, Rareripe.

CHERRIES.

Gorwood, Black Tartarian, May Duke, Black Eagle, Yellow Spanish, Downer's Late.

Effects of Mulching.

WE had a good opportunity this year to see the effects of mulching.

Some corn had been planted on one side of our stack of mulch, and some strawberries on the other. The hay gradually slid down, and partially covered two rows of corn and strawberries. Wherever the plants were protected with the mulch, they grew of a deep green, vigorous and large, while all beyond them, upon the unprotected ground, were but one fourth their size and luxuriance. The short lesson we can learn from this is, mulch in summer as well as in winter and nothing else is so efficacious against the evil effects of dry weather.

Value of the Ives Seedling Grape.

THE editor of *The Prairie Farmer* thinks it equal, and in some respects superior to the Concord.

"During the past two years, in several different States, we have seen the Ives standing side by side with the Concord, both varieties planted at the same time and tended alike, when from ten to sixty per cent of the Concord grapes had rotted, while on the Ives every berry was sound. In the past summer, our attention was several times directed to rotten grapes on the Ives, but in every case, after a careful examination of the decayed berries, we determined the rot to proceed from the wounds made by the grape codling. The Ives grape colors, so as to be put upon the market some days earlier than the Hartford Prolific, and becomes fully ripe about the same time, or a little earlier. For wine purposes it is equally as good as Concord, and by some it is considered preferable. The Ives grape has the merit of hanging on the vine uncracked until frost, or weeks after all the Concord would be cracked and spoiled. As a

table grape, when eaten in comparison with the Concord, we find tastes to differ, about as many preferring the one as the other. We desire you to give the Ives a trial. Under good cultivation, the Concord makes a full crop of grapes in its third year, the Ives the fourth. The vines of both varieties are hardy, and both resist the attacks of thrip equally well."

We would add that, with Messrs. Parsons & Co., of Flushing, Long Island, it is considered the most profitable variety that can be grown for wine purposes, but will not sell as well as the Concord in the markets for a table grape.

Profits of Grape-Growing.

WE have been asked, How great are the profits of grape-culture?

In *Landmarks*, Dr. Grant says twenty-five hundred vines can be grown to an acre, and after the third year of bearing, growers can depend upon five pounds per vine. This would be *six tons* per acre.

We consider such estimates very deceitful, as they are never realized.

As Concord vines are now planted in rows six feet apart, and eight feet in rows, giving eight hundred and twenty-five vines per acre, we should say that a good crop per acre, year after year, would be *two tons*, or four thousand pounds, or an average of five pounds per vine. We do not think this estimate is often exceeded for any series of years.

The prices of grapes this year have averaged eight to ten cents per pound. Deducting the expenses of marketing, the grower has hardly averaged more than seven cents per pound profit, or from two hundred and fifty to three hundred dollars per acre.

The high estimates formed by some, of five hundred to one thousand dollars per acre, are very delusive.

We would consider any vineyard or fruit-ground a good property that yielded a steady income, clear of all expenses, of two hundred dollars per acre per annum.

"When will my Plants Bear?"

THIS question is often asked by very impatient ones, in their eager desire for fruit. *Strawberries*, if set in the fall, will bear the next season; but if set in spring, they should *not* be allowed to bear the same year, as the light crop would not pay for the injury to the plant, which, in fact, in some instances, would be entirely destroyed. They will produce their best crop the year following. In *Raspberries*, the sucker sorts, which often have a strong cane two to four feet high, will produce fruit or spurs thrown out from that cane or stock the first year. But this is not advisable, as it exhausts the root and lessens the growth of the new cane that is to bear fruit the next year. If you are anxious to see the variety, leave one or two to bear, and cut off the others near to the ground. The tip sorts having nothing but roots and germ, and nothing above ground, produce only canes the first year, and fruit well on those canes the second year.

Blackberries, same as sucker raspberries. *Grapes*, if two year old vines are set, and bearing wood left on, will give fruit on that wood, but also to the injury of the plant. Whether plant is large or small, it is better to cut to two or three eyes, and the new growth from these eyes will bear well the following year.—*Small Fruit Recorder*.

Cultivation for Drought.

A SEVERE drought the past summer affected the many strawberry and small-fruit plantations, and their owners had an opportunity to speculate as to how best to overcome the evil effects. In our own case, we redoubled our exertions. We mulched our trees that had been newly planted, and they all grew handsomely; we cultivated our strawberries with four-fold vigor, and though for three months no rain came sufficient to wet the soil, yet they have lived and grown thriftily. We therefore say to all cultivators, keep the cultivator well in motion; stir the soil freely in times of drought, and it will be found an effectual means of safety.

Plums for the West.

The Prairie Farmer recommends the following:

"There are several of the finer varieties of the plum which are perfectly hardy. Perhaps Imperial Gage, for a single variety, for a profitable market sort, would prove as good as any, but we would advise you to plant several varieties. From our experience, we should say plant Washington, Jefferson, Smith's Orleans, Coe's Golden Drop, and Domine Dull. If you plant for the protection of your orchards against the curculio, then we would recommend Columbia. Of the above list, Washington is by several days the earliest plum; but far north, under ordinary treatment, it would be most likely to winter-kill to some extent in the tree, and in the bud. Columbia, also, has a large fruit-bud, and, in severe winters, a part of them sometimes are winter-killed."

A Visit to a Flower-Farm.

How Flower-Seeds are Grown—The Poetry of Gardening.

THE Rochester (N. Y.) *Express* describes the flower-garden of our well-known horticulturist, James Vick:

"The warm, pleasant weather we have enjoyed for a few days past rejoices not only the farmer, but seedsmen and florists as well. Mr. Vick's fields of flowers are now in their glory, and are well worth a long visit to see. We know that many visitors travel miles to see them, and find themselves well repaid for their trouble. On his home farm of twenty-five acres, on East avenue, just outside the city limits, he has fully ten acres devoted to flowers, mostly annuals.

"The flowers are mainly grown for the seed, and beauty is only an incident in their culture. Mr. Vick finds that many varieties of flowers are so especially adapted to our hot, dry climate that they grow more beautiful and perfect better seed than in Europe. Years ago almost all seeds of choice flowers were grown in England or France. Some are yet; but many varieties grow better here than there, and London seedsmen are importing the seeds grown in Rochester. One London house has offered to take all the *Phlox Drummondii* for a term of years. His *Zinnias* are also superior to any that can be grown in England, or to any that are grown in this country. Many of them are as double and perfect as the finest dahlias, and of every imaginable hue expect pure white.

"*Zinnias* are famed all over the world where flowers are grown. The history of this flower is curious. It is a native of Mexico, and was originally introduced to England in 1796. Our grandmothers and great-grandmothers used to grow the Mexican *Zinnia* under the fanciful name of 'Youth and Old Age.' It was not remarkable for beauty, or any thing except remaining in bloom a long time. The flower was very single, poor-looking, about as large as an old-fashioned quarter-dollar, with a narrow rim of flower leaves around it. In 1860, Messrs. Vilmorin, Andrieux & Co., florists of Paris, succeeded in growing a double *Zinnia*, and it was exhibited as a great curiosity in London. About that time Henry Ward Beecher wrote a letter to Mr. Vick, who was then editing the Horticultural Department of the *Rural New-Yorker*. Mr. Beecher wrote that he had watched a *Zinnia* flower six weeks, and it was as bright at the end of that time as at the beginning. He thought the *Zinnia* deserved more attention. Mr. Vick at once took the *Zinnia* in hand and began its improvement. Selecting the finest flowers each year, and pulling up all plants that produce single flowers, he has fully established the double flowering habit. Some of his finest *Zinnias* are three to four inches across, as beautiful as dahlias, and of almost every shade of color, the crimson, scarlet, or magenta being most common. Some of the flowers are more than double, the banks of leaves being two and a half to three inches deep, and bending the stalk by their weight.

"The *Petunia* has been quadrupled in size and grown double, of various shades. The original flower was very small, white and always single. Now the seed produces large flowers, seventy-five per cent of them double, and of various beautiful shades. The double *Petunias* produce no seed, and the seed to grow double flowers from all has to be artificially fertilized every morning with pollen from the double flowers, which are cut off for that purpose. This operation requires great care, cutting out all the pollen on the single flowers so soon as they expand. It must also be performed under glass, or dews and rains would wash off the pollen and destroy the seed. Of course double *Petunia* seed grown in this expensive manner is scarce and high-priced.

"The *Asters* are large, beautiful, and bright. These almost always come true to color; which is not the case with *Zinnias* or *Verbenas*.

"The double German stock is one of the finest flowering plants, and the most difficult to save seed. Double stocks have no seed, and the flowers are forced into fruitfulness by starving the plants under cover until they can no longer produce double flowers. Then they will seed profusely, and 50 to 75 per cent of this seed will produce double flowers.

"A half acre of *Verbenas* presented a magnificent spectacle. Each plant spread over two to four square feet of ground, and was covered with these beautiful flowers. Inexperienced florists are apt to cramp their *Verbenas* by planting them too closely.

"The *Gladioli* were just coming into bloom, and occupied about an acre and a half of ground. One very fine variety, the James Carter, stands erect, and is not quite so large as others. Each root increases to two, three, or four roots during the season. Some fine *Lilies* and *Dahlias* are just beginning to blossom."



Vol. 25.

MARCH, 1870.

No. 285.

Hints and Helps to Cottage Gardening; or, What shall we Plant in our Garden this Spring?

BY THE EDITOR.

A Select List of Garden Vegetables.

THE revival of spring work brings its pleasures as well as its anxieties, and perhaps the few moments of anticipation of garden produce for the coming year help to fill out the budget of pleasure every farmer's and gardener's family is bound to enjoy. No one can mistake the fact that the *character* of our lists of vegetables is steadily advancing, old varieties drop out of the lists, and new and improved ones take their place. And gardening now is necessarily a course of labor, giving both a greater product than ever before; but also an immense gain in *quality*, the very point of all which should interest a family most.

For the convenience of our readers who love gardening and desire their tables to be well spread with the choicest of vegetables from their own garden, we have conferred with our principal seedsmen here, in this city, and have selected a choice list of the very best varieties under each class. Many of them we have personally tried, and it is believed none will regret the adoption of the list as it is, entire, for their own use.

BEANS.

Bush, Early Valentine, Mohawk, Refugee, White Marrowfat.—The last is best adapted to field culture, the third is the most productive, the second is best adapted to northern latitudes, and the first is best for family use.

POLE BEANS.

Lima, London Horticultural, Giant Wax Beans.—The last is a new variety, very productive and of a delicious flavor.

ASPARAGUS.

Conover's Colossal.—A really excellent variety; grows very large, should be planted in hills three to four feet apart. Is very productive.

BEETS.

Early Flat Bassano, Early Blood Turnip, Dark Red Egyptian.—The first is the earliest we have, coming into maturity a week or ten days sooner than any other sort. The second is an old standard variety, is very good for early use, very tender, and is indispensable to every garden, however small. The *Dark Red Egyptian* is a very fine new variety from Egypt, very deep red, tender and delicious.

CAULIFLOWER.

Early Erfurt, Half Early Paris, Le Normand.—All are excellent. The first quite small, but tender; the last of immense size, and very superior.

CABBAGE.

Early Wyman, Early Wakefield, Early York, Early Winningstedt, Early Flat Dutch, Late Bergen Drumhead, Late Drumhead Savoy, Late Red Dutch, Late Marblehead, Mammoth.—The first is a new variety, very early and profitable, large size and excellent quality. The second has always been known for its excellent flavor, and is considered the standard early variety for a market crop near New York. The *Red Dutch* is best for pickling, and the last is the largest kind grown, heads often weighing from twenty-five to fifty pounds. For a late winter variety, for market, nothing as yet is so well liked by gardeners as the Premium Flat Dutch.

CARROTS.

Bliss Improved Long Orange.—A new variety, a great improvement on the old standard long orange, being larger, better flavored and deeper color.

Large White Belgian—grows to a large size, and is much liked for soups and seasonings.

CELERY.

Incomparable Dwarf, Boston Market, Dixon's Mammoth White, White Solid.—The first of a very dwarf habit, exceedingly solid, and fine crimson color; the second very fine and particularly popular among Boston growers, for its tender, crisp and succulent stems; the last very desirable for its large size, and crisp, fine flavor.

CUCUMBERS.

Early Russian, Early White Spine, Long Green Prickly.—The first is the earliest in cultivation, but short; the second, best for market or pickling; the last, for family use, being the firmest and best flavored, makes a beautiful pickle.

CORN.

Farmers' Club Sweet Corn.—A new variety, very sweet, tender, and splendid flavor; ripens early.

Trimble's Sugar Corn.—Also a new variety, very fine quality, for late purposes.

Crosby's Extra Early Sugar.—Ears are very short, but contain fifteen to sixteen rows, rich sugary flavor, very early and very productive.

EGG PLANT.

Pekin New Black, New York Purple.—The first is a new variety from China, a very handsome grower, grows to the height of two to three feet, with dark bronzy, purple foliage, very ornamental foliage; the last is a valuable market variety of deep color and large size.

LETTUCE.

Large India, Early Curled Simpson.—The first a very large variety, forms large, round heads, which cut white, brittle, and almost transparent; the second, an excellent sort for forcing, is very early and largely grown in the neighborhood of New York.

MUSK MELONS—SKILLMAN'S FINE NETTED.

Green Citron, White Japan, Pine Apple.—The first is small but very sweet, and the second is even more delicious; color of fruit, creamy white, and flesh thick.

WATER MELONS.

Mountain Sweet, Mountain Sprout, Black Spanish.—The first is best for general culture, best; flesh scarlet color, solid, very sweet and delicious; the second quite long, also one of the the last, round, and smaller than either of the others, but thin rind and rich sugary flavor.

NEW VARIETIES.

The *Alton Large Nutmeg* melon, round, from six to nine inches in diameter; flesh fine grained, juicy and red, with somewhat of a musky flavor. Is variable also in quality, according to soil and season; a good, profitable shipping melon.

The *Long Persian*, introduced by Bayard Taylor, a great acquisition to our Middle and Southern States; flesh crimson, and remarkably fine texture, delicious flavor, thin rind, hardly half an inch; large size and globular in form; best for family use.

Russian American, also of very sweet flavor, and delicious crispness of flesh, but of tremendous size.

ONIONS.

Yellow Danvers, Wethersfield Large Red, White Portugal.—The first, early and best for garden use ; the second *very large* and good for marketing.

PARSNIPS.

Sutton Student, Long Smooth.—The first, a new variety of delicious flavor ; the second, roots very long, white, smooth, free from side shoots, tender, sugary, and most excellently flavored.

PEAS.

Landreth's Extra Early, McLean's Little Gem, McLean's Advancer, Laxton's Prolific Early Long Pod, Champion of England, Large White Marrowfat.—The first we have no hesitation in saying, from experience, is the *best early pea* for garden use, being very early, productive, and excellent quality. We have discarded the *Early Dan O'Rourke*. *McLean's Little Gem* is a great curiosity, growing very dwarf, but of excellent flavor. The *Advancer* is very prolific. The fourth is very valuable as a second early pea, very hardy and fine quality. The last two are already well known. Few or none can surpass the *Champion of England* in desirability for family use.

PEPPERS.

Bull Nose or Bell, Cayenne.

POTATOES.

Early Rose, Excelsior, Bresee's Prolific, Climax, Mercer, Peach Blow, Jackson White.—The second is the finest flavored of all we have ever tasted, the *first* most productive and best adapted to general cultivation of all the new varieties ; the third and fourth very desirable for trial ; the last two, old and well known kinds for market, of the finest flavor.

RADISHES.

Long Scarlet, Short Top, Scarlet Turnip Radish.

RHUBARB.

Downing's Colossal, Myatt's Linnaeus.—The first truly superb ; the second tender and very fine.

SQUASHES.

Yellow and White Bush Scolloped, Summer Crook Neck, Boston Marrow, Hubbard.

WINTER VARIETIES.

Hubbard, Yokohoma.—Every family should have them all. The Hubbard is the best table squash yet known.

SWEET POTATOES.

Nansemond.

TOMATOES.

Early Smooth Round Red, Cook's Favorite, Gen. Grant, Tilden.—The first is universally admitted to be of excellent standard reputation. The *Gen. Grant* has been well tested the past year, sufficiently so to merit recommendation, being very productive and very fine flavor. Of the newer and later varieties the most noticeable are The *Trophy*, *Rising Sun*, *Crimson Cluster* and *Charter Oak*.

TURNIPS.

Yellow Globe, Cow Horn, Purple Top, Ruta Baga, Yellow Stone, Strap Leaved Red Top.—The first is best for a general crop either for table use or stock. The last very fine grained flesh and exceedingly rich.

In laying out the garden, work will be greatly simplified if the rows are placed sufficiently distant from each other to permit a horse and cultivator to pass up and down, the hoeing being done by hand between the hills of each row. To succeed well with all garden operations, a *system* is necessary which shall provide the simplest as well as most thorough means of cultivation, while the surest *bank* to draw a *discount* from, for future repayment, is a good big bank of well rotted manure.

Popular Pears---The Seckel.

SO old and so well known a variety of the pear as this might not need, at this late day, any description of its excellencies. Everywhere popular; seeming to succeed in nearly all localities, and never failing when once in bearing, it may be considered, in one sense, our very "*Patriarch*" of pears.

We do not believe one grower in a hundred knows its history, and although pomologists cannot closely trace it to its original source, yet Mr. Downing gives us the only authentic information as to its memory.

"About eighty years ago, when the late venerable Bishop White was a lad, there was a well-known sportsman and cattle dealer in Philadelphia, who was familiarly known as '*Dutch Jacob*.' Every season, early in the autumn, on returning from his shooting excursions, Dutch Jacob regaled his neighbors with pears of an unusually delicious flavor, the secret of whose place of growth, however, he would never satisfy their curiosity by divulging. At length the Holland Land Company, owning a considerable tract south of the city, disposed of it in parcels, and Dutch Jacob then secured the ground on which his favorite pear tree stood, a fine strip of land near the Delaware. Not long afterwards it became the farm of Mr. Seckel, who introduced this remarkable fruit to public notice, and it received his name. Afterwards the property was added to the vast estate of the late Stephen Girard. The original tree still exists, vigorous and fruitful.

"It is supposed that the tree originated from seeds dropped by Germans who emigrated from Germany and settled near Philadelphia, as it bears some affinity to the Rousselet, a well-known German pear."

The Seckel pear is small in size, but of regular form, and has a peculiarity of growing in clusters at the ends of the branches, each cluster holding from two to five pears, but usually three. A well laden tree is often a great curiosity, as every available spot of surface seems to bear a cluster.

The fruit at first is but slightly colored, of a brownish green, but gradually changes into a more yellow brown, and finally puts on a lively russet-red cheek and a few small gray dots.

The *stem* is about a half-inch long, moderately stout, inserted in a small narrow cavity, highest on one side. *Calyx*, small, open, with short, stiff, incurved segments. *Basin*, shallow; *core*, small; *seeds*, broad, ovate.

The fruit is unsurpassed in flavor, and at various Pomological Conventions, in England and America, it has been declared the most exquisitely flavored of any variety known on both continents. The flesh in texture is yellowish white, juicy, very sugary, melting, spicy and aromatic.

When we add to this that it is one of the healthiest and hardiest growers of all pear trees we possess, forming a fine, compact, symmetrical head, and well adapted to culture either as a dwarf or as a standard, and on both equally certain, we have a variety of inestimable value in our horticultural collections.

Cultivators should take due notice that it is *late in coming into bearing*. We have seen large trees which did not commence bearing until their tenth year, but when once in productive condition, its luxuriance is fairly astonishing.

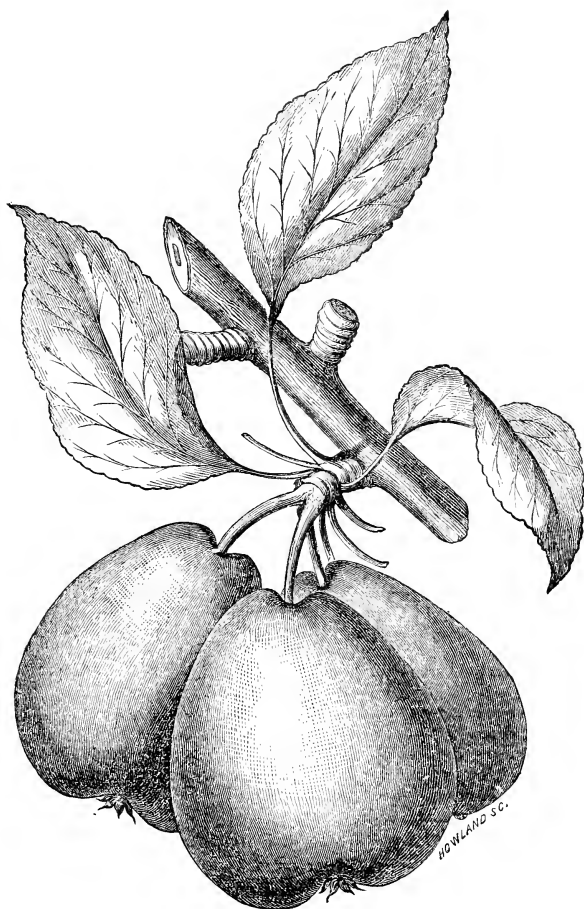
It will bear more manure than any other variety we know, and, in fact, demands it constantly in order to give large and handsome fruit.

The illustration herewith introduced (to which our artist has done ample justice) is, we believe, the only life size one ever given in any journal in this country.

Cost of Growing an Acre of Early Cabbages.

AT the January meeting of the Alton Horticultural Society, O. L. Barler read an essay upon the subject---"*Counting the Cost*." The object was to show that it was the part of wise men, intending to enter upon any great work (agriculturally for example), to count the cost whether he be able to prosecute it successfully.

That all men were not thus wise is the plainest of all truths. The biggest blunders that men ever made have been perpetrated in our profession.



The Seckel Pear.

It is erroneously thought that men of the least understanding and incapable of any other business, can turn a furrow and grow crops. But of all deceitful notions this is the most false and misleading.

It was argued that failure was most frequently occasioned by not comprehending the situation and providing for the necessities of the case. Men attempting to grow vegetables do not count the cost.

By way of illustration, the following estimate was made of the cost of growing an acre of early cabbages:

First, we select for the cabbage patch the richest spot of ground in the garden.

The preparation for the crop should commence in the Fall by hauling on

Fifty tons fresh stable manure, at \$2.....	\$100 00	Mark out in rows, both ways.....	2 00
One deep plowing in the Fall, turning the manure under.....	4 00	Ten thousand plants grown in hot bed, and transplanted—A No. 1 plants in all respects—1 ½¢. each.....	\$150 00
In the Winter give a dressing of ten loads of wood ashes.....	15 00	Setting the plants.....	10 00
In the Spring, plow again, turning up the manure and mixing all thoroughly.....	4 00	Cultivating and hoeing 6 times.....	15 00
Now, sow broad cast, ½ ton raw bone super-phosphate.....	25 00	Dusting with one bbl. plaster during growing season—cost of plaster.....	3 00
Harrow, roll, and pulverize most thoroughly,	3 00		\$331 00

Our one acre of cabbages has now cost us \$331.

When we come to market with the crop in Chicago, we must deduct fully *one-third* from the gross receipts for expenses in packages, freights and commissions.

Then deduct still further an amount sufficient to pay for three weeks labor in gathering and shipping the cabbages—what remains is your *profit*!

"What," you say, "must we spend \$300 and upwards on an acre in the garden, and that too upon so gross and mean a thing as a cabbage?"

Some men don't believe that it costs so much. It has surely not cost them anything like that amount. And then the expense of harvesting their crop was especially light, and the profits lightest of all!

Our statement is moderately made.

If we should adopt the true Henderson style of gardening, our estimate will be found entirely too low! That prince of New York gardeners puts \$600 down as the cost of growing an acre of vegetables in his country!

These statements seem extravagant, because men are not in the habit of counting the cost of anything that they produce.

How singular it is that men do not in agriculture, as in other callings, "first count the cost," and in view of the force and capital to be employed weigh the probabilities of success or failure.

All know that to be a lawyer, or doctor, or preacher, or even a stump speaker, they must have some education and fitness for their specific work.

But to be a "tiller of the soil" it is thought that education, or "smartness," so called, is even damaging. Nothing but *big hands* and bigger feet are essential to him, and as for "book larnin'"—away with it—you can't teach me!

Such men never respect their calling, and certainly they do not honor it.

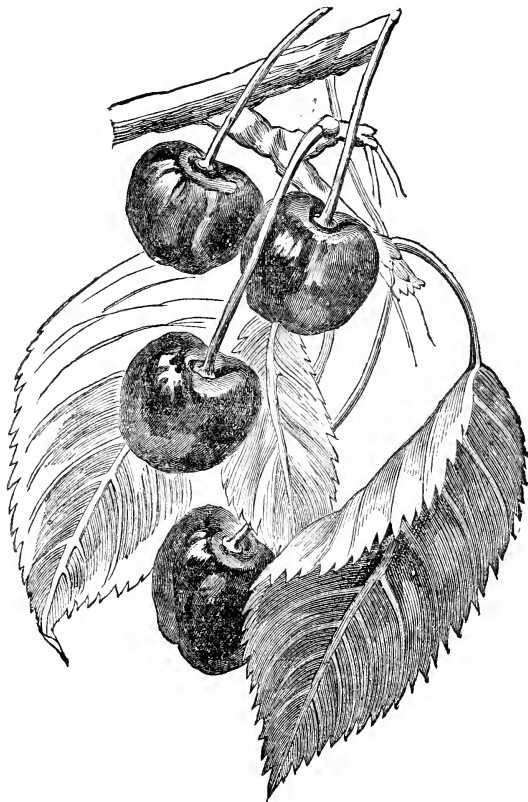
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The Currant Worm.

CAN any one inform me whether there is any power in the raspberry to prevent the ravages of this pest? I have somewhere heard or read that the worm will not attack a currant bush if a raspberry plant is growing in its immediate vicinity. I have noticed but a single fact apparently bearing upon the question. Last summer my currants were overrun with the nuisance; but one bush in the row was entirely exempt. This one had three or four Brinckle's Orange raspberry shoots growing up in the midst of it. Whether these would account for its exemption is a very interesting question which I have no sufficient knowledge to answer; but I could discover no other reason. Will some one give us further light upon the matter?

W. H. W.

Popular Cherries.

*The Early Purple Guigne.*

LIKE many other valuable varieties of fruit that have been introduced into America from foreign countries, and become successfully acclimated, we are indebted to Europe for that popular cherry, the *Early Purple Guigne*. To what part of Europe we can give it credit, it is impossible to ascertain. By our eastern horticulturists it was imported from England, while in the West it was introduced by a party of German emigrants from Germany.

But it has become, in both sections of the country, very valuable, on account of its many desirable qualities. The tree is quite hardy, a rapid grower, but sometimes with loose and irregular branches; the shoots are of a dark brown color, with small leaves drooping from the petioles. *Stem*, long and slender; *size*, medium to large; *form*, roundish, heart shaped; *color*, before ripe, dark red, but when fully ripe, a rich, dark, purplish black; *flesh*, dark purplish red; juicy, with rich, sweet, excellent flavor.

It is a very early variety, perhaps the earliest of all the sweet cherries, ripening usually in the month of May. It is a good bearer, although rather shy when young; but as they acquire age become very productive, and also very hardy. May be considered indispensable in every collection, whether for garden or field use.

The Barnes Mammoth Strawberry.

BY THE EDITOR.

FOR several years past a variety of strawberry, with the above name, has been sold in New York to a limited extent, which has attracted the attention of dealers and consumers on account of its large size, firmness and excellent *carrying* as well as *keeping* qualities, and wherever sold have uniformly commanded prices double those of the Wilson, although marketed at the same time.

The conviction has become a general one, that the reason for the great unprofitableness of strawberry culture, in late years, has been too close an attention to the Wilson, as well as too great a rush into the business. Cultivators tell us that the Wilson, although the most reliable of all kinds of strawberries to cultivate in all parts of the country, is still an unsatisfactory one in very many respects. It is called the *poor man's berry*, because it will succeed without a great deal of attention; but when grown for market its produce is very unreliable. The first year it may be only one thousand quarts per acre, nearly all large berries, and the second year, its best year, there may be only two thousand or three thousand; but afterwards it fails to produce a fair crop, its berries are small and is hardly worthy of attention. To keep, then, a bed of the Wilson in prime order, requires heavy manuring, good cultivation and renewing every two years. Such a course is costly, and when we remember that the *Wilson is always the lowest priced strawberry in the market*, it becomes a candid question whether strawberry culture would not be more steadily remunerative if some other variety could be found, producing more large choice berries, equally as firm, and equally good in quality, but the roots or beds of which would last twice as long without renewing. Horticulturists are watching for such a variety, but no substitute can yet be found. The nearest substitute we have seen yet, for localities *where it will grow*, is the *Barnes Mammoth*.

We have the variety growing on light sandy soil, and it is very fine, but we have been corresponding with other cultivators to learn their experience, and from one cultivator at Middletown Point, N. J., we received this letter.

1st. "*Barnes Mammoth*" does best on sandy loam, better on heavy land than light, but under any circumstances have the ground *good, rich*.

2d. It will not yield *as many berries* as the Wilson, but will produce *more large berries* than any other variety we know of.

The Wilson has the characteristic of giving a few of the first pickings that might pass for large, but they soon fall away into little trashy stuff.

3d. We find the second year it will produce as large berries and as many of them as the Wilson. This is one of its marked features, provided the ground be kept clean and free from weeds.

4th. We believe it will do better on the *hill system* than any other.

5th. It is about as early as the Wilson.

Its uniformly large size, beauty of shape and color, very good flavor, and the best bearer of the large berries, make it a very desirable variety. It is a very vigorous grower, stooling immensely.

We have sold as high as \$800 from an acre of Barnes, grown on the *row system*, and still neglected, and from that down to \$250 per acre.

The Barnes has always brought a much higher price than any of the common sorts, and during the last season commenced at twenty-five cents per pint, and did not fall below ten cents per pint, when the berries came in good order.

We also received another letter from a correspondent on the Hudson River, who enjoys the advantage of a *good heavy* soil. So, from both these accounts, we are able to judge that the Barnes succeeds well on both light and heavy lands.

"The Barnes Mammoth Strawberry, as far as my experience has gone, I consider is the best strawberry for *market cultivation*. It is a very abundant bearer, is not particular as to soil, produces large berries, very large indeed, and more in proportion to small ones than any variety I know of. Does not by any manner of means exhaust itself the first year, or the second, but will continue in bearing longer than the Wilson, and produce more *pounds of fruit*; the berries averaging a third larger, and bringing a correspondingly higher price

in the market. I should have no hesitation in recommending it for market cultivation. It will undoubtedly thrive better on a strong soil than on a light one, as is true of all varieties that produce abundant crops of large berries; but I think it will do equally well as the Wilson on a sandy soil."

We are anxious to have strawberry culture brought up to a *higher standard*. As long as the mass of cultivators are content with shiftless culture, and such indifferent berries as the Wilson usually averages, we can never expect anything but glut after glut, and disaster after disaster. We sincerely believe in originating new varieties, and seeing them well tested, for even if there is but one in a hundred that proves of decided merit, there is a real gain somewhere. *We must have a better berry than the Wilson for profitable market cultivation.*

A New Cherry.

BY HENRY T. HARRIS.

WE have here, in this part of Kentucky, a new cherry—at least I have never seen it elsewhere, or read of one like it. It is of a very decided Morello type. The tree is almost a semi-dwarf; or, rather, not a full standard, growing bushy, stocky, and with the branches not so pendant and *willowy* as the common old red Morello. The fruit is a clear, transparent, dark pink; the skin and pulp almost opaque, and begins to ripen, in this latitude, about the first days of June; and the crop is fully gathered before the old Morello red is fairly blushing. It is exceedingly juicy, tart and pleasant when fully ripe, but is much too acid to eat from the tree. As preserves, and for tarts, however, it has no equal in the cherry kingdom. The wood and bark of the tree partake strongly of the old Morello (of which I doubt not it is a chance seedling), but are, in some respects, similar to both the Duke and Bigareau families. Both tree and fruit are exceedingly hardy, and enormously prolific—rarely failing to mature a full crop even when *all* other varieties fail. I have known this cherry about twelve years, and have never known it to fully fail. The tree is a rapid and handsome grower, and begins to bear very young. It reproduces itself (but not so abundantly from the roots or suckers) like the common Morello. I have gathered from a quart to a gallon of fruit from trees five years old from the sprout. The leaves are somewhat broader than the common Morello, and not so dark. I have seen trees, eight years old from the sucker, so literally covered with fruit that, at a little distance, they had the appearance of being covered over with a pinkish scarlet cloth. The blossoms are some larger than its "mother cherry." It is familiarly called here the "Dyehouse," in honor of the old gentleman upon whose farm the first tree was discovered. That tree is still standing; now over a quarter of a century old, and still bears fine crops, and has never been known to fail but twice. This new fruit has been but little disseminated; not, perhaps, in a half dozen counties outside of this (Lincoln) county. Mr. Dyehouse lives in the southern part of our county, in the hills near Hall's Gap. I have about fifty trees growing on my place, planted seven or eight years since, which were dug from under the trees of Mr. Dyehouse. Fruit raising, with us, until within the last few years, has been shamefully neglected, and this accounts for the non-dissemination of this truly desirable fruit. Such is its excellence, that no other cherry will be preserved where this can be had. After all, may we not be mistaken as to this matter, and it prove to be what is familiarly known as the "May Cherry?" Be this as it may, I have never known it elsewhere, nor can I find any description of it in any of our books on fruits—Barry, Downing, Thomas, etc.

I have been equally at a loss to find any of our intelligent nurserymen or horticulturists, in our own or other States, who know anything of this cherry. I send you a small quantity of the wood and bark, and perhaps you can form some idea of its true type from them. The fruit is not suited to long transportation, being very tender when ripe enough for use. For near market, however, it can be used, and will give satisfaction to all who like a cherry preserve (and who does not?). I shall send specimens to some of our near horticulturists next season, with a view to obtaining light upon this unsettled question of identity. I would remark that I have no trees for *sa'e*, nor do I ever *expect* to have, but would send a limited number, *gratis*, to a few who really desire to try it, and who would be willing to send something to me from their grounds in exchange.

STANFORD, KY.

Design for Village or Country House with Home Conservatory.

FREQUENT inquiries are made of us for plans of small green-houses and conservatories, to be connected with the main dwelling, and heated from the same heating apparatus as the interior rooms are warmed. This design will give a partial idea how to accomplish the object.

By reference to plan, A is the portico; H, the front hall, 7 by 16 feet; B, the parlor, 14 by 16 feet; G, the conservatory, 14 by 18 feet, opening out of the parlor and fitted up with shelves at the sides, with a stand in the centre, and a passage-way of three feet in width all around it.

At the further extremity of the front hall a glazed door opens into the back entry. This hall opens out upon a back porch, I, 6 feet wide, and into the parlor and kitchen, D, which is 12 by 18 feet. The dining-room, C, 14 feet square, also connects with the kitchen by means of a small passage fitted up with shelves. On the right of the chimney is a good sized china closet. Opening out of the kitchen is a pantry, E, 6 by 8 feet, with sink, pump, cupboard, etc. This pantry opens out upon a platform at the rear of the house.

The second floor of the house contains two front chambers, each 14 feet square; a kitchen chamber, 12 by 14 feet; another chamber over the pantry and entry, 9 feet square; and a small room over the dairy.

The best method of heating such a home conservatory is as follows: A furnace made of a common air-tight stove is placed in a brick air-chamber underneath the floor, the heat passing up through a single pipe running from the *top* of the chamber to the floor above—while from the floor at the farther end of the conservatory, near the door, another pipe extends downwards, and terminates in the *bottom* of the air-chamber, thus producing a thorough circulation of air all the time, with a regulated supply of fresh air from out of doors, conducted by means of a box, like a common furnace box, to the chamber. The six upper sashes of the roof have pulleys and cords, by which they may be lowered or raised at pleasure.

A good country carpenter can erect such a green-house at less than \$250, and it cannot fail to be a most agreeable addition to the home necessities and pleasures of the inmates.

Grape Notes from the Parsonage.

THE year 1869 was, on the whole, a very favorable one for the grape crop in New England. It is true the spring was very cold and backward, and the early summer unusually wet. But we had such a magnificent autumn, so warm, so protracted, that nearly every variety of grape had an opportunity to show whatever excellence there is in it.

As there is always much interest to learn any facts that experience may have given, especially in regard to the newer and less tested kinds, I propose to say a few words concerning the behavior of several of these during the past season.

1. *Othello*.—This is No. 1 of Arnold's hybrids. It was removed in the fall of '60 from the place where it had previously stood, so as to allow it more room. There was, consequently, no fruit. The vine is a healthy, vigorous (but not rampant) grower, and wood *very* hard and compact. It was entirely healthy the whole season through.

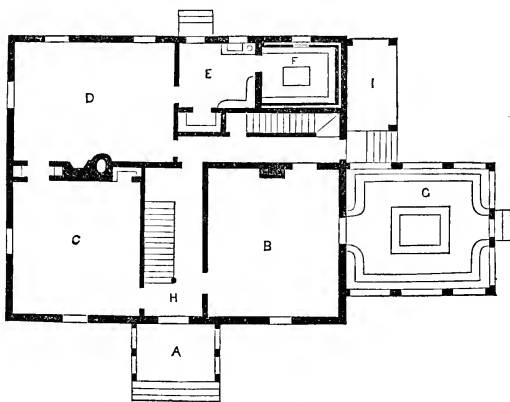
2. *Cornucopia* (Arnold's hybrid No. 2).—A strong and healthy vine, showing unusual vigor. It ought to have borne several bunches of fruit, but did not show a grape. It fruited slightly the previous year, but the birds paid it the emphatic compliment of devouring every berry before I could get a taste, while magnificent Delawares hung untouched by its side.

3. *Autuchon* (Arnold's No. 5).—This, too, was transplanted in '68, to give it room enough to show its admirable qualities, for it is a very fine, delicate, high-flavored, white grape. It, of course, bore no fruit the past season. The vine is a good grower, very short-jointed, and thus far entirely exempt from every appearance of disease.

4. *Brant* (Arnold's No. 8).—This is said to be a remarkably early variety, and I should so conclude from the early ripening of the wood. Planted the previous fall, it has made a strong cane of six or seven feet, which promises to give me next season a taste of its fruit. It showed some *slight* traces of mildew, but not enough to do any perceptible harm.



Design for Village or Country House with Home Conservatory.



Ground Plan.

5. *Canada* (Arnold's No. 16).—Set in its present position last spring. It has grown tolerably (about three feet), but has been entirely healthy. I very much regret having been obliged to transplant these promising varieties; but they soon showed such vigor of growth that their first position was seen to be entirely unfit for them. Next year I hope to be able to speak of their fruit grown in my own garden.

6. *Eumelan*.—As I have already reported upon this exceedingly promising grape (*HORTICULTURIST*, Vol. 24, page 355), I will add but a few words here. It has, during two years, grown as vigorously as any one could wish, while yet its internodes have averaged not more than four inches in length. It has been as free from disease as the trellis on which it grew. And its fruit, earlier than either Hartford or Miles, is very nearly equal to Iona. One of the clusters which it bore last season (vine planted in spring of '68) was *very nearly* as large as the cut published by its introducers. It is decidedly the best black grape yet offered for sale.

7. *Diana Hamburg*.—I have given this variety the warmest spot in the garden, good, rich soil, and careful attention; but it is most shamefully ungrateful. The most that I have yet been able to induce it to do is to stand still without dying. But whether it won't "shuffle off this mortal coil" during the winter (as its predecessor did), remains to be seen. The fruit is said to be superb; but the question is—How to get it?

8. *Weehawken*.—Almost the same remarks will apply to this as to the preceding. I have not been able to do anything with it. It won't grow. Though planted in a good, warm and sheltered position, and in good soil, it did not lift its head an inch during the whole season. And it was just so the year before with another plant of the same variety.

9. *Hine*.—This has grown well in circumstances where it might certainly have been excused if it had refused to grow at all. It was unintentionally neglected. It has been free from all disease, and made such a strong growth as justifies the hope of a little fruit next fall. I am much pleased with the appearance and behavior of the vine, and hope to find the fruit as early and as excellent as has been represented.

10. *Croton*.—This and the next are hybrids, raised by Mr. Stephen W. Underhill, of Croton Point, N. Y. They have attracted a great deal of attention wherever shown; and they are most richly worthy of it. The *Croton* is a white grape, ripening (according to Mr. U.) with the Hartford. The berry is about the size of Rebecca, and bunch from six to eight inches long. It is of the very highest excellence, having a thin skin, no perceptible pulp, and a most refreshing, winy juice. Its quality approaches nearer to the tender delicacy of the foreign grapes than any other hardy variety I have ever tasted. The vine during the past season proved with me entirely healthy, making a fair but not vigorous growth of hard and *very* short-jointed wood. I have not yet fruited it, but its originator says that it blossoms later and requires less time for maturing than any other variety with which he is acquainted. If it shall prove hardy and healthy, and the fruit ripens as early as Hartford, it must almost entirely supersede every other white grape. Indeed, if the *Croton* and *Senasqua* can be successfully grown out doors, there will be little occasion for building any more cold graperies.

11. *Senasqua*.—This is a black grape—a hybrid between Concord and Black Prince. Berries about the size of Concord; bunch of medium size. The author of the article on native grapes, in the *Horticultural Annual* for this year, says: "*We regard this as the finest hardy grape we have yet tasted.*" I should fully agree with him, unless another of Mr. U.'s hybrids (not yet named), should be excepted. It leaves almost nothing to be desired. It has a thin and delicate skin and very meaty flesh, the two firmly adhering when fully ripe, as in the Black Hamburg. You can break open a berry, as you can a peach or plum, and expose the seeds, without separating the skin from the flesh. Almost every one would say, on eating it, that it was a foreign grape. My vine was planted in common garden soil last May. It has grown vigorously, forming a stout cane about seven feet high. The leaf is thick, tough and healthy, with no indications whatever of foreign blood. My brief acquaintance with the *Senasqua* leads me to the belief that it is the most successful approach that has yet been made to combining in one plant the superior quality of the foreign fruit and the healthiness and hardness of the native vine.

12. *Salem*.—This vine stands in a very favorable position for early ripening, in light, dry soil, a few feet south of a high tight fence; and yet its fruit was the last to mature in

the whole garden. Diana, Rebecca, Iona, Union Village (though not one of them, except Iona, in as favorable a situation), all ripened before it. The vine is a strong one, with three or four canes as large as a good large lead pencil, and ought to have borne some pounds of fruit. In reality it bore only four small bunches, which, altogether, would not weigh more than half a pound. I don't know what to think of it. The vine is true to name, for it came direct from Mr. Rogers. But if this is a specimen of its future behavior, "its room is better than its company." The fruit was fair, but not nearly so good as Wilder, growing at its side, or Massasoit or Agawam.

But my article is getting too long, and I will close with a few words in regard to one other variety.

13. *Miles*.—This is a strong and healthy grower, but the fruit is so small and so inferior that I do not consider it worth raising. It *colors* quite early, but does not *ripen* as early as Eumelan or Hartford. Nor is it a prolific bearer. In a word, I have concluded that the best use I can make of it is as a stock into which to graft some other desirable kind.

READING, MASS.

W. H. W.

A Letter from Shirley Hibberd.

STOKE NEWINGTON, LONDON, *January 18, 1870.*

EDITOR HORTICULTURIST: Your invitation affords me an opportunity of returning thanks, better than I could do by letter, for many kindnesses and courtesies bestowed upon me by compatriots of yours. I call to mind now, with intense pleasure, the many occasions on which plants, and seeds, and friendly letters have been forwarded to me from friends (who call themselves friends, and to whom I send hearty greetings as from one who values friendship) on your side of the Atlantic. If we can be brothers all, let us be so.

"Wherever British hymns are sung,
There is the Britain's fatherland."

As thousands of our needy emigrants might say as they land upon your fruitful shores. I have but one difficulty in responding to your invitation, and that is, to divine what I should say that may be interesting and profitable on your side. Perhaps a word about the weather may not be amiss; we are never tired of talking about it, perhaps for the simple reason that it varies so frequently that we never know what the next hour may bring forth. At this moment the barometer stands at 30½, and appears to be pushing upwards, yet we are bathed in warm vapors. Those who want a vapor bath need not to turn up the gas in the bath-room, or put the servants through their exercises in boiling the pot; they have but to strip and sit down in the garden, where it is warm enough and moist enough to make a fellow sweat away seven pounds of good flesh per hour. But the wind is going round to the north, and in a couple of days we may have sharp frost, and in another couple of days good skating, and perhaps with one day more the ice will be rotten, the skaters will tumble in by dozens (as they did the other day on the Serpentine, in Hyde Park, as if members of a voluntary death-by-drowning society), and then again a sloppy sweat, and joints of meat, ordered in to hang, turning green and clammy, and beautifully clothed with mildews for the microscopists. I date from a wet valley on the immitigated and almost immitigable clay on the north side of London, the head of a tributary of the Lea. (You must have heard of the Lea as the drowning place of hundreds of London lads.) And the quantity of water passing over the weir in my garden would supply a fair sized town, if only it could be properly filtered. Our case is that of the ancient mariner,

"Water, water, everywhere;
And not a drop to drink."

Fact, I assure you; we pump up a sort of thin mud, and by the aid of filter obtain dilution for our grog and tea-kettle, a dissolver of our tea. A very strange place is London. Within four miles of it, this way, you may find melancholy marshes, peopled with king fishers in summer, and snipes in winter, yet from the midst of these marshes London is to be seen, a dark cloud by day, and at night a red fog, the redness being caused by the

innumerable lamps glaring in the murk and moisture. Probably, with all your advances (and we know something of your go-aheadedness), you can form no idea of the enthusiasm with which we practice horticulture. Every citizen who can keep a rural box and half a pony, grows good grapes—better grapes than are commonly seen on the tables in European cities, and the names of the newest of the pelargoniums, chrysanthemums, fuchsias and roses, are “as familiar in their mouths as household words.”

The quantity of glass employed in suburban gardens is truly wonderful. Why, look at the advertisement pages of our horticultural journals (we have three weeklies and about half a dozen monthlies; I will give you an account of them some day), and judge by the competition of advertisers how vast is the trade they are doing, or would wish to be done. I know nothing, except through book information, of the characteristics of American gardens, but have no doubt at all that my first impression, on a visit to New York, would be the paucity of glass in gardens. Yet, perhaps, we have less need of glass than you; our winters are so mild, as a rule, and when a good nipping frost occurs it rarely lasts beyond ten days, so that a cooling may help soft greenhouse plants, and the knowing ones get through this part of their work by means of most rough and ready methods.

I have been led into these observations perhaps because, as remarked above, your invitation reminds me of my debts. I am indebted to Mr. Bresee for samples of his seedling potatoes; and to Messrs. Bliss & Co., for the same; and to a gentleman (I forget his name now, but his letter is in the great, grand reserve drawer, which I shall dig into if it should ever please the Almighty to give me one week's peace of mind)—a gentleman who corresponds with Messrs. Bliss, and who sent me samples of all the best sorts of pop-corn. Your potatoes—I mean your own potatoes—interest me immensely. I feel convinced for the present, though I may prove to be in the wrong, that there is in your race a taint of blood we have never had, or, if we have had it, there is no impression left therefrom in what I will call our race.

Not one of our potatoes has the upright, bushy growth of yours. I am not guessing when I say this, for the Stoke Newington collection comprised, only three years since, 250 varieties. We obtained from Messrs. Gibbs, of Down street, Piccadilly, London, a field potato of the greatest promise, called “American Red.” Judging it by its merits, I should say that you know it by at least half a dozen names. We had a terrific frost on the 25th of May following, and all our sorts, then growing luxuriantly, were cut down to the ground, and as black as ink, save and except this American Red, which stood up like a bush, green and unhurt, proclaiming to me that there was a seminal strain in the plant that we did not possess, the result of breeding from species of the wild potato that probably has never been introduced to Britain. Some of your potato fanciers may be able and willing to illuminate the British pomodetrigists upon the subject.

Surely you will not be surprised to hear that our trial of pop-corn resulted in a complete failure. We can grow maize. Oh, yes, we can. But we can only grow it as a curiosity, we cannot grow it as an off-hand garden or field crop. The thirteen sorts of pop-corn sent to me last year, were sown in the first week of May. The weather that followed was unfavorable, and only a tenth part of the seed germinated, and not a single plant produced a single cob of corn. I could have grown cobs, of course. By starting the seeds in a hot-bed; by potting off the plants and nursing them like seedling geraniums; by planting them out on hills of manure, and giving shelter at night, we might have had a crop. But that would not have been a fair trial. If we are to grow pop-corn, it must be by rough and ready methods, for it cannot rank with us in importance like such things as tomatoes, capsciums and cucumbers, to which we give just the kind of attention which maize requires to make sure of it. Our noble-hearted but too impetuous William Cobbett advocated maize so ardently as to delude thousands—in fact his two great delusions were the maize and the locust tree, two capital things in their way, but not adapted for English cultivators to get bread and cheese out of. But what a pity it is that our climates do not more completely assimilate. How pleasant it would be to compare notes with you on equal terms, and to exchange freely our several products and notions without impediment of weather. We should get through Alabama difficulties if we could stand on the same platform in the matter of eating and drinking; but here, to begin with, Nature denies us American potatoes

and pop-corn, and the breadth of the Atlantic is as nothing to separate, compared with the necessary diversity of tastes occasioned by the differences of our climates.

You may have heard of my labors in collecting and cultivating ivies. The Stoke Newington collection is the result of fifteen years application to the subject. It comprises now exactly fifty varieties, a great many having been destroyed in order to limit the collection to the most distinct and beautiful. Lately I classified and named them all afresh, for the names they bore in the catalogues were long enough almost to reach from here to you, and absurd enough to stagger an Ojibbeway pundit. My names were all founded upon characters. I abolished all the stupid commemorative names, and deceptive names, and fanciful names, and, oh dear, the pedants of our botanical world were all aghast at such an inroad of common sense. You shall have a copy of the paper on Garden Ivies which I submitted to the Linnæan Society. Criticise it freely, and if you think a nomenclature founded on characters worthy of respect, uphold it without flinching on your side of the Atlantic.

SHIRLEY HIBBERD.

Pencil Marks by the Way.

BY OCCIDENTALIS.

The Lessons of the Year 1869.

HERE, in the Northwest, where the past season has been a remarkably wet one, the cultivators of the soil have been taught one lesson at least they would do well to profit by, that is—DRAINAGE.

Some will begin at once to put in practice what has been taught them at so much cost; others, failing to comprehend the lesson, will go on as before, without drainage, and with shallow culture, wondering why they can realize no crops. All clayey sub-soils, whether of timber or prairie, need more or less of underdraining, and are really unfit for fruit culture without it. And these lands, with the proper amount of underdraining, are regarded as the very best for that purpose.

And, then, as to DEEP CULTURE: farmers' clubs may discuss weekly, for a lifetime, the question of deep or shallow plowing, the sentiment is all but universal, and is daily gaining strength, that *deeper culture* is necessary the country over. Deeper culture! Deeper culture! is the cry from Maine to Georgia; and implements for effecting it are daily in greater demand.

While deep culture can be more readily reached by means of improved implements, and at comparatively slight expense, drainage is, and must be, costly. The best artificial drains are doubtless made of tile; and with this on the ground, at the high price of labor in the West, they cannot be laid at a less cost than about two cents per foot. So that, with first cost of tile and transportation added, the proper drainage of an acre of ground cannot fall short of sixty to one hundred dollars. Besides, as yet there are comparatively no tile manufactories in the country. As these increase—and they will increase as the demand increases—and the high cost for transportation is reduced, tile draining will largely increase, and will be found to pay a good return, and to none more than to the fruit grower of the Northwest.

DRAINAGE and DEEP CULTURE, then, I regard as the two chief lessons taught the fruit growers by the memorable season of 1869.

Bad Luck in Fruit Culture.

There are difficulties in the way of fruit growing, and they are many and formidable. Yet is it not a fact that many who engage in the business do so without any adequate conception of its requirements. It is safe to say that a fair amount of skill, of energy and common sense, brought to bear in the cultivation of fruits, will be productive of results little less satisfactory than in the culture of other crops. There are difficulties in the way in whatever a husbandman undertakes. His grain crops fail or fall short through the influence of unpropitious seasons; his hogs die of cholera; his cattle fall victims to disease—and yet farmers continue to raise cattle, and hogs and sow grain, putting the proceeds in their pockets, and thanking heaven for the blessings dispensed.

There is an unaccountable delusion in the public mind in regard to the requirements of fruit culture. Men of good sense and large experience in other matters will act in this without any reason or judgment. They will exercise a sound discretion in all other branches of farming—will plant corn and get good crops; will sow wheat and realize a handsome

yield; will raise cattle, and hogs and sheep—observing all the known rules of economy and profit governing in such cases, and yet, when they come to try their hand at fruit culture, all their good sense seems to have deserted them. They blunder along from year to year, and accomplish nothing; all the time complaining of their bad luck, and railing at the nurseryman, or, what is worse, at Providence, for causing their misfortunes.

One desires a crop of potatoes. He knows that to obtain a good yield he must plant good seed in good soil, and in the proper season, and he must give them the requisite cultivation. Another desires a crop of corn. Like a sensible man he puts his land in good order; he plants his seed in good season; he plows, he harrows, he hoes; knowing all this to be necessary. And his eyes dance with delight as he watches the growth of his crop, the result of well applied labor and toil.

Let men display the same amount of common sense; let them expend the same amount of energy, and the same due diligence, in the planting, care and growth of fruits, that they do in other branches of business, and, my word for it, fruit culture will be rendered much more profitable and a much greater success.

Yet I would not be understood as urging that there are no more impediments in the way of fruit growing than of most other branches of farming. There are more—and less easily overcome. Fruit trees have their diseases, and they have their many known and unknown insect enemies. And the fruits themselves also have their thousand and one known and unknown enemies. To be entirely successful these must all be fought and conquered. But what I do urge is, that a vast majority of those who do undertake to grow fruit, do so with much less of care, of patience, of energy, of sound judgment, than they bring to bear upon other pursuits of life.

On the Bluffs of Northern Egypt.

That long peninsula of prairie and bluff, hill and crag, and woodland, reaching from Cairo northwardly, and across from the cotton woods of the Ohio to those of the Mississippi, is known, in western vocabulary, as *Egypt*, and its people answer to the title of Egyptians. The southern boundary of this Egypt is sharply defined; but its northern—indeed it has no northern boundary; or I have never yet been able to find that geographer who could locate the northern confines of this Egypt of the New World. The Sphinx and the Pyramids are presumed to be somewhere near the confluence of the two rivers; but as we recede towards the north star, Egyptian characteristics become less and less distinct, and gradually die out altogether.

On the bluffs of the Mississippi—or, I should rather say, *among* the bluffs—many miles away from Cairo, lies the little city of Alton. Whether this city, and the excellent and eminent horticultural society of which it can boast, are in Egypt proper, I am unable to say. North of them they are called Egyptians; south of them they are regarded as “outsiders.”

Be this as it may, it is of this body of good and true men that I would write. Live men they are—every one of them; active and untiring in their work; pursuing what they undertake with a zeal and persistency that never flags; they have maintained an organization for years that has come to be a power in the land. They have scattered the fruits of their work broadcast over the prairie State and the West. They have inspired the Egyptians south of them, and the Yankee invaders north of them, with a love for their noble calling. Not only live men themselves, they have given life and energy to kindred associations around them; and they have contributed largely to make the Illinois State Horticultural Society what it is—one of the most influential in the Union.

I pay this tribute to an association of men, with not one of whom I have the honor of a personal acquaintance. But I have been largely benefited, I hope, by their work. I have read their monthly discussions with an interest that attaches to few others; and I have lying before me a long list of their publications—issued lately in neat pamphlet style—the contents of which will fully justify what I have written.

How two or three score of such men as Flagg, and Hull, and Starr, and Long, and Pearson, and Barler, and Kingsbury, and McPike, *et. al.*, came to be congregated so near to a given point, and that point so near to the borders of Egypt, is inexplicable. Can the Sphinx tell?

Practical Papers.

NO. IV.

A Shady Spot in the Garden.

BY OLAPOD QUILL.

I HAVE, in my former notes entitled "Practical Papers," endeavored to give, in a pleasant and suggestive style, practical, amusing and valuable information upon matters horticultural, ornamental and scientific. Uniting the useful and practical for the benefit of those who might desire to improve upon a few practical hints and experiments in ornamental gardening and floriculture.

For this paper you are indebted to a "shady spot in my garden;" to "an hour's cogitation in my rustic armchair," within a quiet little nook or border planted with shade trees, whose foliage was so dense that I hardly knew what to do with it, or how to begin any improvements.

This part of my garden was near the carriage drive-way or road, and a portion of the same near the dwelling-house bordering upon the same, was a beautiful grove of some eight rods in length, by an irregular shaped figure from four to eighteen or twenty feet in width.

The trees composing this little grove were the Mountain Ash, Maple, European Larch, English Alder, Hemlock, Yellow Birch and Norway Spruce. Some of these trees are of large size and very symmetrical, particularly the Norway spruce, which skirt the outer edge of the grove on one side. So dense is the deep green foliage of these trees in some portions of the border, as almost to exclude the rays of the sun. Unadorned and quiet in its natural state, it offered an agreeable and cool retreat as one could desire from the meridian rays of a summer sun.

Seated within a rustic chair, within this pleasant arbor, the thought arose—

"How can I make this place more beautiful?"

What shall I add to this oasis of the garden to make it more elegant? What union of the artificial with the natural shall I combine, and how shall it be done? This was the plain question; and it needed a like plain and practical solution.

Having an abundant supply of water at command, I first formed a small, irregularly-shaped basin in the centre of this grove of trees, choosing the widest portion of the grove for its location, and nicely bordering the exterior with small sized stones laid carefully in cement. All around the sides of this basin I placed irregularly shaped stones, making first such a basis as would be needed for a natural fernery and garden for the culture of aquatic plants. Here the delicate flowering vines requiring protection from the intense rays of the sun, requiring shade and moisture to develop in all their beauty and grandeur their curious properties of leaf and flower, would find a genial shelter. With me, to think was to act; and any one who is desirous to witness the result, has only to take a seat in "my rustic chair," and he will behold, rising amid this grove of trees, a jet d'eau to the height of some seven feet, which falls in silvery spray into the basin below, giving life to and sustaining the great variety of plants and vines which adorn its sides.

The outer edges of this grove being of considerable extent, in some parts from four to fifteen feet, is laid with stones of a like irregular character and form, with here and there a larger sized Boulder stone, to break the monotony, interspersed with a few crevice rocks piled one upon another, over which the various plants are trained in a manner, although highly artistic, to resemble as much as possible the perfection and simplicity of Nature in her wildest woods.

It were hardly possible for one to imagine how beautiful such a place* may be made; how much of life and pleasure will spring up from such a little cloistered spot, until he tries to produce such results.

I would say to all who take in the adornment and floral cultivation of their grounds, to count NO SPOT AS IRRECLAIMABLE, AS ONE IMPOSSIBLE OF IMPROVEMENT, until they have first made the same an "experimental ground;" let such count not the most barren and uninviting spot about their grounds as devoid of beautifying influences, a wild waste of tangle wood. With this introductory paper I simply place my subject before you.

* Every one has just such a place in some portions of his garden.

In my next I shall report progress, and if my *old friends* and *readers* are pleased to follow me in my "*experimental vagaries*," I will endeavor to scatter a few green leaves by the wayside, and from time to time inform them of the result of my cogitations, or an "HOUR AMONG THE FERNS."

Fruit Raising in the West.

Where Shall we Plant?

PROBABLY no one question of all the questions which have been discussed upon fruit growing has received any more study and thought than the second one of this caption—not even what to plant—rivals it in importance—or in amount of study bestowed upon it. Would that we were able to say that this study, investigation and experimenting had always proven of a uniform healthy nature, successful and conducive of good results.

In this communication I shall have especial reference to the culture of the apple—which though it has had a life thus far of variableness, has for the last eight years been steadily gaining ground and growing in favor—and though our orchards are growing older and larger, that vexed question still remains unsettled—*where to plant?*

Not very many years since the valleys, sunny warm ravines, were thought the best and only sure location for an orchard in so cold a climate, but trees here were found to die; the other extreme was then resorted to, viz: the hill-top, or even a north exposure, where "a tree once frozen would remain so till warm weather came in earnest," well nigh unto July sometimes. That new comers to a cold climate should be led to adopt the first location, viz: the valley, is not at all surprising, and to consider some of the reasons of failure may not be amiss, and prominent were unsuitable varieties with the then inexperienced tree planters, and poor or only partial preparation of the soil—the particular lack of attention being the drainage; but not to enlarge upon this location, I notice the other extreme, viz: the hill-top, or cold aspect, with a free circulation of air. Why do trees die here? I may answer it Yankee-like. Why are the oranges of Florida, or the peaches of southern Illinois, killed betimes? Is it not the cold, and to avoid the danger of repetition do the orange growers seek a cold aspect for their future plantations; or will the Illinois peach-grower plant all his future orchards in the coldest and most bleak aspects of his farm? And yet the orange, the peach, and we may add, the apple, are fruits worthy our best efforts "for a' that." But why not plant upon the hill-top? If a steady even temperature is to be sought as indispensable, here it will be found; as most well know who have spent much time in an open hilly country. But is it a continuous steady cold that we so much require for the preservation and successful growth of fruit trees, but rather is it not this same continuous steady cold that is killing our trees? If the ambitious amateur were to try here the known tender fruits among raspberries, or any other class, would he in reason place them in the coldest corner of his garden; or would he not seek the more sunny aspect where the winter blast would not have full force upon their tender mercies?

In some parts of the Union there may be good reasons for planting upon the hill-tops—we would instance southern Illinois—where they must guard against the extreme damp and foginess of the valley, where it is betimes almost like night till well into the day—so dense are the fogs, and in a climate from which they can select a very large list of varieties; but in the farther northwest we have no such damp and fog to guard against, and, too, a more limited list of varieties to select from. The advocates of the hill-top system say we must guard against the winter's sun. Now here we come to the question of questions. Is it the winter's sun (heat) or the winter's cold that kills our trees? We answer this squarely and briefly, that we do not believe that the sun, or the heat derived therefrom, ever yet killed a fruit tree in Wisconsin, either directly or indirectly, but the reverse, viz: a certain degree of cold—and why not? Why may there not be a point or degree of cold beyond which an apple tree will cease to live, as well as with other fruits we have named? As evidence we might cite the often root killing of trees, while the top remains alive for months, or until the sap of the body is all exhausted by the half grown leaf. Then if the hill-top, bleak exposures and valleys are to be avoided, where, oh where shall we plant?

In Wisconsin we have winters as "cold as Greenland"—not actual, but comparative—as variable as can well be imagined, as the last twenty-four hours will testify—rain, bright March, or almost May sun; thunder and lightning, and last but not least, a change to *forty degrees colder*, and all within a few hours—then our favorite clime gives us wind, to the perfect gale which sweeps everything—and though the west is noted for its clear bright sunshine, yet the past year has been remarkable for its cloudiness, as the record from January to October, 1869, inclusive, shows it to have been 52 per cent.

By reference to the Meteorological observations, as kept at the State University, I find that the prevailing winds of the season have been from the southwest and west, being 36 per cent; next, northwest and west, 33 per cent; northeast and east, 15 per cent; and southeast and south, 16 per cent. With these facts before us, and the knowledge also that the northwest abounds in or is noted for its winds, will not the future orchardist seek for his orchard site such a location as to *guard against* the exposures of cold or severities of the wind. Add to this the fact that the *morning sun* is as welcome and as beneficial to the fruit tree as to our own humanity; that it is conducive to health and longevity; that nothing can be more beneficial to life and health than a bright morning sun, to dry up the dews and damp of the night; to encourage a clean vigorous growth to all the vegetable world, and to none more welcome or conducive of better results than upon the apple, which ever has a tendency to retain its moisture and to encourage a bark moss growth; and does not the numerous southeast and eastern hill slopes readily suggest themselves to us as being just the place for our orchards? Of these aspects we have an abundance, especially in the timber portion of the State, and in the bluff districts bordering our streams; coves, or pockets, well protected from the prevailing winds, and where now are many orchards budding into future hope, giving signs of the times that ere long they will blossom as the rose, and bring forth fruit of its kinds.

O. S. WILLEY.

The Vine.

EVERY years' experience gives some new knowledge in fruit culture. But all need to keep constantly in mind what may do well in one locality will not in another.

Some are speaking highly of Ennuelan. My "Extra" \$3 vine from headquarters, did not ripen six inches of wood; the leaf mildewed badly. I think the leaf not as hardy as the Delaware, and I suspect from the looks of the cluster that its stamens are not as perfect as the Delawares; however, I have not examined them. One-fourth of my Marthas rotted; Rogers, No. 3, did not fertilize one berry in ten; its stamens are so imperfect that it has not made one-fourth of a crop yet, and is not worth cultivating. The Concord rotted and mildewed much worse than the Delaware, Iona and Isabella. I have, January 18th, Ionas, Isabellas, Crevelings and Catawbas. The Iona keeps the best, and does not drop from the stem, and will ripen better than the Catawba on light sand or gravelly soil. Concorde and Crevelings blighted badly, where the Delaware is exempt and makes a good crop. The Delaware had this year from 20 to 40 degrees less saccharine matter than last year. I think the Iona will make better wine than the Delaware, at least it is tending that way.

Some farmers that planted vines a few years ago, while the grape panic was raging, wish they had not planted. But those who have made it a speciality, on a suitable soil, are not discouraged if they have not realized the expected fortune, and find it takes capital, time and perseverance to insure success in vine culture.

A. J. MOORE.



Editorial Notes.

Engagement of Shirley Hibberd on the Editorial Staff of "The Horticulturist"

WE have the rare pleasure of announcing the engagement of Shirley Hibberd, of London, England, as an Associate Editor and Special Foreign Correspondent.

Mr. Hibberd is already well known to all our intelligent horticulturists, as the accomplished and popular editor of *The Gardeners' Magazine*, published in London, acknowledged to be the best *Gardener's* and Horticultural Journal published in that country. He is also editor of *The Floral World*, a monthly magazine devoted to floricultural subjects, and also the author of many very popular horticultural volumes, which have made his name a household word all over "Merrie England," fully equaling that of A. J. Downing here in America.

Mr. Hibberd's first communication appears this month, and he will write *regularly* every month for our pages, giving in a free, conversational style, and a pleasant spirit, notes on the progress of horticulture in England, best calculated to interest American readers. Our readers may expect a rich treat from our new associate constantly, and we would be pleased if our friends will pass *THE HORTICULTURIST* around freely, and call attention to our announcement.

Gardeners and florists will do well to enrol under our banner. We have other good things in store for them.

Superphosphates in the Garden.

WITH due respect to the more wise advocates of fertilizers, we are compelled, after two years' trial, to state our candid belief that they are *not worth the money asked for them*, and are a very poor substitute for manure of home manufacture.

Occasionally we find a particular manufacture does exceedingly well, and we feel satisfied; but subsequent effects are never as good as the first, and the dose has to be increased to produce equally good results.

A perfectly pure article of *bones, bone meal* and *ground bone*, we find in every way worth using, and do use constantly, but a good superphosphate is very rare.

We advise every one having light, poor land, *not to use fertilizers entirely*; it is money wasted. It is far cheaper to buy good *manure* at \$2 and \$3 per load, or \$10 per cord. But it is better still not to plant the land until well worked up into good condition. First get out muck and apply thickly in doses of a couple of hundred loads per acre. Let it lie and rot during the winter; then in the spring plow it in; then sow clover, and at the proper time plow that in, and then, when you come to plant vegetables or small fruits, you have got a bank of *vegetable earth* beneath which all the superphosphates ever made cannot compensate for. Chemical analysis is a nice science, but we are old fogey enough to prefer the ordinary ways of fertilizing land, and we shall use no more artificial fertilizers, save as stimulants occasionally.

Plant Shade Trees.

WE are intense lovers of trees, and wherever we go we repeat the words—*plant trees! plant trees!* An incidental benefit of the practice of planting trees came lately to the notice of a Canada farmer who had been planting shade trees along his roads, and around his house, and up and down his lanes. The climate previously was so severe that he could raise little or no fruit, but when his shade trees were grown, he found he could plant fruit trees too, and make them yield abundant crops.

We are reminded of the old Scriptural saying—"He tempereth the winds." So doth the planting of trees temper the climate to the tender vines and buds within the lines of protection.

Special to Contributors.

SEND us notes this season of your fruits, strawberries, vegetables, and all large and small fruits. We are anxious to have our readers communicate their experiments and experiences. Read this number of *THE HORTICULTURIST*, and see how freely our correspondents write. Every line from you containing a *hint*, or an *idea*, or an *experience*, will be highly appreciated.

Horticultural journals would be twice as valuable to their readers if their correspondence were greater. We want more contributors, *practical men*, with good ideas, who will send short paragraphs of their daily experiments.

Strawberries for Testing.

IF anyone wants a few of the new varieties for testing, we would recommend Charles Downing, Boyden's No. 30, Napoleon 3d, and Barnes Mammoth.

We have found these uniformly excellent, and worthy of a general trial. The Barnes Mammoth is the most firm of the four, and best fitted for market.

Green Crops.

HAVE any of our readers any experience or ideas about what kind of *green crops* are best to use and plow under in preparing land for small fruits? Please communicate.

Distances for Planting Pear Trees.

WE would recommend fifteen by fifteen feet as more economical than the old rule of twenty by twenty—still adhered to by many. Where pear trees are trained in the *pyramidal form*, one space will be found amply sufficient, for very few trees will have a spread of over twelve feet, and rarely fifteen. In the grounds of Marshall P. Wilder, at Dorchester, the pear trees stand as close as ten feet from each other, and yet are fifteen to twenty feet high, and usually loaded down with abundant crops. We did not observe any inconvenience from their nearness, and no tree interfered with its neighbor; still it is nearer than the cultivator can manage with greatest comfort and cultivate properly. Dwarf trees are universally set ten feet apart, and experience has made it a good and convenient rule.

Illustrations of Pears.

WE call special attention to the fineness and elegance of the engravings of pears in this and the previous number. Our January illustration was fairly murdered, although the specimen fruit was very fine, and the engraving went through the hands of three engravers. We have since then found, most luckily, some new artists, whose work cannot be excelled, and will bear the most critical examination.

Missouri Mammoth.

THIS variety should be stricken from our list, having proved anything but mammoth in size, and totally unreliable in productiveness. It is not equal to either the Kittatiny or the old Lawton—a most decided humbug.

Early Tomatoes.

EARLY tomatoes are certainly the most profitable, but for family and general garden use they are not the most desirable. The later tomatoes are generally larger, finer quality, and more productive. We observe this season quite a number of new varieties offered, and some contain extraordinary merit, as, for instance, the Gen. Grant and the *Trophy*, the latter being of tremendous size and fine solid flesh. But for ordinary culture it is very doubtful whether anything is better than the Early Smooth Red, for market; or the Tilden and Cook's Favorite, which have been so well and favorably known for a long time. Try the new ones, but do not forsake the old kinds.

Growing Asparagus.

THE introduction of the new variety, *Conover's Colossal*, is destined to work a radical change in asparagus culture for the future. Hitherto gardeners have been accustomed to plant in rows two feet apart, with plants one foot in the rows. The new variety, *Conover's Colossal*, should be planted in rows four feet apart and three feet in rows, thus practically introducing the system of *hills* instead of rows, and reducing the culture to about the same as for corn, until the roots have spread and filled the whole ground, and the stools have become large enough to occupy the entire space. The new method is certainly the most economical in manure and labor, and original cost of plants.

Girdling Fruit Trees.

Blessings sometimes come in disguise; at least we thought so when we were told of the orchard at St. Joseph, Mich., which was girdled twice by a miserable miscreant last spring, and yet lived and bore the heaviest crop of peaches ever known in its history.

The principle of girdling fruit trees is akin to that of pruning the roots and trimming the branches of the tree, the tendency to wood growth being restrained, the energies of the tree are directed toward the production of *fruit*, and, as a result, we have occasionally splendid returns. No rule can be given how far pruning can be safely carried. It is one of the curiosities of Nature, which every one must search out, but sometimes "*luck*" comes, as it did in the case above, and many a man is blessed who thought he was cursed.

Converting Dwarf Trees into Standards.

THE *Dwarf Pear* is admitted not to be the means of producing the highest success in pear growing. The only advantage the dwarf form possesses is a little earlier bearing and a great economy in space. Nearly all experienced horticulturists are now converting their dwarfs, as fast as Nature will aid them, into standards. This is done simply by planting the junction of the quince and pear stock sufficiently deep below the surface of the ground to favor the formation of roots from the pear stock. It frequently happens that trees grown this way are far more successful than in any other, and their quality and size greatly improved. The Duchesse d'Angoulême Pear, grown as a standard from standard roots, is very inferior both in size, quality and productiveness; but when grown as a standard from dwarf roots, its fruit is large, fair and very abundant.

We have seen trees that were productive as dwarfs for eight and ten years, but suddenly would shoot up tall, stout stems and branches, and grow quite vigorously. This is a good evidence that the pear roots have formed from the native stock, and hereafter the tree will be a low standard growing on its own roots. During the first year or two the fruit will suffer a little, as the energies of the tree are bent on the formation of new wood, but this is soon rectified, the tree settles down into a healthy habit of growth, and a steady productiveness that makes the heart of every owner of a pear orchard happy every time he looks over it.

The Old Familiar Green.

By the request of our readers we return this month to our green colored cover, and shall retain it permanently hereafter. We hope to lighten the shade a little in future numbers, and render it more agreeable in typographical appearance.

Spring Catalogues.

Our seedsmen are substantially appreciating the importance of embellishing their catalogues with illustrations of fruits, flowers and seeds, helping to render them more attractive and useful.

B. K. Bliss & Son have handed us their new edition for 1870, vastly improved over previous years by the addition of new engravings and new pages of reading matter. When we add that in typographical appearance it is almost faultless, and in choice illustrations unexcelled in number and variety, we speak only the truth in our hearty commendation of their taste and enterprise.

Peter Henderson's new catalogue of plants introduces us to quite an admirable list of novelties, which we hope will be useful. The new Coleus, "*Setting Sun*," we have seen growing in his greenhouse, and are very much pleased with the delicate colors and beautiful, vigorous habit of the plant.

We are indebted to Messrs. Hoopes, Bro. & Thomas, John Saul, Frost & Co., and George Such, for their favors, which we would be glad to notice at length if our space would permit. We appreciate the mutual rivalry which prompts our principal nurserymen to issue better catalogues every year, and we would remind them that the most effective means to popularity is a *liberal use of illustrations*.

The Edmonds Pear,

INTRODUCED by Ellwanger & Barry, is quite productive. The editor of the *Country Gentleman* says that a young tree of this variety, set out three years ago, bore nearly half a bushel of fruit of excellent quality, in 1869.

French Method of Raising Tomatoes.

As soon as a cluster of flowers are visible, the stem is topped down to the cluster, so that the flowers terminate the stem. The effect is that the sap is immediately impelled into the two buds next below the cluster, which soon push strongly and produce another cluster of flowers each. When these are visible, the branch to which they belong to is also topped down to their level, and this is done successively. By this means the plants become stout dwarf bushes, not above eighteen inches high. In order to prevent their falling over, sticks or strings are stretched horizontally along the rows, so as to keep the plants erect. In addition to this, all the laterals that have no flowers, and after the fifth topping, all laterals whatsoever, are nipped off. In this way the ripe sap is directed into the fruit, which acquires a beauty, size and excellence unattained by other means.

The Best Two Cherries.

EARLY Richmond, for the West, and Coe's Transparent, for the Middle States, so said the majority of the members of the American Pomological Society.

Rogers' Hybrid Grapes.

MR. PERRY, of the Canandaigua nurseries, New York, perhaps one of the most successful propagators of the grape, in speaking of Rogers' Hybrids, says: "One important thing, but little known, should be carefully looked to when planting these grapes; every second or third row of vines should be either Delaware or Hartford Prolific. These bloom at the same time that the Rogers do, and are abundantly supplied with pollen, which is carried by the winds to the Hybrids, causing the bunches to be much more perfectly formed than they would otherwise be."

Philadelphia Raspberry in Michigan.

MR. CROSS, of Spring Lake Village, Mich., is cultivating raspberries among peaches. He thinks the Philadelphia the most profitable raspberry: 1st, because it bears a season earlier than the Black Cap, and 2d, because it brings a better price in the market. His Philadelphias brought twenty cents a quart in Milwaukee, while Black Caps were selling at twelve cents. He gathered from his Philadelphias as many as 123 quarts in a day this year. He thinks the raspberry, and especially the Philadelphia, the poor man's fruit, as it bears a crop the second season, and within about fourteen months after planting.

His method is to drive in stakes about two feet high, about a rod apart in the rows, and draw small wire along on the tops of the stakes, as tight as possible. To this wire the cane can be tied so as to keep the fruit from the ground.

Cost of Osage Orange Hedge.

A FARMER in Missouri has made a calculation as to the cost of the different modes of fencing, and found that the Osage orange was the cheapest and most durable. He gives the cost of 100 rods of Osage orange fencing, planting and cultivating same for three years, which is \$23. The cost of fencing with rails, 100 rods, is \$58; with post and plank, \$220, thus showing the cheapness of the Osage orange. He says he has an Osage orange three years old that would turn stock.

Hanging Baskets.

A ROOM, whose windows are filled with plants, flowers, and hanging baskets, has a *living charm* in it for old and young. Some very pretty little ornaments can be made at but very slight expense, and produce an exquisite effect. For instance, the *sweet potato vine*. A tuber planted in a hanging basket, covered with earth and moistened slightly, at occasional intervals, will commence growth and throw out its long stem, and twine around the side arms of the basket, adorning it with one of the prettiest of all climbing vines. A writer in *Hearth and Home* recommends another simple basket.

"We have seen one made of cocoa-nut shell, with the upper section nearly sawed off and scarlet cords attached, planted with Moneyworth. Its trailing stems, extending half way down the window, filled with its bright golden blossoms, might have graced a Fifth Avenue drawing-room, so exquisite were its proportions, as bright in coloring. For larger baskets, buy, at the woodenware shops, a wooden bowl twelve or sixteen inches in diameter. Bore three holes at regular distances for the cords to support it. Then ornament with rosettes made of halves of the coffee-bean not roasted, grains of rice and small black soup beans. Any girl of common ingenuity can make a pretty one with these materials. Attach them to the bowl with common glue dissolved in water or whisky—if dissolved in the latter it does not set or harden until used.

"When it has dried, varnish with black varnish, which is readily procured at little expense at any paint shop or carriage manufactory.

"When that is dry ornament the edges with all-spice berries strung on wire. Now attach the cords, and you have as handsome a basket as the shops can furnish, and the expense is very small. A wooden bowl can be ornamented with the scales of the long pine cones. Each scale can be nailed on with upholster's tacks, first boring the holes, and after the bowl is covered, varnish with brown varnish. Even the varnish can be made at home, if one chooses. Buy two or three ounces of asphaltum and dissolve it in turpentine or kerosene, making it lighter or darker as one desires, by adding more or less of the asphaltum."

The Dorchester Blackberry.

A CORRESPONDENT of *The Iowa Homestead*, living at Eldora, Iowa, is very well pleased with its cultivation.

"The first season's growth gave some protection during the winter. The next winter, which was that of 1867 and 1868, I gave them no protection whatever, and they came out sound and healthy and bore a full crop the past season, fully verifying all the good qualities and noble characteristics ascribed to it. Fruit large, oblong, oval, slightly pointed, black, sweet, rich and excellent, leaves broad, oval, do not sunburn, ripens early; berries quite firm for good market variety."

EDITORIAL NOTE.—The Dorchester is the earliest of all varieties we have cultivated, sometimes ripening even before the Wilson. Unless grown on very rich land, it does not grow to a large size, and does not produce a large crop. If well treated it is very profitable. As a family fruit it is excellent, being of an exquisite flavor and very small core.

Fruit Culture at the West.

OUR Western horticulturists and horticultural societies have been quite active the past winter, and their discussions have elicited much valuable information on the methods of growing and pruning fruit trees, with animated reports on insects, and success of new varieties. We report in brief the most interesting portions.

Value of the New Grapes in Ohio.

At the annual meeting of the Ohio Horticultural Society, at Dayton, Dec. 3, 1869, the new grapes received special attention, and Mr. Bateham has favored us with abstract of remarks.

Eumelan.—M. A. Stevenson, of Clyde, Ohio, fruited this variety the past season—having several good clusters on a vine received from Dr. Grant, in the spring of 1868. The growth of the vine was remarkably vigorous and healthy, as much so as the Concord. The fruit was nicely colored on the 1st of September, and ripened as early as the Hartford Prolific; while the quality he regards as equal to the Iona, which is high praise. The foliage was quite free from disease, and the growth of wood from a two-bud spur, was four canes of uniform size, from eight to ten feet in height, with short joints and ripened to the tips. He planted 500 Eumelan vines, and his brother the same number the past spring. Their only object is to grow the best grapes for the market, and they feel persuaded that the Eumelan will take rank as one of the best "for the million."

Dr. Warder and Mr. Campbell spoke quite favorably of the Eumelan vine and fruit, from what they had seen of it the present year, and Mr. Elliott did the same, with the remark that no man should plant largely of a new variety till fully tested.

Walter.—Not fruited yet in Ohio. Mr. Elliott has grown the vine two seasons; foliage failed this year about as much as Delaware; vine much more vigorous and apparently hardy; thinks it promises to be valuable. Mr. Campbell said the foliage had failed badly with him, especially the present season, but he would not condemn any vine for failing this year. Dr. Dunham also spoke of the failure of its foliage this year. Mr. Bateham said the branches of vine laden with fruit, exhibited by Mr. Caywood, were proof that the Walter was sufficiently productive and vigorous, and the fruit is shewn to be rich in sugar.

Iona.—A box of this fruit was presented from Judge Phillips, of Berlin, which was freely tasted and commended. Judge P. has found it one of the very best for market and family use; more reliable than Catawba and of better quality; keeping finely till the holidays. Mr. Bateham counted it the best variety on his grounds, but he was free to say it had not ripened as perfectly the two past seasons as he could wish; though he attributed this mainly to over-bearing, which he would try to prevent next year. Several members spoke of some failure of the foliage of Iona, as well as lateness of ripening the past season.

Croton.—Mr. Bateham spoke very highly of this new seedling of Dr. Underhill's, but said the Chasselas flavor of the fruit excited apprehension, that like Allen's Hybrid, the vine has too much of foreign blood to be reliable in this country. Mr. Elliott said he had three vines of the Croton which had grown satisfactorily the past season, holding their foliage quite well. He should leave one of them uncovered during the winter to test the question of hardiness. He had hopes that the variety would prove valuable, at least as an amateur variety. The foliage has a little of a foreign cast, but not as much as the Rebecca or Allen's Hybrid.

Martha.—Mr. Elliott said he had been slow to express commendation of this grape, until the present season he had seen the vines so healthy and productive at Mr. Knox's and the East, and the fruit so good that he was disposed to speak well of it.

Mr. Bateham said the vines were quite healthy and productive at Mr. Leick's vineyard at Collamer, as well as at Mr. Knox's; and he would give an incident which had recently come to his knowledge, illustrative of the market qualities of the fruit. Mr. Knox sent a small lot of well ripened Marthas to the Philadelphia market, as an experiment, and found them to retail readily at the fruit stores for fifty cents a pound; and a gentleman, who is preparing to grow fruit extensively near that city, was so highly pleased with the fruit and the accounts of the vine, that he was induced to buy of Mr. Knox 5,000 of his first class vines for \$5,000. A very handsome sale for this dull season.

Mr. Campbell said he was one of the first to propagate and recommend the Martha, as he was early convinced that it would prove like its parent the Concord, a most hardy and reliable variety; and he was gratified to find that this very trying season had so fully confirmed all his former impressions respecting it.

Salem, Wilder, Merrimack, and several others of the Rogers varieties were mentioned briefly, but nothing elicited which has not already been published. Mr. Campbell said he had high hopes of them, notwithstanding some defect of foliage this year.

Annual Meeting of the Illinois Horticultural Society.

THIS Society held its annual meeting at Ottawa, Ill., last December 14, and a few succeeding days, and from its character as the leading horticultural society of the West, the discussions were of

more than usual interest. We have condensed reports from the *Western Rural, Journal of Agriculture* and *Chicago Tribune*, and we have endeavored to make them as full as the materials within our reach will allow.

Neclarines.—Dr. Hull, Alton: The Elruge is the only one that is valuable.

Reported by O. L. Barler.

The following is the discussion on cherries at the Illinois State Horticultural Society:

Belle de Choisy.—Dr. Hull, who is the most successful grower of sweet cherries, said: This excellent cherry is very liable to rupture of the bark, probably from the effect of cold weather. It has also the fault of shedding its leaves. It is an early cherry, but not very productive; quality generally considered best.

Belle Magnifique.—Dr. Hull: This is a fine cherry in some respects, and it is quite hardy and productive, and of good quality. It is a late variety, and coming in about the 1st of July, is valuable on that account.

The President, Tyler McWhorter, Mercer county: How about the ripening of the fruit? Does it ripen uniformly, all about at the same time, or is the ripening carried on gradually?

Dr. Hull: It ripens gradually, and not uniformly at the same time.

Bigarreau.—Dr. Hull: An excellent cherry, and hardy as the majority of cherries. Very large and early fruit.

Black Eagle.—Dr. Hull: This tree is late in coming into bearing, and then bears moderately. If you are willing to wait eight or nine years for the fruit, then plant it.

Wier: With him very early and productive, quite hardy.

H. C. Freeman, of South Pass: I would ask whether cultivating and high manuring will not force the tree into bearing? I know a large tree that bears abundantly, which has had special treatment and high manuring.

D. B. Wier, of Lacon: I have no doubt that I can grow as many bushels of sweet cherries as I can of Early Richmond. My plan is to bud on the north side of the Early Richmond, and then plant in rows north and south, close together. We have trees in our town—old trees—that bear well, and are sound to-day, with no other protection than being planted on the north side of a building. What they want is the protection of a tree or building on the south and south-west sides. With this special care and treatment we can grow sweet cherries.

Someone suggested that if it was true that he could grow the improved cherries as abundantly as the Early Richmond, it would pay him well to drop everything else and grow cherries alone.

Black Tartarian.—Dr. Hull: This is a beautiful early cherry, excellent quality, and productive, but as a tree it is faulty. It is not as hardy as some other kinds. I think we can dispense with it.

Cleveland Bigarreau.—Dr. Hull: Exceedingly productive. I do not know any tree that bears more fruit. The tree is a fair grower; it is more than a medium grower.

Elkhorn.—Dr. Hull: I regard this as the finest cherry of the heart varieties. The tree is a fine grower and exceedingly productive. I have seen them growing and doing well in the different parts of the State.

The President: In regard to these heart cherries do you think it practicable to introduce them into the different parts of the State?

Dr. Hull: I do not know why they should not be generally planted.

Early Purple Guigne.—D. B. Wier: This is a very early, hardy cherry, of best quality, and I think it can be grown further north than most others.

Elton.—M. L. Dunlap, of Champaign: This is the only variety of sweet cherries that has produced any fruit for me. I did get two or three quarts of fruit from this tree. It was two or or three years, however, in doing so much. (Laughter.) I have been very unfortunate with sweet cherries.

The President regretted that there were so few who knew anything about this class of cherries. If others had any experience with them he wished to hear from them.

Smiley Shepherd, of Hennepin: I saw one tree this past summer that had, I should think, half a gallon of cherries. I have placed them in particular locations, where they have succeeded well.

O. B. Galusha, Grundy county: I have experimented with these varieties of cherries for many years. After twelve years waiting and watching they have died, and firewood and a bonfire is the only result.

Arthur Bryant, Bureau county: I do not think it possible for us to grow the sweet cherries on our rich prairie soils. I have tried it to my satisfaction. I did get, on one occasion, one half bushel of cherries. In very rare instances do we get any fruit.

Elias Daggy, Douglass county: I have had some twenty-five varieties within the past sixteen years, and have never had anything but disappointment, and now the trees are all gone.

D. B. Wier: Top graft them on the Richmond. I consider them harder even than the May Duke, thus treated. I have the trees doing well, with no other protection than another tree on the south of them. I have the Governor Wood in bearing from the sixth year.

The President: You are speaking of your location in the Bluffs.

D. B. Wier: No, sir; I am speaking of the second bottom soil on the Illinois river.

Mr. Ragan, President of the Indiana State Horticultural Society, being present, was requested to give his experience with the cherry.

He was sorry to say that they had met with nothing but failure with the sweet cherries, and that they had settled down upon the May Duke, with which they had only partial success, and the Early Richmond, which alone was reliable, and these budded chiefly on the Morello stock. Some upon the Mahaleb.

O. B. Galusha : Have you tried it upon the Mazzard ?

Mr. Ragan : No, sir.

Jona. Huggins, Woodburn : We find them doing well planted on the north side of some building. I would recommend this position for planting for family use. I do not think we can grow them profitably for market.

The President : Do you not find, for this reason, that these cherries do well in towns ?

J. Huggins : I think so.

A gentleman from Woodford county stated that he knew trees that for many years have borne as well as the Early Richmond ; never failed.

The President : I notice that those who have been successful in fruit culture are more forward to speak of this than those who have made failures. Now, we want to hear of the failures as well, for we shall learn quite as much when we speak of our failures as of our successes.

Early White Heart.—Smiley Shepherd : I have this cherry ; it resembles the Elton ; it bears every year ; ripens before the old Morello kinds. The tree branches immediately above the roots, and to this I attribute its healthfulness. It generally succeeds well.

Dr. Hull : It is a delicious, sweet cherry.

Governor Wood.—Dr. Hull : Too tender and not as early as some others.

Sam. Edwards, Bureau county : This is the only tree of all the varieties that has succeeded with me. It is sheltered by an evergreen hedge, and has given us some fruit.

D. B. Wier : The fruit is not of first quality, but has given us crops from the first planting.

Woodward, of Marengo : Growing sweet cherries on Mazzard stocks is a failure ; on the Mahaleb it does very well, if the union is perfect, but on the Morello it does best of all.

Gridley.—Dr. Hull : This variety is largely grown in our locality, and is one of the best for market. It is not fully ripe when first colored, and is sufficiently firm to be sent to Red river. The tree is faultless and very productive. I have gathered three bushels of cherries from a tree five years old, which was not more than one-third what it would produce when fully grown.

The President : You speak for your locality at Alton ?

Dr. Hull : I do.

Early Richmond.—Suel Foster, Iowa : This is our great cherry. The crops are very abundant. All other varieties are uncertain.

English Morello.—Dr. Hull : It is quite hardy, the objection to it is that it breeds insects.

D. B. Wier : It always sells readily and at a good price. The stone is quite large. The tree is perfectly hardy.

O. B. Galusha recommended it.

Late Richmond.—D. B. Wier : We have it, and think the quality better than the Early Richmond.

The President : That is not my experience. The quality is quite inferior to the Early Richmond. The difference is very noticeable.

W. P. Pierson, Iroquois county : There is a grub working in the cherry trees, in our neighborhood, from which nearly all the trees are dying.

Dr. Hull : Describe him.

Pierson : I do not know that I am sufficiently familiar with the gentleman. It is a white grub, about half an inch long, with a flat head. He works under the bark, and leaves his hole full as he goes.

Mr. C. V. Riley, State Entomologist of Missouri, said the cherry tree borer was peculiar to that tree, and the remedy was an application of soft soap.

Mr. Pierson further complained that their cherries rotted.

The President : Do they not crack before they rot ?

Pierson : I have not observed it.

The President : Was it not the effect of long-continued and heavy rains ?

Pierson : We had a good many rains. (Laughter.) I had an idea that it might be the work of the curculio. My trees are on cultivated ground.

The President : Have you known trees to do well standing in grass ?

Pierson : My experience is limited. Mine are cultivated. Now, what I want to know is, whether I must run the curculio catcher or not in order to get a crop of cherries ?

Dr. Hull : You have, sir.

Mr. Riley stated that the rot was not due to the curculio, but to other causes.

Mr. Hull claimed that it was often due to the work of the curculio, and sometimes to wet weather or other causes.

Pears.

ADDRESS BY P. BARRY.

P. BARRY, of New York, read an essay on the culture of the pear. He stated that more than 2,000 named varieties are now under culture. Among these we may select varieties to suit most locations. It is growing in favor. One man in Ohio has an orchard of 16,000 trees just coming into fruit. Pears will succeed on a great variety of soils, and it can be grown to advantage for family use on almost every farm. The soil must be dry in all cases. Some locations are well adapted to large pear orchards, and only in such should large orchards be planted. Shelter is of value for all fruits, but is of especial value for the pear. He would plant belts of trees around the orchards, and evergreen screens at regular distances in the orchard. He would call attention to the necessity of pruning and the thinning of fruit. All require thinning. This is done when the fruit is of the size of a hickory nut. Unless these two points are attended to, we shall have small fruit.

Gathering the Fruit.—Pears must not ripen on the tree. Some varieties require to be taken from the tree earlier than others. The Flemish Beauty, Bartlett and Clapp's Favorite, may be gathered when scarcely more than half grown. The common rule given is, when the stem will part from the twig easily. This is not a safe rule. Experience only can indicate the time to gather. Pears on the lower branches will ripen first. Great care must be taken not to break the stem; if this is broken the fruit is ruined. Winter varieties may be left on the tree until the leaves lose their vigor and fall.

Marketing.—The best package is the half barrel. Select clean barrels and pack carefully; shake the barrel in packing, so that each pear may settle down in its place, from which it may not remove. If your pears are nearly ripe, they will carry better in boxes. It is believed by some that pears cannot be shipped at long distances. We know that pears are now shipped from California to New York and Boston, and come in good order.

Assorting.—The shipper will find it to his interest to assort his fruit. Buyers are not deceived by the beautiful exterior, covering rottenness below, but once. Here "honesty is the best policy."

For a general synopsis of the address we are indebted to *The Western Rural*.

"The essential points to pear culture are: 1st. A deep, dry, fertile soil. 2d. A sheltered situation. 3d. Good clean tillage of the soil, including manures or fertilizers when needed. 4th. Judicious pruning and training. 5th. Thinning the fruit and removing and destroying all wormy, diseased and deformed fruit. 6th. Prompt removal of trees or parts of trees affected by blight. 7th. Fill up the places of dead trees with new ones, and of dead branches with grafts, if necessary to restore balance of the tree. 8th. Keep some reserve trees on hand to fill vacancies. 9th. Graft over promptly such as fail, with one that has proved valuable. 10th. Select varieties, as far as practicable, that have proved successful in the locality, or the nearest locality where experience may be had. 11th. Make an experimental plat, where all the varieties of great promise may be tested, and thus ascertain what is and what is not adapted to the locality. The speaker said: The most popular standard pear to-day is the Bartlett. I think there are as many of this variety alone as of all others. There certainly would be if the trees could be obtained. The other varieties stand about as follows; that is, the present demand for trees would indicate it: Flemish Beauty, B. d'Anjou, B. Clairgeau, Sheldon, Lawrence, Seckel, Howell, Doyenné Boussock, Belle Lucrative, Duchesse d'Angoulême and Vicar of Winkfield. Clapp's Favorite is rapidly growing in favor, to precede the Bartlett. Osband's Summer and Tyson are also being planted largely. Dwarfs stand about as follows: Duchesse d'Angoulême, Howell, Beurré d'Anjou, Louise Bonne de Jersey, Belle Lucrative, Bartlett, Osband's Summer, Tyson, Brandywine, Beurre Giffard and Vicar of Winkfield.

A great difference, however, exists among planters as to the number or proportion of these to be planted, and this difference arises not so much from their own actual experience, as from that of others. The Bartlett succeeds everywhere, and is always considered safe to plant. The others are taken at more or less hazard. The Bartlett always sells well, and is known to thousands who know no other variety, and will sell readily when a better fruit would not sell at all. Color is an important quality; if the color be not attractive it will not sell. All the pears that are named above are of good color except the Belle Lucrative; in some seasons and localities it also colors up well. The Vicar of Winkfield, when well grown, colors finely in ripening, and commands high prices. When poorly grown it remains green, and is of no value whatever.

Late pears are growing in favor among market growers. Beurré d'Anjou is now the most popular; large, fair, excellent quality, and may easily be kept until January. The Lawrence stands next; it becomes a beautiful lemon yellow, and keeps rather longer than d'Anjou. Winter Nelis is not attractive looking, but sells well on account of its fine quality; keeps till January. All these ripen in a dry cellar as easily as an apple. Beurre Clairgeau promises to be very popular, and is already widely planted.

The Easter Beurré, the finest of all Winter melting or dessert pears, is difficult to grow to perfection, and is almost abandoned, except by amateurs. It needs a rich, warm soil and close pruning to maintain a fair growth of wood, and the fruit must be thinned. The tree, at best, does not seem capable of maturing in perfection a crop, although it is very prolific.

The Beurré Gris d'Hiver is a noble fruit. It requires high culture with pruning and thinning to bring it to perfection, as the tree has a tendency to overbear, like the E. Beurré.

The class of pears, known as baking pears, the flesh of which does, not become soft and melting,

are not yet in demand, but I have no doubt they will be in a short time. As the uses of pears become better understood, there will be a demand for them.

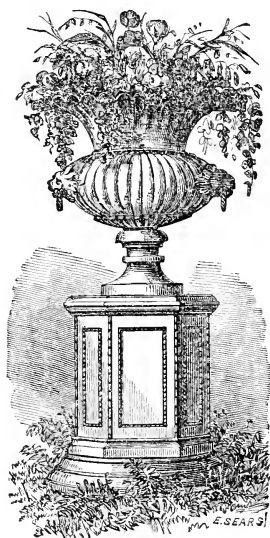
PEARS THAT ARE FAILING.

Our once famous White Doyenné, the finest of all pears at one time, and yet if in perfection, has generally fallen into a decline. It has been attacked by a sort of fungus on the skin, which destroys it. It is now abandoned in all the Eastern and Middle States. In some parts of the West, on new soils, it seems to flourish yet.

The Flemish Beauty is threatened with the same disease, and is now planted very sparingly.

The Beurré Diel, a noble fruit, has ceased to be reliable. Other varieties will doubtless go the same way. When a variety fails it should be grafted over.

Vases for Garden Decoration.



THE above designs of garden vases are selected from several patterns in the possession of Robert Wood & Co., Philadelphia, Pa., and our artist has thrown in a few graceful touches by way of embellishment, with flowers, shrubs and grass.

A vase well filled with striking flowers or plants of marked foliage, and placed on the lawn directly between the house and the street, imparts an air of elegance to a country residence, which gives a most admirable effect. The *coleus verscheffeltii* is a splendid shrub for use in such vases; so is the *Mountain of Snow Geranium*—and a skillful florist can find hosts of other plants equally as suitable and brilliant in their colorings. We have seen quite a number containing nothing but ornamental grasses, or even a simple specimen of Arbor Vitæ; the Fuschia is also very suitable.

Our Contributors.

THE Editor gracefully yields up his accustomed space, hitherto occupied by the Portfolio, to accommodate our increasing army of contributors. Our pages have not, in a long time, been so well filled with excellent articles of sterling practical value from our correspondents. *Thrice welcome* are they to our table, and we hope they will *never be weary in well doing*.

We want more, and we have always a cordial hand of fellowship to encourage our friends to *keep writing*. Our readers like *short, pithy articles*, records of *practical experience*, rather than theory, and as that is our own taste also, we have gradually changed the character of the magazine from a mass of dry reading to one which we are confident enough to believe has *not a waste line in it*, and every page teems with good ideas and pleasant intelligence. Our Drawer is full of good things for the future, and our April number will be particularly excellent in contributions and illustrations.

Get up a club and extend the benefits of THE HORTICULTURIST as far as possible. We are working for the interests of our readers, and we hope to merit a little effort on their part in recommending the Journal to their friends.

Hints for March.

Orchard and Nursery.

THE orcharding of the present day is a very different thing from the growing of tree fruit in the earlier days of the settlement of our country. From all sections comes up to us the cry, or inquiry, "What ails my apples?" "Are apples failing?" etc. The original mode of growing apple and fruit trees, in the Eastern States when first settled and tree planting commenced, was to set the trees scattering, or wide apart, with plenty of room between; and usually there was protection of forests not far distant, perhaps on all sides, and with little or no attention given the trees, there were abundant crops of good sound apples obtained. Varieties then were few, hardy and well adapted to the climate, soil, etc.; but with the lapse of time, increased cultivated taste, etc., old and tried varieties became inadequate to satisfy the desires, and new varieties must be introduced from abroad, bringing not only the trees, but also their diseases and insect enemies, which before were unknown among us. Varieties ill suited to our climate came with those better qualified to endure the climate, etc., till we have increased our varieties to vast numbers. Downing, in his last revised edition of "Fruits and Fruit Trees of America," describes 3,420 varieties of apples, 2,786 pears, and other fruits in proportion. With all this great variety there are but few which are especially adapted to any one locality, and that few must have regular and careful attention, in order to give us fruit, even in moderate quantities, and then we obtain only irregular returns, most frequently. Varieties and culture especially adapted to the Eastern and Middle States are unsuited for the more Western, Northwestern and Southern States, and sections, so that practical directions for any one particular section would necessarily need modifying materially for another, if they would not be entirely unsuitable; yet the practical experience of any section is valuable for another if judicious conclusions are drawn and applied in our experiments. Neither can these hints, if made special, be particularly adapted to all sections alike, as to time and application, yet it will be our aim to make practical suggestions in a general way from our own standpoint, embracing also suggestions drawn from reading reliable reports from other sections, and the best authorities.

The growing of Peaches in orchards has, of late, become an uncertain business, from diseases of the tree, and from insect enemies of tree and fruit, seasons, etc., yet no inconsiderable may be done in culture to overcome these obstacles. Growing stock and budling only from healthy parentage; judicious pruning and shortening in, is a means of prolonging the life of the tree and increasing fruitfulness; and early in the spring, as may be, is a proper time for pruning the peach, destroying insect eggs, borers, etc. Peach trees should be grown with low heads, as they shade the roots and are more within reach for pruning, and also for gathering the fruit; the heads should be pruned to a rounding shape, the new, or young wood, cut back one half; this reduces the numbers of fruit, but what is lost in numbers is made up, and more, in quality.

In pruning any standard fruit tree, in the orchard or garden, it is necessary to know its natural habit and form, and to interfere with that as little as possible, barely rubbing, or cutting out weak and superfluous buds and branches; in this way, by constant attention, we obviate the necessity of often cutting away any large branches, and weakening the health or vitality of the tree. In case where an old tree has been neglected and it becomes necessary to cut away considerably any branch, the cut should be made clean, smooth and close as possible to the main stem, and immediately have the wound covered with some impervious composition, and nothing is better than gum shellac dissolved, to the consistency of thin paint, in alcohol, which can be applied with a brush; kept closely corked in a wide mouthed bottle it is always ready for use; or, if from evaporation it becomes thick, a little alcohol added and stirred in restores it to the proper consistency.

Apple, pear or other fruit trees are often rejuvenated and cleared of many insects, in embryo, by washing their trunks and principal branches with a strong solution, made by dissolving potash in water, or a strong soap suds; and late winter or early spring presents the most favorable opportunity for performing it, as there is usually more leisure, and the eggs and young are more readily destroyed now, and also the wash is dissolved and often descends to the ground to be absorbed by the roots of the tree.

If the trees of the orchard have been neglected as to being manured, now is the time that a good dressing of manure may be given with good effect, for the tree must have something to feed on or it cannot produce good fruit in perfection; as well think of making a fat beef without good rich food, fed freely. A good compost of rich muck mixed daily with stable manure, and well fined, makes as good a fertilizer for an orchard as can be had; but in the absence of the manure good muck, mixed with lime, slacked in a saturated solution of salt in water, half a barrel, to a barrel, of dry slacked lime to a yard of muck, and well fined, or instead of the lime good wood ashes may be substituted, eight to ten bushels to the yard of muck and half a bushel of salt, or if you cannot get the muck mix lime, ashes and salt in the proportion of two, ten and one, and give a good dressing, broadcast, over the whole orchard as far as the tree roots extend.

As soon as the weather becomes mild and warm the moth of the canker worm will issue from the chrysalis state, from where they have spent the winter in the ground, and seek to ascend the trees where the male and female will couple, and the female will lay her eggs; stop their ascent, if possi-

ble, by trapping them while making their attempt. If every owner of a tree would carefully attend to his trees in season, this great nuisance could be greatly abated and eventually, effectively driven from our orchards and destroyed. As these pests not only lay their eggs in spring, but come out in fall or winter, preventives from their ascending the trees should be applied as early as October and continued till well into the next summer. Much might be done in working the ground to expose the chrysalids in fall and winter to the influence of the weather, and for the birds, etc. Traps, made by surrounding the trees with a band of paper, a foot wide, covered with tar mixed with oil or grease, to keep it soft, and kept fresh by renewal of the composition as necessary, would catch quantities of the female moths, by holding them fast, when they try to go over it in ascending the tree, as, from their nature, they creep along but slowly.

Too much attention cannot be given to ridding the trees and twigs of the little circles of eggs of the caterpillar or tent worm, before they hatch out, as they will begin to do, as soon as the weather becomes warm and the buds begin to burst and the leaves to push.

Pears, where successfully grown, are a profitable crop, much more so than almost any other tree fruit. The selection of varieties to suit any given soil is a somewhat difficult matter, as often a given soil will only bring but one or two kinds to perfection; and where this is found to be the case those varieties should be grown to the exclusion of the others, so that we may gain a name and reputation for our fruit.

Planting should be forwarded as fast as possible; yet no planting should be done without first putting the ground in good condition by underdraining, where necessary, suitable enrichment, plowing and subsoiling. One tree properly planted and cared for by after attention is worth more than ten improperly planted and neglected afterwards.

Fruit Garden.

Look out in the garden and grounds and see how busy the birds are. What can they be doing I wonder? See! they seem to be picking and scratching over the leaves and ground. Oh! now I see what they are at; they seem to have found something and are eating it. They are seeking out the bugs, worms and insects, which if left alone would have given us trouble in our strawberries, other fruits and vegetables in the garden. They can find nothing now to live on except insects, etc., and they work lively to find them, and seem to be pretty successful. What quantities they must destroy? Remember that when that robin comes next May and June into your strawberry bed, currant bushes, cherry tree, etc., and takes some of your choice fruit, that you might not have had it if he or some of his kind had not kept off those insect pests that so often trouble. Do anything you can to save your choice fruit from his greedy appetite, when the time comes, but just remember his present services, there can be no disputing them if we but reflect a little. We know it is very annoying to have the choicest berries and fruit, often, destroyed by the birds, but such is their nature, and can we grudge them a little for the services they are doing us at the present season of the year?

A plenty of good fruit is what we all would like, and how shall we obtain it at reasonable rates? becomes the great question to solve. That we can plant trees, vines, etc., and sit down and fold our hand for fruit to grow, while we wait to eat, is far from a fact; "eternal vigilance" is the price at which we must obtain *good* fruit, if we would have and eat it; not only must we give it the best of culture, but we must secretly guard it from insect enemies, protect it from unseasonable frosts, storms, cold winds, etc.

Look to the fruit trees, quince and other shrubs and bushes, and destroy the borers, cover the ground around their collars with anthracite coal ashes, or use some other approved preventive for keeping the moth from depositing her eggs, favorably for reproduction; those already at work must be dug out, or followed up closely with a sharpened "stick."

Be not in too much haste to remove protection from choice fruit, plants and vines, and if any are unprotected and danger is to be feared from untimely frosts, etc., protect with a few evergreen boughs, or like.

Every place should have a fruit garden, or at least there should be a plentiful supply, according to the extent of the grounds, of Strawberries, Grapes, Raspberries, Blackberries, Gooseberries and Currants. Seldom do any of these fail to do well in all localities, when judicious selections of varieties is made. Good, deep, rich and well drained soil, with judicious culture, seldom fails to give good crops; and these may all be had naturally or with a little labor and expense, where one has a little ground.

In spring planting, Raspberries, the canes should be cut down nearly to the ground, when planted. Never look for any fruit from any tree, shrub, or woody vine, the season after transplanting, as what you lose in fruit is more than made up in increased strength and growth for future productiveness.

Grafting of plums and stoned fruits should be done before the buds begin to burst, as soon as the sap begins to flow.

Great heat is apt to injure trees when the ground around the roots becomes heated; it is well, then, in planting, to aim to so plant that the hot dry sun may not have full effect about the roots. Raspberries appear to do best where partially shaded, and may be planted frequently under trees in the garden, and while the partial shade seems to do good to the raspberries, the shade afforded by the raspberries helps the trees.

Lawn and Flower Garden.

WITH the opening of spring—whether it be in March, as in the Middle States, or April in the more Northern, or as in the Southern, in February—comes the annual clearing up; for however much may have been done preparatory in anticipating spring work, there is remaining a certain amount of finish to be given to all grounds after the “rest” of winter; and the preparing to plant spring flowers and green things.

With the English the lawn plays an important part in gardening, much more so than with us who need it so much more, to render our summer heats less oppressive by the green grass absorbing this same heat largely. One great obstacle to our greatest success with fine lawns is from our droughts, which often are severe, yet the gratification and pleasure attendant upon the possession of a pretty little “strip of green grass,” or lawn, makes extraordinary efforts for its attainment desirable.

A great item in overcoming the effects of severe droughts is, in having the soil rich, deep and porous; for a deep soil is usually the reservoir of moisture, from which is drawn supplies to replace the waste from the surface from evaporation, thus keeping the grass and other plants from burning out. Why should the grass of a rich well kept lawn run out, or become weakened, any more than that of a fine old pasture sod which is kept closely grazed year after year, as is frequently the case? That they do become weakened from frequent close cutting, with the lawn mower, is the testimony of most experienced gardeners, and that in their weakened state weeds come in, is also true; these weeds are a source of great annoyance to the neat gardener, or the critic eye, and how to best get rid of them is often a question. Breaking up thoroughly and re-seeding is an expensive job, especially where there are trees, shrubs, etc., and is to be avoided whenever possible.

Some gardeners recommend, and our own observation, experience and opinion is, the best plan would be to top-dress exhausted lawns with burnt soil, or rich soil perfectly free of weed seed of any kind, and sow thereon grass seed, seeding thick—*Poa pratensis*, *Solium perenne*, and *Agrostis vulgaris*, are three varieties of grass which will accommodate themselves to different soils and circumstances, and will make, either, alone, an excellent sod. We would take one of these—which depending upon local, or other circumstances—and seed to that alone; they are dwarf grasses and will bear close cutting perhaps better than any other varieties, and the last named will bear greater abuse than any other grass we know of and recover.

Walks and roads are expensive to keep in repair, looking neat, and are to be avoided, except as absolutely necessary, and then turned and twisted as little as may be, consistent with beauty, without losing sight of necessary duties. Do not cut them from turf leaving trenches of sand, or canals for water or mud, but let them be a little oval, the centre higher than the bordering ground; if whatever material they are covered with they should be kept smooth and hard.

Paths and walks bordered with appropriate flowers and plants make the grounds attractive. We now have plants with beautiful and variegated foliage which make very pretty show, introduced into such borders; these mostly are of tropical origin, and can only be planted out after settled warm weather and the ground is warmed up. The *Caladiums*, *Iresine*, *Colens*, and a number of other similar foliaged plants give quite as fine effect as flowering plants.

Planting of seeds in the open ground will only be done in the warmer sections, and then only those of the more hardy varieties, as planting before the soil gets suitably warmed will result in non-success with any, except perfectly hardy plant seeds.

Planting of trees and shrubs will require particular attention now; but do not hurry to do it the moment the frost is out of the ground, as time should be given for the soil to dry a little; and cold winds are not prone to treat new set trees, etc., with very great respect. Better wait a few days till they are over. Shorten in the shoots of trees to be newly set, as they will do the better for it. The roots need looking to, that any torn or bruised ones may be pruned, and made smooth, with a sharp knife.

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Editorial Acknowledgments.

Transactions of the American Pomological Society, 1869.

WE are indebted to Marshall P. Wilder for a copy of the above volume, which is quite valuable, and should be in the library of every horticulturist. We are also indebted to the same kind hand for a copy of his address before the New England Genealogical Society.

Report of the Department of Agriculture, 1869.

THIS volume is edited with great care, and differs specially from former reports, by the entire absence of all contributions from outside writers. This is as it should be; the true idea being to exhibit the “*Department*” as it is and as it does, rather than to furnish the public with information properly belonging to the sphere of agricultural journals. We hope to see greater attention paid to the importance of introducing new plants into this country, and of all points none is more desirable than that of the *fibrous-leaved plants*.

Annals, 1870.

Register of Rural Affairs, 1870, L. Tucker & Son, Albany, N. Y., is fully as practical and entertaining as ever. The space devoted to horticultural information is more limited than usual, but to the farmer there is an abundance of useful hints.

American Agricultural Annual, 1870, O. Judd & Co., New York, contains a large amount of statistical information, and several excellent articles on potatoes, by Dr. Hexamer, and steamed food for cattle, by S. M. & D. Wells.

The *Horticultural Annual*, 1870, by the same firm, has more and better contributions than the previous one. Josiah Hoopes discourses on the *Retinisporas*. W. G. Comstock, on selecting seeds. Dr. Warder, on new apples. P. Barry, on pears. F. R. Elliott, on peaches and cherries. A. S. Fuller, on small fruits. Peter Henderson, on new bedding plants; and James J. H. Gregory, on new vegetables. It is quite a faithful record of our horticultural progress for the past year.

The Practical Farmer.

PASCHALL MORRIS has certainly made a wonderful improvement in his enlargement of the *Practical Farmer*, and as an agricultural journal we esteem it thoroughly practical (true to name), useful and entertaining.

The American Farmer.

HAS changed hands, Mr. Frank Lewis succeeding the old firm of Worthington and Lewis. The quarto form is assumed, and hence it has become a newspaper rather than a magazine. The subscription price has been reduced to \$1.50, and numerous other improvements added. It is now the oldest agricultural publication in the United States.

The Grape Culturist.

GEORGE HUSMANN has determined to enter upon his second volume, and "do or die." We admire his enterprise, and wish a "heap" of subscribers for his excellent journal.

The Gulf States.

A MOST remarkable leap from Tangipahoa, La., to New Orleans, and a change of name from its old cognomen of *The Southern Ruralist*. We like the new appearance much better than the old, and the contents are likewise much improved.

Farming as a Profession:

Or, How Charles Loring Made it Pay. By T. A. BLAND, Editor *North Western Farmer*. A very pleasant sketch of how a young man won a farm and home, containing many incidents and practical suggestions to young farmers. It should be read by every farmer boy in the land.

Miscellaneous Publications Received.

Alabama: Her Resources.—A pamphlet prepared by the Commissioner of Industrial Resources, descriptive of the land and agricultural advantages. Published at Montgomery, by John G. Slotes and Co.

Prize Essay on Cooked Food for Domestic Animals.—A very practical little pamphlet, well written and fully explanatory of one of the most useful and economical of all farm practices.

Proceedings of Third Annual Convention of American Institute of Architects—Contains an admirable address by E. L. Godkin, and a very faithful report of the discussions of the Institute.

Norway Oats.

WE are indebted to Mr. Ramsdell for some of his Norway Oats. Our experience with them, in 1869, was very satisfactory, and we believe them to be the *most productive variety* ever grown in this country. A large amount of impure seed, disseminated last year, created a prejudice against it, but the pure seed has proved to be almost extraordinary in its productive results. The weight per bushel equals the legal standard of 32 lbs., while its yield is fully three times that of any common variety.

Catalogues of Nurserymen.

A LARGE number received too late, will be noticed in April number.



Vol. 25.

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Among the Flowers.

BY ANNE G. HALE.

III.

Standard Parlor Plants.

THE notion that plants are injurious to health deters some persons from all attempts at cultivating them within doors. Others, with a slight knowledge of chemistry, say that the carbonic acid gas which they throw off during the night renders them especially deleterious to sleeping rooms, while, with certain restrictions, they admit them to parlors. All of these very foolishly deprive themselves and their friends of a wide source of enjoyment and improvement, as those most experienced in flower culture can testify. That they are not hurtful in the sick chamber, either by night or by day, the present writer had ample means of proving during the winter and spring of 1868-9, when she was held a prisoner seven months by heart disease, yet was not deprived of the society of her favorites, for her kind and intelligent physician made not the slightest objection to the two dozen and more plants that shared with her the sunshine and the starlight of her apartment, beguiling many a painful hour with their fragrance and beauty, and unfolding with their daily growth sure and sweet hopes of health and freedom.

The only way in which plants, or, rather, the culture of plants, can be considered injurious is in their injudicious management. Steady work at any other employment for a number of hours consecutively wears as much upon the energies as the daily attention required by a large collection of plants, and the frequent lifting of heavy weights would have the same effect as the lifting and moving of heavy flower pots. A lady of slender constitution, or, in delicate health, being fond of flowers may attempt the care of too many, or may not arrange them in a manner conducive to easy culture. But where hanging baskets, or stands with castors, and other conveniences for changing the position of plants are provided, and a reasonable number only are to be watered and trained and looked after generally, the cultivation of house plants may be considered an exceedingly healthy pursuit; while at the same time it leads to the highest intellectual and moral improvement, and furnishes the most exquisite and the purest means of enjoyment.

But so many new and strange species that are said to be adapted to house-culture, as well as new varieties of old and well-known plants, are annually brought forward by florists, that, in the multitude of diverse foliage and habits of growth, the endlessly varied tints and shapes of bud and blossom—each with its individual texture and odor—we find much to crave; and greedily endeavor, too often, to possess,—realizing at last, after large

drafts upon our purse and our patience, that we have made great sacrifice of health and happiness, and gained, perhaps, a mortifying array of sickly, half-developed changelings, instead of the few bright and beautiful pets that we might have been proud to own.

And so the first word of advice to novices in floriculture is—select only those that have been thoroughly tested; that with small outlay of time and painstaking will prove remunerative in full foliage and ready flowering,—and but few of these. If you succeed with them, others of rarer and more difficult kinds may be safely added from time to time. But do not be too ambitious—be content with one good healthy plant whose wants and whose habits you study and supply, which, even if it be of the most ordinary sort, has under your care developed its highest capacities, and it will afford you greater pleasure than a dozen of meagre struggling things of which you know nothing save their high-sounding names.

If vines, both climbing and trailing, thrive under your care, and you have room for others, and time enough to spend in training them, you will want standard plants; under which head should be classed only those that with proper treatment maintain an erect position without support. It is sometimes necessary to provide rods or trellises for young plants of upright proclivities, during their first season, but after that they should be laid aside. To this end care should be taken to give all portions of a plant its proper share of the sun's strengthening rays, either by turning it around or moving it to a sunnier window, as well as furnishing it with the soil it needs for attaining the requisite firmness and symmetry of form by which it becomes self-supporting; and all that under such treatment will not acquire a perpendicular habit of stalk or stem should be treated as trailers, and left to their wandering propensities in the wide accommodation which hanging pots or baskets afford.

Among standard plants the *geranium*, which gets its name from the Greek—meaning *crane's bill*, in allusion to the form of its seed vessels—should be first mentioned; because this genus furnishes a large variety of foliage and bloom (if under the same name we count the *pelargoniums*, or *stork's bills*, as is commonly done), and all species are easily cultivated. The *stork-bill* family bear larger and more showy flowers than the *geraniums* proper, and many of them are fragrant in both leaf and flower—the *crane's bills* are not.

A few *geraniums* are found in our dusky woods, and along shady and damp country roads, which are much improved by a training similar to that bestowed upon their city cousins—who were originally natives of Europe. *Pelargoniums* came first from the Cape of Good Hope, and even in their natural state are of neat, compact growth, and brilliant and profuse bloomers. Hybrids, uniting the best qualities of both families, are now the most popular style of *geranium*.

Plenty of air and sunshine are essential to the thrifty growth of *geraniums*—they cannot bear crowding. If their branches do not spread widely, so that the whole plant is freely exposed to light and air, some sprigs or branchlets must be cut away, and those that remain assisted for the first year or two with rods, to which they are tied, for attaining a spreading form. They need also frequent showering and much watching and cleansing to keep them clear of insects.

Old *geraniums* should be re-potted in May, at which time their branches should be cut back a few joints. Take the pieces thus obtained and set them to the depth of the first joint in good garden loam mixed with decayed vegetable matter, either in pots under a bell-glass for a fortnight, or in a cool and shady garden-bed;—which is also the best place out of doors for the pots containing old *geraniums*. All the summer water sparingly the potted *geraniums*, and—*forget* those in the open ground. In September a new plant should be taken from its garden soil, with a ball of earth about its roots,—but these must be trimmed a little,—and having selected a pot which will allow it two inches of loose soil in every direction, throw in a few pieces of charcoal of the size of small pebbles, and then a handful of loam and vegetable mould well mixed. Set upon this the ball of roots, and support the stem of the plant with the left hand while you sprinkle in more soil, and then strike the edge of the pot to settle it. Add more soil, shaking the pot gently, or striking it, and then press this soil with a smooth round stick around and upon the roots till the plant stands firmly. Add more soil still, and press carefully yet lightly with the fingers all about the crown or neck of the plant. Water it, and if by this means the soil sinks below the crown lay on a little more. Set the pot in a cool and shady place for a week or ten days,

and then take it to the parlor. If the leaves droop, water it freely; but as they regain their natural position abate this. After it is taken to the parlor water it daily with tepid water; and give it liquid manure once a week after the flower-buds appear. Pot old plants in the spring according to the same manner.

The horse-shoe, or *zonale* geraniums, either those with a dark band, which gives their name, or those with variegated foliage—each leaf of which is as gay as a flower; in crimson and gold, and green,—or the silver or gold-margined, are among the easiest of plants to rear, and may be kept in almost constant growth and bloom. One may have a fine display of floral beauty with this sort alone; the different varieties giving large trusses of white, scarlet, red, crimson, rose, and salmon, either singly, or shaded or striped with each other—those bearing double flowers are particularly elegant. The ivy geraniums, usually classed with these, with their dark green wax-like leaves heavily ringed with black, and their blossoms of white, red, or light purple, are trailers, and very desirable for hanging baskets.

The leaves of the fragrant geraniums—rose, balm, lemon, nutmeg, citron, etc., are always needed for bouquets (their flowers are of small account) and enhance the beauty of their more showy relations, the pelargoniums, whose gorgeous petals of crimson and brown, white and maroon, rose and crimson—mottled, or flecked, or shaded, may fill your windows with splendor from November till May if their shoots are cut back in July or August and all buds pinched out till October. These need to be re-potted in June and kept in the shade, rather dry, till September,—generally within doors.

Next to geraniums, and forming not a foil to their beauty and yet enhancing it greatly by the contrast of their delicate blossoms and graceful foliage, come the eupatoriums, stevias and heliotropes. The eupatorium gets its name from Eupater, king of Pontus, who first used the plant in medicine. We have many species growing in their native beauty in the lonely mountain passes and valleys of the north, as well as in the sunny meadows farther south; and the florist has transplanted them and carefully watched and tended their growth till the foliage has attained unwonted smoothness and beauty, and the hues of the tassel-shaped flowers have become clearer and brighter. Their large clusters of snow-white, or lilac blossoms, have a fine effect among geraniums. Cut back old plants to their roots, in the spring; shake out the old soil and re-pot in good loam and sand mixed in equal proportions. Make new plants of the cuttings. Start them in damp sand under glass. Water them much and frequently. Set them in the garden till September, then accustom them gradually to the in-door atmosphere. They will bloom from November till February. The stevias, of similar foliage, but a yet more delicate and feathery flower, of a creamy white, cultivate in the same way. The heliotrope, with its delicate lavender and purple flowers, so exquisitely scented, is always desired with geraniums. Cultivate this like the two preceding plants, but beware of the autumn frosts if they are kept out of doors; and when first taken from the garden handle tenderly, or the foliage will appear as if scorched, and quickly wither away. Pinch out all buds that appear on these plants during the summer. No plants can be so effectively grouped as geraniums with heliotropes, eupatoriums, and stevias, if proper attention is paid to an agreeable contrast of their blossoms,—the purple or lilac being always flanked with white—never with red or crimson or rose,—and the white mingled among scarlets, crimsons, reds, and salmons—the white predominating.

[TO BE CONTINUED.]

Pears at Rochester.

THE winter meeting of the Horticultural Society of Western New York, besides other matters of unusual interest, had an exhibition from Ellwanger & Barry of twenty-six dishes, with as many varieties, of *winter pears*—most of them in excellent eating condition. The Anjou took the lead, both in fine appearance and in delicious quality. I understand the proprietors have still several barrels of this admirable pear in excellent condition. Next after this, the Josephine de Malines and the Duchess of Bordeaux attracted much attention. The former of these two is well known, and continues to maintain its high position. Dwarf trees of the White Doyenné or Virgulien, the fruit of which years ago failed, were re-grafted with this sort, by inserting a number of scions in the head of each tree, and

leaving the pyramidal shape. These trees are now ten feet high, with strong vigorous shoots and branches and with a fine form—and they bear abundantly. The Duchess of Bordeaux is of only medium size, but the flavor is rich and fine. The same collection had specimens of Jones or Jones' Seedling, an excellent cinnamon russet pear, of rather small size. I have fruited the Jones as a dwarf for several years, and it uniformly bears large crops, and every specimen, large and small, is of fine flavor, and fine and melting in texture. It immediately follows the Winter Nelis, and is scarcely inferior in flavor. What is the experience of others—and why is it not more extensively cultivated? T.

Winter Pears.

BY P. BARRY.

The Beurre d'Anjou.

EVERY year's experience with this variety gives additional proof of its great value. The tree, as it acquires age, becomes more and more productive, and the fruit improves in quality as well as in keeping properties.

Instead of being a late autumn fruit, as classed in the books and catalogues, it is really, at the North, a winter fruit. Last winter Col. Wilder carried some with him to Florida, and they were eaten there about the 1st of February in good condition.

At the present time, February 4th, we have them here as fresh and sound as when gathered from the tree. They have been kept in a barrel in a cool barn cellar, and when ripened a few days in a warm room, are melting and delicious. Indeed, they are very good when eaten directly from the barrel, but a little ripening in a warm place improves them, as it does most varieties that have been kept in a cool place.

When we take into account the excellent character of the tree, both on pear and quince stock; the size, beauty, richness, and keeping qualities of the fruit, we can have no hesitation in awarding it the first place among late autumn and early winter varieties. Truly "a noble fruit."

The Josephine de Maline.

This is another variety that improves from year to year as the trees acquire age and we know more of it.

While the tree is young it is rather deficient in vigor, and the habit of growth somewhat irregular. The foliage is small, and this also detracts from the appearance of the tree. It is hardly however, vigorous and very productive; the fruit is always smooth and fair, of a delicate straw color; the flesh slightly tinted with rose, melting and perfumed, may be kept till the 2d of April. The Easter Beurre being so difficult to grow, generally, I think the Josephine is the finest late winter pear we have. We have had splendid crops of it here last season and the previous one, on trees of White Doyenné, grafted over. I have also had fine crops on a tree of Woodales St. Germain, grafted over.

The Wauregan Raspberry,

IS a new seedling, discovered some fifteen years since, at Norwich, Conn., but only lately brought to the notice of the public by its originator, Dr. L. L. Button, of that city. Is described by Mr. John V. Wilson, a former President of the Norwich Horticultural Society, as of very remarkable size, quite prolific, and *continuing long in bearing*. Its only defect is the same as that of all our largest and finest red raspberries, *not perfectly hardy*; must be classed with the *Franconia*, *Brinckles' Orange*, *Knevel's Giant*, etc., but will bear the same exposure these varieties do, and needs the same protection.

The illustration is a very faithful representation of the size of the berries, and its habits of fruitfulness, being copied from a photograph of a cluster.

Its best recommendation is its *firmness*, which equals the *Franconia*, and renders it of great value for market purposes. Flavor of the highest character, sprightly and aromatic. It resembles the *Brinckles' Orange* in form of growth, but is not strong enough to dispense with stakes or trellis.

It appears to be, from all the evidence we can obtain from trustworthy sources, a seedling of extraordinary merit.

The Wauregan Raspberry.



A Pleasant Cottage Home.

INQUIRY is made of us very frequently for designs of pretty cottages *very cheap*, say less than a cost of \$1,500 to \$2,000. It is very difficult to produce acceptable designs for such low-priced houses, because either building materials and labor are too costly to warrant the possibility of cheap homes, or if one can be built for so low a sum, it is almost always devoid of some ornaments, which seem absolutely necessary to make the cottage an object of beauty, as well as of convenience.

The design we present this month has the merit of both convenience and a reasonable degree of ornament, and yet will not exceed \$2,500. In the interior of our State or country districts, a good carpenter will build it for less than \$2,000.

In this design the veranda, balcony, eaves, brackets, dormer windows and gables, are very simple and easily constructed, while the ornamented appearance of the cottage comes from the climbing vines and pleasant surroundings introduced by the artist.

Were we building for our own taste, we would introduce a little more ornamental work, and make the architectural beauty complete. The following is the plan and arrangement of the rooms:

The front door opens into a vestibule A six feet wide and nine feet long. From the rear of this a passage extends to the staircase hall E, which opens out to the yard, or into a wood-shed if desired. B, the parlor, is fifteen feet square, and connects by means of a small passage with the living room D. This living room is twelve feet by seventeen, and opens into the staircase hall at a point convenient to the back entrance to the house. Across the hall, and near the head of the cellar stairs, is a good sized closet or store room *a*, fitted up with shelves and cupboards, and lighted by a single window.

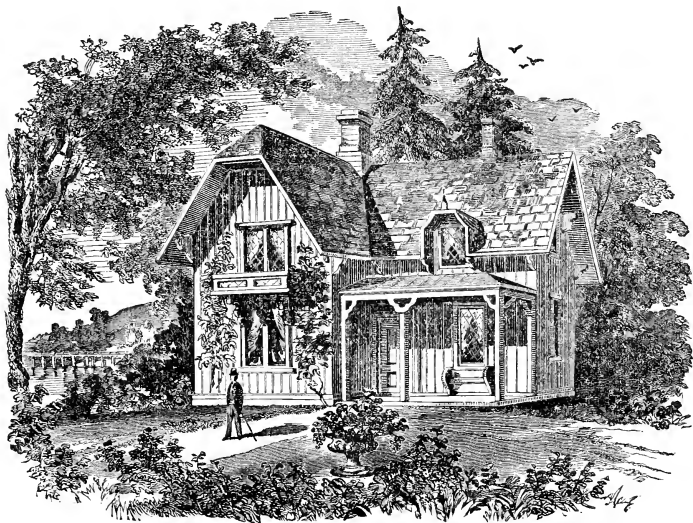
The sitting room C measures thirteen by fifteen, and has two doors, one opening into the vestibule, and the other into the passage back of it.

The second floor is divided mainly like the first, and comprises three chambers, a bathing room, and five closets, besides the hall.

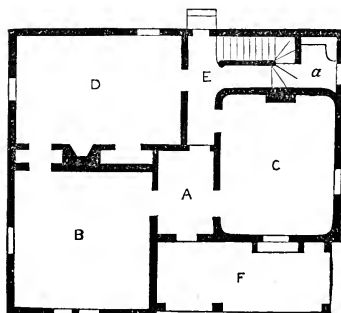
The Orchard.

I READ an admirable article in a number of THE HORTICULTURIST, for 1869, on the "*Orchard*," much of which I heartily endorse; but there was one practice recommended that I must here assail, with all due deference to the opinions of the author of that article. I refer to the question of cultivating (plowing) the orchard. Until the trees are ten years old this is the proper treatment, but after that age I would *never* suffer the ground to be molested with plow, hoe or spade; but would treat it very much as recommended in the article—save only the stirring of the soil—that is, I would at the tenth year sow it to red clover, and never cut it off, but let it die down and *rot*, or I would turn in hogs or sheep to eat off the first crop, allowing the second blooming the same season to grow up to seed and fall down for the next year's crop of seed. In this way the ground would be mulched summer and winter. I would keep it in clover as long as it would grow well, and after that sow any other grass seed that would not make too tall a growth, and alternate with clover every few years. The plan of stirring the soil injures the roots, and of course injures the trees, and the result is that the fruit either falls prematurely, or specks and rots. During the first decade after planting I would never stir the soil *under the branches*, except an inch or two deep, and under the branches I would cut and scatter some clover three or four inches deep in June, and in December would place straw of some kind the same depth, but not within two feet of the trunk, as that would harbor field mice, to the injury of the bark. Such has been my practice and observation with uniform success, while, on the plan of stirring the soil, great and irreparable injury has followed. How far this plan of mine would be successful and best in other soils and climates differing from Kentucky, I am not advised, either by observation or information, except that contained in the excellent article referred to; but I am inclined to the opinion that the same general rules and natural laws would apply, and I should be loth to adopt any other practice anywhere than the one briefly set forth herein.

HENRY T. HARRIS.



A Pleasant Cottage Home.



Ground Plan.

The Cut-Leaved Weeping Birch.

Betula lacinata pendula.

THIS tree was figured in the February number of THE HORTICULTURIST, under the name of "American White Birch," evidently by a mistake of some one. I can give you something of the history of its introduction to this country, which may be interesting.

In THE HORTICULTURIST of September, 1848, being the third volume, H. W. Sargent, Esq., then in Europe, wrote an account of his visit to Booth's nurseries, in Holstein, in which he said: "Among trees and shrubs, rare to me, I noticed a weeping birch peculiar to Germany. It had descending shoots thirty-two feet long; the branches hang as perpendicularly downward as those of either the *Sophora pendula* or the common Weeping Willow, and are quite as delicate and pensive as the latter."

After reading this we took immediate steps to procure it, and succeeded in importing a few plants the following spring. From that time until the present it has been extensively propagated in our nurseries. In our Catalogue of 1850, it is offered at \$2 a-piece.

One of the first imported trees now stands in our specimen grounds, and is nearly fifty feet in height, the trunk near the ground is three feet in circumference. Another, one of our own propagation, is thirty-eight feet in height and about same thickness of trunk as the other at the ground.

This is the one from which the portrait was taken that appears in your columns, but the portrait fails to show the long, slender, thread-like, pendulous branches which make it such a striking and beautiful object.

We have still another younger than either of those mentioned and nearly as large. It grows, like the common Birch, rapidly, and makes a large tree in a few years.

I think that among all the deciduous trees of drooping habit, now grown, none possess *gracefulness* in so great a degree as this. P. B.

MOUNT HOPE NURSERIES, ROCHESTER, February, 1870.

The Buffum Pear.

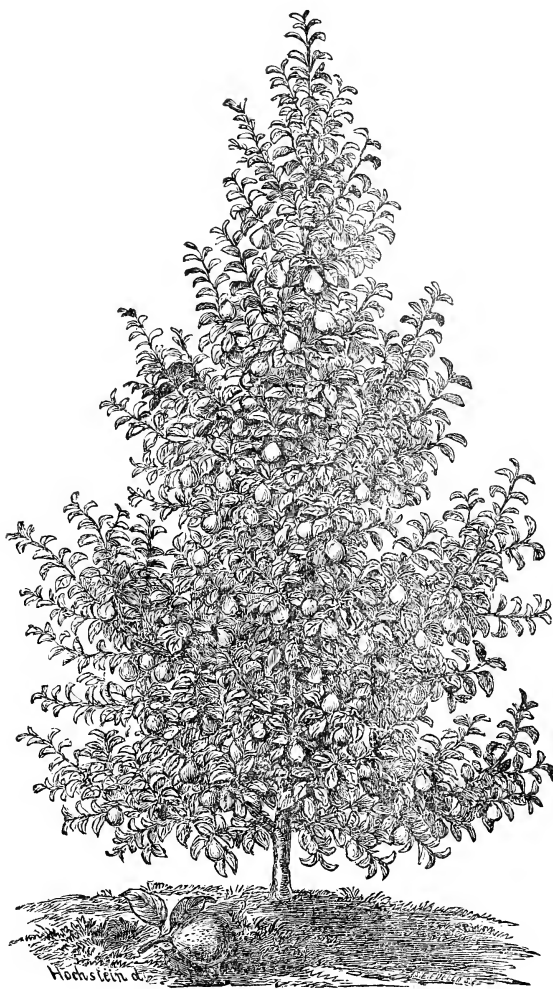
WE are indebted to Rhode Island for the nativity of the Buffum pear, and by Mr. Downing it is considered probably a seedling from the Doyenné. Its quality is very variable, frequently very coarse and ill-flavored, and again rich, aromatic, juicy, and melting. It can be classed as a *good orchard fruit*, but not of highest excellence. The fruit is only of medium size, a fair yellow color, changing to a bright red, slightly russeted. It is very attractive as a market variety, and is often sold by stand dealers, in cities, for the Seckel. Although every true orchardist can always recognize the difference in taste and shape.

But its crowning excellence and glory is in the tree itself.

Was ever a pear tree seen better able to realize our idea of beauty than this? Growing erect and vigorous, with its straight regular branches, and large deep green leaves, year after year, assuming in upward lines the grace and beauty of a perfect pyramid, until in full vigor it is unequalled among all the trees of the orchard.

For *hardiness* we ask it a trial; for use in ornamental grounds we bespeak favorable mention, for it is equally pleasing on the lawn with any of the flowering shrubs or low growing trees. In the garden, what a pleasure it is to train it in regular symmetrical outlines for hedges or screens, or let it, like a sentinel, guard the entrance to our choicest paths, or stand beside our grape laden arbors. A correspondent of the *Michigan Farmer*, adds a word concerning it, so appropriate in ideas and expression, that we quote the passage entire:

"Those who have not seen this tree in growth have no idea of its unique beauty. In form it considerably approaches the Lombardy Poplar—upright, compact and with a large number of nearly parallel upright limbs. It needs a little opening to keep it from being too intensely compact, but no heading in like most other pears. It is peculiarly adapted to lining avenues and garden walks. It is so close and upright as to allow of very close planting, and forms a line or curve almost equal to a well trimmed hedge. Where neatness and uniformity of outline is needed or allowable, the Buffum surpasses any other fruit tree



The Buffum Pear.

I know. On a lawn, also, where ordinary fruit trees would be excluded in favor of purely ornamental deciduous trees, the Buffum would not only not mar the scene, but would contribute to the charm.

"The foliage is also a rich, glossy, dark green, and not likely to fall early in the season. The fruit is of a medium size, a little coarse-grained, but nearly equal to the White Doyenné, and one of the longest keepers of all the early autumn pears. It is also an early and profuse bearer, and in every way meets the requirements of ordinary pear growers."

Landscape Gardening.

"It is the first step which costs."

THE disappointments which so often mock the hopes of a happy country life, and which come in the form of the annoyances and vexations entailed by lazy workmen, large bills and delinquent nurserymen, have led many persons to ask, is it impossible for us to have a cheap and yet beautiful place in the country, either by doing the work ourselves or by employing a professional person to do it for us? It is not impossible, if before we begin our work, or to build our house, we carefully consider the difficulties which we must meet, and are determined to be contented with what is possible, and are willing to confess that we are ignorant of many things which it is the duty of only professional men to know. The largest number of country place vexations come from miscalculations of what can be done with limited means. We want more than we are willing to, or can pay for, and try to supplement our purse with our own efforts and, perhaps, the gratuitous advice of our neighbors and friends.

The first and long enduring mistake made by those who go to the country to live in summer, or for the year, is an unwise selection of the land on which they mean to make their future home. Chance oftener settles the question of locality than selection, though sometimes men are influenced by hereditary and family associations. Where any local attraction, such as follows one's family or business, decide a man to purchase any particular piece of land, there is no need of deliberate thought about the advantages and economics of situation and treatment, because he must make the best of the land he has acquired; but when the purchaser is indifferent, and can as well build in one district or village as another, or in one or another part of the same town, then it is of the utmost importance that the selection should be carefully made.

It often happens that a wise choice of lot will save many hundreds and perhaps thousands of dollars in making a country place, as, for instance, whether the land will permit the house and other buildings to be built and approached by such easy grades as will require no extra filling of gravel to bring the new surface into harmony with the old.

A few feet of filling seems but little as we contemplate our building lot, and run over in our minds the inevitable expenses. But every two hundred and sixteen cubic feet of loam or gravel to be moved will cost from two dollars to six, in proportion as it is easy and convenient of access. It is extremely costly to move earth; we can spend a thousand dollars in that way without making much change of surface or show in the effect produced.

An unwise choice may make it necessary to spend a large sum in getting water, or in removing rocks to make a lawn, or in length of avenue, shelter required for protection to gardens, young plantations, etc.

All these first questions, which readily suggest themselves to the mind of a professional man as structural and unavoidable necessities, only come to the novice as he slowly moves from one point to the next. Therefore the selection of site, which involves them all, should be gravely pondered, and, if possible, we should get the advice of some experienced person.

Everyone thinks himself fully competent to choose a building lot, and most persons would scorn the idea of asking any man to help them. Yet, when we look at the question analytically, and summon the long train of future work and improvements, which will cost from two to twenty thousand dollars, it is plain that we ought to start right, if possible, and that what we pay for advice, which will help us to avoid blunders, is but a small percentage on the whole future expense.

Most persons who have made country places, have said many times, as the work progressed, "If I had only known this at first; if I had foreseen what I wanted, I would have changed my plan and have saved cost and trouble, but it is too late to retrieve the mistake."

It is very easy, when we look back at the completed work, to see where great savings could have been made, if we had only known how to do, or to avoid some of the things we have undertaken, and it is just this knowledge that comes with the experience, which it is the peculiar office of professional men to supply; and no amount of reading or theory will enable a novice to obtain it.

Few persons understand, before they begin their work, that the simplest treatment of the ground to be improved will cost a definite sum of money, and that the amount will vary with the economy and wisdom with which the work is managed.

It is easier to believe that any paid advisor will be likely to recommend costly work, which will tend to show his skill and give him a reputation, than to try to simplify our undertakings and reduce their cost. Such conduct is human, and we may be liable to be over persuaded into extravagance by men who are familiar with the resources of nature and the effects which can be created by using money liberally; they too often set light value on other men's money; but it is certainly less dangerous to be guided in our plans by one who can answer any questions we may ask. We may test our theories before we put our money into them, if we consult with one who is supplied with a fund of experience in all matters that relate to the changes of surface and the use of earth, grass and trees. It is safer to seek such aid than to venture out alone on a sea of whose rocks and sand-bars we are ignorant; whose shores we have never explored; whose depths we never have sounded; our only guide being a compass that we have never learned to use.

ROBERT MORRIS COPELAND.

Blackberry Culture.

BY P. C. REYNOLDS.

OF the entire list of small fruits cultivated in the Northern States, none are more uncertain than the blackberry. This is singular, considering how hardy, vigorous, full of vitality it is in its wild state.

Previous to the discovery of the Lawton, the chief dependence of our cities for their supply was upon the wild blackberry. Quite a good many are still received from that source, but the cultivated sorts are fast taking their place. The greatest objection to the wild sorts, is the preponderance of seeds over pulp. That objection is obviated to a great extent in the cultivated sorts.

In the Lawton was presented a variety so large, handsome and productive that attempts were at once made to cultivate. The result has been anything but satisfactory.

The great cause of failure in the cultivated blackberry is its tenderness, inability to endure our northern winters. The question here arises, why should the blackberry be so tender? Black raspberries endure a degree of cold that would freeze the blackberry down to the ground. The former ripen their fruit and canes earlier than the latter. Is there any correspondence between the early maturing of the fruit and wood? I think that there is. Among red raspberries, the Kirtland is the first to ripen, and its season is short. It is also the most hardy. The Hudson River and Franconia hold on into the blackberry season and they often suffer in winter.

But this is speculation. What the grower of small fruit wants to know is how to prevent the blackberry from freezing down in winter.

The only way that we can accomplish anything in that direction is to encourage the maturing of the canes. In the first place we should select a warm, dry, well-drained soil for our plantation. A soil on which corn would always ripen before frost, would pretty certainly ripen blackberry canes before the frost would stop their growth. I know of a plantation of Lawton's on such a soil that seldom fails to bear a large crop of berries.

Another precaution—never manure blackberries in the *spring*. It will induce a late growth of cane, which will be unlikely to mature.

If a plantation requires manure apply it immediately after the suspension of growth, in the autumn. It will then dissolve and soak in down to the roots, ready to give them a vigorous start in the spring. With these precautions in selecting a location, and manuring blackberries, the next question is, what *varieties* to cultivate. I think, from the light we have upon the subject, that I should give the Early Wilson the preference. I am planting it on my grounds more extensively than any other kind.

Its merits are earliness and shortness of season, ripening its entire crop within two or three weeks. It is also large, good and productive.

The public taste is very fickle and demands frequent changes in fruits. After enjoying strawberries for a few days it calls for raspberries, and by the time raspberries become really plenty it clamors for blackberries, upon which it is soon satiated, and then wants peaches, grapes, &c.

To meet this fickle, ever-changing demand, it is highly important that such varieties be cultivated as ripen early, and ripen their entire crop in a few days. This desideratum is met by the Early Wilson. It endures the winter better than Lawton, but perhaps not quite as well as Kittatinny, which I think ranks second in the list of well-tested varieties for profit. It is generally considered the hardiest of all varieties, enduring the winter in localities where the Lawton fails. It is good, productive, but smaller, softer and later than the Early Wilson.

The Lawton has been longest before the public, and is, under favorable conditions, a large, handsome, good, productive blackberry.

But those favorable conditions are seldom realized. It winter-kills about Rochester on an average half the season, and is never allowed to hang on the canes until *ripe*—as a consequence, it is very acid, and sells low.

CULTIVATION.—Land in condition to bear an average crop of corn is in suitable condition for blackberries. The rows should be marked out straight both ways—four feet by eight feet—which will admit of cultivating with a horse, both ways the first two seasons, and one way thereafter.

In transplanting, reject weak plants, handle careful so as not to break off tender shoots, and plant with the hands. Blackberries should always be cultivated *shallow*, otherwise you mutilate the roots, causing sprouts, which are troublesome. One prominent idea should be kept steadily in view in all the processes of the cultivation and pruning of blackberries, the promotion of the early ripening of the cane. Late in May, or early in June, when they have attained a height of twenty inches, or two feet, the terminal bud should be pinched off. This will cause them to throw out laterals, which should be allowed to grow undisturbed the remainder of the season. The next spring these laterals should be shortened in about one-third, which will give the bush a strong compact head, self-supporting.

The second year it may be well enough to allow the canes to grow to a height of two to two and a half feet before pinching, but I am decidedly opposed to a high bush, exposed to the winds. To keep a plantation clean, with shallow culture, it is imperative to meet the weeds on their first appearance, for if allowed to become deeply rooted it will require deep culture to uproot them.

ROCHESTER, N. Y.

Pears in Southern Illinois.

Notes on Varieties.

THE Southern portion of Illinois differs materially, in its topographical and geological features, from the Central and Northern parts. The level, treeless plains, which characterize the latter, and which have entitled Illinois to the designation of the "Prairie State," give place, in the South, to wood-covered hills, with a soil of clay quite distinct from the black loam of the plains. Forty miles north of the confluence of the Ohio river with the Mississippi, is a high range of rocky hills, extending east and west, from one river to the other, and known as "The Grand Chain," whose highest elevations are six hundred feet above the level of the rivers at Cairo. This ridge, with its foot hills, is about thirty miles wide, and it is here that most of the great orchards of "Egypt" from which Chicago receives her chief supply of early fruits are situated. South of this and separated

from it by the wide valley of a small river, and only twelve miles from Cairo, is another ridge, or series of ridges, some 150 feet above low water mark in the rivers, of a still different geological formation. It is what the geologists call *loess*, and is composed of a finely comminuted and friable clay, resting upon a thick bed of gravel and sand. It is rich and well drained, both underneath and on the surface, and is wonderfully productive of wood growth as indicated by the great size and remarkable variety of the forest trees it supports. The soil has been pronounced by competent authority to be unsurpassed for the growth of fruit trees, and is just such as would be chosen for the pear.

This brief account of the character of the region and soil in which my orchard is situated seems necessary to give value to a statement of my experience with varieties.

The trees, which are partly standards and partly dwarfs, were planted in the spring of 1859 and the spring of 1862. They have generally grown well and most of them have borne more or less fruit. Some varieties have suffered from the fire blight while others have been wholly exempt.

Of the very early sorts, the *Bloodgood* has proved most satisfactory. The trees are thrifty, vigorous and handsome, their only fault being their tardiness in coming into bearing. The fruit is of fair size and, for so early a pear, of excellent quality. Ripe about first of July. *Madeleine* is objectionable from its tendency to blight, resulting from its sappy, succulent and late growth. The fruit ripens a little earlier than *Bloodgood* and would be valuable if the health of the tree could be depended on. *Julienne* is a pear of handsome appearance, but the quality is variable, proving, in some seasons, insipid and worthless. The tree is healthy and fruitful.

Beurré Giffard.—In size, quality and beauty, is superior to either of the foregoing, though not quite so early. The tree, however, is a poor grower and shy bearer. I have not found it profitable.

Rostiezer.—Trees ten years old, on quince roots, have borne no fruit. Its habit of growth is spindling and ugly. It seems to have disappointed all who have planted it in this part of the country.

Bartlett.—Maintains its preëminence as a market pear, and no variety is likely to rival it, in its season, unless it be the *Howell*, which possesses almost all its good qualities, with better flavor. Contrary to what is said of it in most other localities, the *Bartlett* is one of the freest from blight.

Flemish Beauty.—Never had much to recommend it except the large size and beautiful coloring of the fruit. The trees, however well they may grow for a few years, sooner or later, are almost sure to manifest their constitutional feebleness in a premature dropping of the foliage. The same may be said of that much superior pear, the *Beurré Diel*. I have had very fine fruit from both of them, but would plant neither of them for profit.

White Doyenné.—Is, with me, healthy in tree and fruit. It is exceedingly productive, and I hope it may be long before the malady that has made this delicious fruit valueless in so many localities, shall appear in every orchard.

Gray Doyenné.—Resembles and is quite equal in quality to the *White*. The fruit is rather larger and is very attractive in its orange-colored russet coat.

Buffum.—Very productive, and the fruit very delicious, when well ripened, but it is too small for market.

Seckel.—Trees healthy and handsome, forming a perfect pyramid almost without pruning. The fruit is the standard of flavor, a standard to which no other sort has ever yet attained.

Its small size is the only objection to it, and that is scarcely an objection here, when many of them measure full two and a half inches in the transverse diameter.

Belle Lucrative.—Trees moderately healthy and exceedingly productive. The fruit is of first quality but objectionable as a market variety on account of its want of color. People buy pears by the eye rather than the taste, and the plain green coat of the *Belle* does not attract them.

Duchesse d'Angoulême.—This is the only pear I would care to cultivate on the quince stock. It is as hardy and healthy as an oak, and very productive. The fruit is of medium quality, but its large size sells it.

Louise Bonne de Jersey.—Is productive and profitable. The fruit, when well ripened, is nearly first rate.

Glout Morceau.—Makes an exceedingly handsome tree, but it is tardy in bearing and very prone to blight. The fruit is large to very large, sometimes very fine and sometimes astringent and scarcely eatable.

Beurré d'Anjou.—My trees, on quince roots, have proved but moderate growers and very shy bearers, but the fruit is almost perfect in every constituent of a first-rate pear.

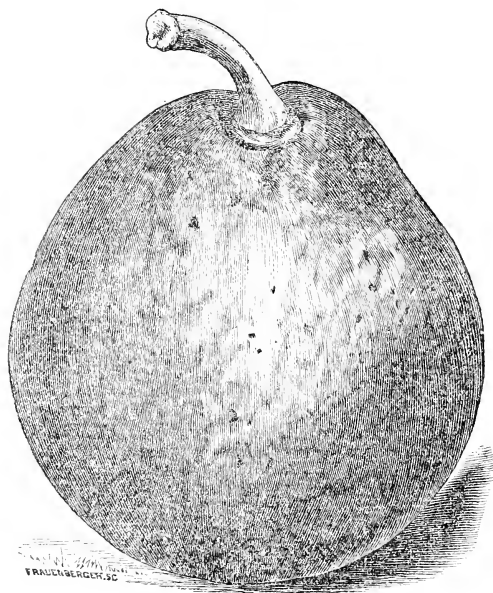
Stevens' Genessee.—Shy bearers; fruit large, handsome and excellent.

There are several other varieties that I have fruited myself, or seen in the orchards of my neighbors, but would not speak of them without further trial. Among those that promise well are *Passe Colmar*, *Onondaga*, *Beurré Easter* and *Lawrence*.

My experience leads me to the conclusion that a profitable pear orchard must contain only a very few well chosen sorts. I could not name more than six that I should be willing to plant largely. My belief is, indeed, that one of the main causes of the failure in pear culture has been the rage for large collections of varieties. These are for the amateur, the commercial orchardist does not want them.

VILLA RIDGE, ILL.

A. M. BROWN.



Duchesse De Bordeaux Pear.

THE above is an illustration of the new pear, introduced by Dr. J. S. Houghton, of Philadelphia, and favorably mentioned at the meeting of the American Pomological Society, last September, and also on other occasions.

Since pomologists are now endeavoring to induce growers to pay more attention to our Winter Pears, this variety will deserve special interest. By those who have tasted it it is pronounced of first rate quality, large size, in form like the *Beurré Diel* and *Doyenné Boussock*, keeps sound and good until February, March and April; ripens up and colors finely, overflowing with rich sweet juice, delicious and refreshing. It would be well for our large pear cultivators and amateurs to test it carefully.



Belle de Choisy Cherry.

NOT being a market variety the Belle de Choisy is desirable only for amateur purposes and family culture. In flavor unexcelled, it is universally admitted to be of first character, and one of the most delicious varieties we cultivate. It originated in the year 1760, in the village of Choisy, near Paris, France, and belongs to the *Duke* family of *cherries*, and like others of same class, is a healthy, hardy, vigorous grower, being well adapted to a great variety of soils in both northern and southern locations.

Fruit is only of medium size, round in form, thin skin, with pale amber color, changing to yellow, finely netted with red when ripe; flesh is very tender, juicy, of sub-acid sweetness, and delicious quality; ripens last of June, is only a moderate bearer, but very desirable for table use. The Governor Wood being nearly equal in quality, but more vigorous and productive, will supersede it for large plantations; but the *Belle de Choisy* should be remembered in every experimental garden.

Garden Ivies.

On the Classification and Nomenclature of the Species and Varieties of Hedera.

(Communicated to the Linnean Society by SHIRLEY HIBBERD.)

DURING the past fifteen years I have assiduously collected and cultivated the species and varieties of *Hedera*, and my collection comprises upwards of one hundred varieties (so-called), representing the three well-known types; namely, *H. helix*, of Linnaeus; *H. Canariensis*, of Willdenow; and *H. colchica*, of Koch. Observing that many varieties were known in gardens under a diversity of names, and that those names were in many cases unnecessary complex, and in some cases obnoxious both to sense and syntax, I determined on a complete revision of my own garden catalogue of ivies, and I now respectfully submit to the Linnean Society a general summary of results:

First, as to the general principles of the classification now adopted. It is based on the three species named above, the characters of which are unmistakable. The sub-divisions comprise groups of—1, Scandent or climbing ivies with green leaves; 2, Scandent or climbing ivies with variegated leaves; 3, Arborescent or fruiting ivies with green leaves; 4, Arborescent or fruiting varieties with variegated leaves. Under one or more of these four sub-divisions may be placed every garden ivy known—a few which combine the property of climbing and the more free growth of the scandent forms, with the property of fruiting also, may claim a place in more than one group. I have, however, in every such case, considered a variety known to bear fruit as arborescent, though as to habit of growth it may very closely approximate to the truly scandent forms. A very brief experience with ivies will convince the observer that every scandent form tends inevitably to the fruiting form, requiring only age and immunity from the pruning-knife to produce in due time abundance of berries. It is not, however, so generally well known that every fruiting form, however arborescent, is capable of reverting back to its corresponding scandent form—the mere opportunity for climbing, as, for example proximity to an old brick wall and its roots having free range in a rich soil, tending to what may be properly termed its rejuvenescence. More than one variety in this collection appears to be in a permanently intermediate condition between the extreme characters of the climbing and fruiting forms, producing shoots that are in some cases decidedly scandent, with large and distinctly lobed leaves, and other shoots of a more twiggly nature, with small entire leaves; these twiggly shoots *tending* always to produce fruit, but never so much as perfecting a flower-bud.

Secondly, as to the nomenclature. In adopting or inventing names for the most distinctive kinds in the collection, an endeavor has been made to harmonize the requirements of the cultivator with the usages of the botanist. For garden purposes, one descriptive name, which can be easily remembered, or, at all events, easily associated with the plant it represents, is the great desideratum. Commemorative names are simply useless as aids to identification, and geographical names are nearly useless when good; and as they are generally bad, they are also generally objectionable. *Hedera Canariensis* may be cited as an example. It is the Canary Islands ivy of the botanist, the "Irish ivy" of the horticulturist, the African ivy of the traveler. The necessity of a revision of the nomenclature of the ivies may be established by a glance at any garden list of them. Thus, for example, we find, even in the best catalogues, such names as *Hedera helix arborescens baccifera lutea*. Now, to say nothing about scientific properties, such names spread over a collection of a hundred or so varieties constitute a painful burlesque of botanical nomenclature. The plan I have adopted makes an end of all such difficulties; it provides for every distinctive kind a descriptive name, which can be taken up into its proper connections by the botanist—if the botanist will adopt it—while for the use of the gardener it is valuable both as a key to the character of the plant, as well as a suggestion of its existence. To carry out this plan in its entirety, I have been compelled to assign to two out of the three species new specific designations, which I trust the botanist will allow, if only in aid of an experiment which has for its principal objects simplicity and utility in the nomenclature of plants. Thus, "Canary" or "Irish" ivy is in this classification designated *Hedera grandifolia*; and the Colchian ivy, more generally known as *H. Rœgnieriana*, is named *H. coriacea*.

Thirdly, as to the varieties. These, if estimated by their names, number considerably over two hundred. After a first general revision, and the obliteration of a number of most

ridiculous synonyms, there remained about one hundred kinds. These were carefully classified and compared, the most distinctive being renamed, unless it happened that the names they already bore were deemed suitable. There remained no less than fifty varieties, sufficiently separated by their characters to justify the places assigned them in the classification. All others have been canceled, and the collection comprises the selected fifty kinds only.

HEDERA HELIX (Linnæus), the European ivy. The pedicels and calyx are covered with white stellate hairs, with six to eight rays each.

A. Scandent green-leaved forms of **H. HELIX**.—*Helix major*, the largest leaved British ivy; *Helix minor*, the smallest leaved British ivy. These are the two commonest climbing ivies in all the northern parts of Europe. *Heterophylla*, a beautiful variety, intermediate between the scandent and the fruiting form, but has never yet flowered. It was raised from seed at Stoke Newington. *Gracilis*, a very slender form of *H. helix*. *Tortuosa*, a variety characterized by its twisted leaves. *Lobata major*, a robust variety, with leaves distinctly lobed. *Rugosa*, a robust variety with corrugated leaves. *Lucida*, commonly known as *Hedera helix poetica*, or the Poet's ivy; it is remarkably glossy, and the noblest variety in this section. *Nigra*, the leaves are nearly black. *Contracta*, variously known as "Sagittæfolia," "Taurica," etc., etc. *Scutifolia*, a small variety with shield-shaped leaves. *Cinerea*, known in gardens as "Himalaica;" it has the most decidedly grey-tinted leaves of any in this section. *Triloba*, a small variety, almost uniformly three-lobed. *Palmata*, this is the "*Hedera helix palmata*" of gardens. *Crenata*, the "crenata" of gardens. *Digitata*, the "digitata" of gardens. *Angularis*, a peculiarly angular-leaved form, which is occasionally met with labeled "Taurica." *Pedata*, an exceedingly distinct form, known in gardens as "chrysocarpa;" but as it is unquestionably a scandent form, the leaves of which will become less deeply lobed or absolutely entire when it attains a fruiting state, such a name is inadmissible—it belongs, in fact, to the fruiting form, and not to this peculiarly pedate kind. *Minima* has the smallest leaves of all; in general configuration they resemble those of *pedata*, but the two plants are quite distinct, more especially in winter, when *pedata* has a deep green hue, and *minima* is of a brownish purple.

B. Scandent variegated-leaved forms of **H. HELIX**.—*Discolor*, the "*Hedera helix minor marmorata*" of gardens. *Sulphurea*, a sulphur-tinted variety, known as "*marginata canescens*." *Chrysophylla*, a fine golden-hued ivy, which, being popular, has a multitude of garden names, the most common being "*aurea densa minor*," and "*canariensis aurea marmorata*." *Chrysophylla palmata*, a palmate leaf with yellow variegation. *Marginata grandis*, *Marginata major*, *Marginata media*, *Marginata minor*, *Marginata rubra*, a group of five distinct and beautiful varieties, the leaves of which are margined with creamy variegation. The last in the group acquires a deep red tint in winter. The names by which these five are severally described in garden catalogues are sufficient in number to serve for fifty varieties, and sufficiently ridiculous to be unfit for any. "*Hedera helix minor marginata Cullisii*," the garden name of the variety now designated "*marginata rubra*," affords an example of the necessity of a thorough revision of the names. *Sub-marginata*, the last in this section, is characterized by a line-like whitish margin. The five constituting the *marginata* group proper, have broad band-like margins.

C. Arborescent green-leaved varieties of **H. HELIX**.—*Baccifera nigra*, the common fruiting form of *H. helix*. *Baccifera nigra crenata*, a wrinkled-leaved variety of the last. *Baccifera lutea*, the yellow-berried ivy. *Baccifera alba*, the white-fruited ivy.

D. Arborescent variegated-leaved varieties of **H. HELIX**.—*Argentea major*, a remarkably fine variegated tree ivy. *Argentea minor*, similar to the last, but with smaller leaves. These are counterparts of the marginate varieties in section **B**, but as they cannot be placed in that section, because of their arborescent character, they are not regarded as marginate, but as silver leaved ivies, and thus their names separate them from the group to which, by their colors, they are closely related. *Sub-lutea*, the counterpart in a climbing form of *sulphurea* in section **B**. *Aurea*, a splendid variety, with rich golden variegation, counterpart in a climbing form of *chrysophylla* in section **B**.

HEDERA GRANDIFOLIA (Hibberd), the large-leaved African ivy. *H. Canariensis*, of Wildenow, *H. Hibernica*, of gardens. The pedicels and calyx are covered with white stellate hairs, which have from thirteen to fifteen rays each.

A. Scandent green-leaved forms of *H. GRANDIFOLIA*.—*Grandifolia*, the common Irish ivy. *Viridis*, "Algeriensis" of gardens, the leaves light green with cuspid lobes, or nearly entire; usually regarded as a species, but undoubtedly an Irish ivy, in a state intermediate between the true climbing and the true fruiting habit.

B. Scandent variegated-leaved forms of *H. GRANDIFOLIA*.—*Variegata* a new, scarce, handsome variety, the glossy leaves richly margined with primrose yellow. *Pallida*, well known in gardens as the "golden-blotched" ivy. *Maculata*, a fine variety, the leaves of which are uniformly blotched and spotted with yellowish gray variegation. *Canescens*, known in gardens as "Algeriensis foliis variegatis."

C. Arborescent green-leaved forms of *H. GRANDIFOLIA*.—*Arborescens*, the common fruiting form of the Irish ivy. *Cordifolia*, a variety with thick-textured cordate leaves. *Cuspidata*, a tree-like variety with cuspid lobes.

D. Arborescent variegated-leaved forms of *H. GRANDIFOLIA*.—*Flava*, a fine variety with rich yellow variegation. *Striata*, the leaves striped and blotched with yellowish creamy variegation.

HERERA CORIACEA (Hibberd), the thick-leaved Asiatic ivy. *H. colchica*, of Koch, *H. Rœgneriana* of gardens. The pedicels and calix covered with two-lobed scales, the lobes divided into seven to ten segments.

A. Scandent green-leaved forms of *H. CORIACEA*.—*Coriacea*, known in gardens as "Rœgneriana" and "Cordifolia."

B. Scandent variegated-leaved forms of *H. CORIACEA*.—Hitherto I have not met with a variegated form of the thick-leaved ivy, nor has a single variegated leaf occurred amongst a number of plants submitted to every variety of treatment.

C. Arborescent green-leaved forms of *H. CORIACEA*.—*Dendroides*, this name is adopted to distinguish it from the arborescent form of *H. grandifolia*. It is a remarkable ivy, resembling in growth a rhododendron or an evergreen cerasus more than any ivy of the prevailing type.

D. Arborescent variegated-leaved forms of *H. CORIACEA*.—None.

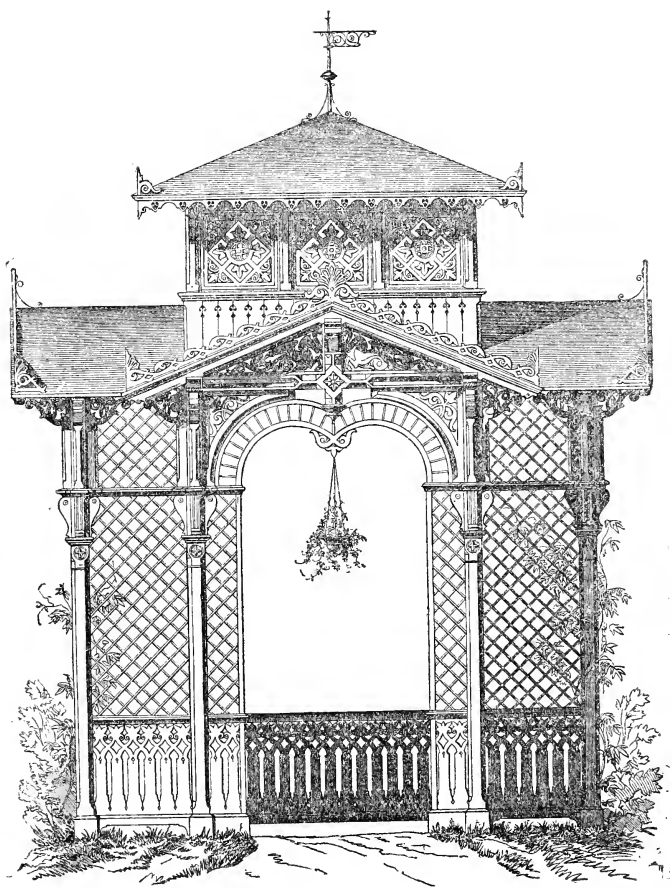
A Chat about Pansies.

THE violet *tri-color*, some years ago, was considered a strictly florist's flower—that is, the florist was the only one who took pleasure in perfecting its form and color, and increasing its size. These were the days of the old-fashioned wild Pansy, or *three faces under one hood*, as they were commonly called. Now the florists, in the vicinity of the cities, raise the finest improved varieties by the hundred thousand, and find a ready sale for them at prices varying from one to three dollars a dozen. The cultivation of the Pansy is remarkably easy; they like a rich sandy loam, mixed with plenty of decomposed cow manure, and during dry weather they require to be protected from the scorching rays of the sun,—with plenty of water. Liquid manure will be found very beneficial if the soil is poor. This may be made of guano, horse or cow droppings mixed with water and carefully run between the plants. When planted in a moderately shaded place they will remain in bloom nearly all the season. If they show symptoms of running out, by over-blooming, they should be cut off a few inches above the surface of the ground; this will check their growth for a while and allow them to form new roots and wood, and thus recuperate them. By this means they will bloom freely during the fall months. Pansies are propagated by seed, cuttings, layers and divisions of the root. When saving seed, select the largest and finest formed flowers. Sow the seed in August for early flowers, and September for late. When we have a very choice variety that we wish to perpetuate, we make cuttings of the young wood; these are planted in shallow boxes, filled with fine sand, placed in frames and shaded from the scorching rays of the sun, care being taken not to give too much water, as when this is the case there is danger of their damping off. Layering, for the novice, will be found less troublesome. Take a few pint pots, filled with compost, and plunge them in the ground as near the old plant as possible; an incision next to a joint will be necessary. In the young shoot this will cause it to form roots more readily than when not cut. In



Pansies.

making this cut great care will have to be exercised to avoid cutting the shoot entirely off. Layers will root in about six weeks. Although Pansies are comparatively hardy, yet they are much better if protected. Glass frames are to be preferred; yet we have used board covers, and canvas, well oiled, tacked upon wooden frames, will last for some years. If the plants attain a good size before cold weather sets in, they will bloom all winter when protected from the cold winds and snow. The criterion of a good Pansy is, first, the form, which is the most essential point. To be perfect it should form a complete circle, without a notch or indentation; the petals should be large and broad; the eye clear and well defined; the colors rich and vivid, and of a velvety texture; the size not less than an inch and a half—if two inches, the better. All ragged notched edges, crumpled petals, indistinct markings, flushed or run colors, are blemishes, and whatever may be the ground color, the principal color of the three lower petals should be alike, whether yellow, white, blotched, plain or fringed, and whatever the markings or penciling on the ground color may be, they should be bright and distinct, and retain their character without running or flushing with the ground color.



Design for a Summer House.



Editorial Notes.

Selection of Fruits for Family Gardens.

It would be well for all planting gardens this spring to *start right* by having a choice selection of varieties of fruits and vegetables already tried and known to be excellent. We herewith give such a list:

ASPARAGUS.—*Conover's Colossal.*

RHUBARB.—*Victoria, Linnaeus, Downing Colossal.*

GOOSEBERRIES.—*Houghton's Seedling, and Downing's Seedling.*

CURRENTS.—*Versailles, Red Dutch, White Grape.*

RED RASPBERRIES.—*Clarke, Brinckle's Orange, if well protected; Franconia, and Hornet.*

BLACK CAP RASPBERRIES.—*Mammoth Cluster, Seneca, Davidson's Thornless, Doolittle, Westchester.*

STRAWBERRIES.—*Wilson, Barnes' Mammoth, Jucunda, Triomphe de Gand, Charles Downing, Boyden No. 30, Napoleon 3d.*

Make Your Trees Branch Low.

TRAIN your pear trees for garden or even field use, so that they will branch at a distance of one to two feet from the ground. The advantages are easily enumerated:

1st.—It is easy to trim.

2d.—It is easy to gather the fruit.

3d.—Falling fruit is little injured.

4th.—All branches being sturdy, will not be strained by over-bearing or over-weight of fruit.

5th.—Soil will be kept shaded and moist.

6th.—Trunk will be protected from the scorching sun.

7th.—Tree will grow more and more beautiful.

Protecting the Trunk of Trees Against the Sun.

THE training of the branches of trees low, in a pyramidal form, is one of the most effectual plans of shielding the trunk against the ill effects of the sun. Where trees already have high branches, a board adjusted to shield the bark from the midday sun will be found useful. A western cultivator, trying this once, states "that since he tried it he has lost no more trees, and the bark on that side remains as smooth and as soft as on any other part of the tree."

The Best Markets for Fruit Growers.

A FRUIT grower at Grand Haven, Mich., who shipped last year to Chicago

300 bushels of Strawberries,

200 bushels of Raspberries,

500 bushels of Blackberries,

200 boxes of Pears,

150 barrels of Apples,

2,500 boxes of Peaches,

states that he has generally found the *village markets* the best. The city markets get too frequently overstocked, and fruit could not be sold before it spoiled. Hence fruit growing is better for inland towns and villages than for large cities.

Ornamental Trees and Shrubs for Small Grounds.

Cottage Gardeners desiring trees or Evergreens for ordinary planting, such as will grow, will find this list a help:

EVERGREEN TREES.—*Norway Spruce, Hemlock Spruce, Silver Fir, Scotch Pine, Austrian Pine.*

HEDGES.—*Privet, American Arbor Vitæ, Norway Spruce.*

EVERGREEN SHRUBS.—*Chinese Arbor Vitæ, Irish Juniper, Tree Box, Yew, Siberian Arbor Vitæ.*

DECIDUOUS TREES.—*Sugar Maple, Silver Maple, Scarlet Maple, Tulip Tree, Horse Chestnut, Magnolia Macrophylla, Oak-leaved Mountain Ash.*

WEeping TREES.—*European Weeping Ash, Everflowering Weeping Cherry, Cut-leaved Weeping Birch, Weeping Linden, Kilmarnock Weeping Willow.*

SHRUBS, LARGE FLOWERING.—*Magnolia Conspicua, Lilacs, Snow Ball (viburnum), Althea, Syringa grandiflora.*

SHRUBS, SMALLER SIZE.—*Japan Quince, Forsythia, Barberry, Tartarean Honeysuckle, Deutzia, Spiræa, Jasmine, Cytanthus.*

These are sufficient for a beginner. As horticultural taste and information become more extended, other new, rare and beautiful specimens should be added.

Seed Business of James Vick.

THE *Rural New Yorker* states that Mr. Vick's business has increased beyond all precedent either in Europe or America.

He occupies as a warehouse a building eighty by one hundred and twenty feet, four stories high, entirely devoted to the filling of orders for seeds and bulbs. In the busy season some seventy-five young ladies are employed in the various departments, while thirty men assist in the more laborious part. The sales reach several hundred thousand dollars per annum, while the letters received, varying from nine hundred to eighteen hundred per day, are about one-quarter received at the Rochester post-office, and require from four to six persons steadily to open and fill orders, as many more being employed in answering correspondence. The seed farm comprises fifty acres, devoted to bulbs, etc., of which ten alone are in *Phlox Drummondii* and ten in Tomatoes. The editions of his Catalogue reach 120,000 per annum, and advertising nearly \$10,000. THE HORTICULTURIST can claim the honor of his name as one of its former publishers.

Best Methods of Planting the Strawberry.

FOR market, plant two and a half by one ft. For family use, two ft. by one. Invariably cultivate on the hill system. Cut off all runners. Give every hill a good shovelful of manure at time of planting. Cultivate to keep down weeds. Mulch in winter. In time of drouth do the same. Renew plantation every third year, and crops will come and berries as big as are wanted. *An acre well tilled makes a purse well filled.*

"A Pleasant Look."

SUBSCRIBERS, as they renew their subscriptions, often remark that THE HORTICULTURIST always has a pleasant look.

Yes, indeed; it has many pleasant friends, and many are the hours of pleasure the editors in years gone by have devoted to it.

A pleasant look often decides at the outset the success of a Journal, and the brighter the face with-out and the warmer the heart within, the greater will be its popularity.

"Long may it live" and "greener still its memory."

Green Prolife Strawberry.

PROBABLY no strawberry for family use is more productive than this, and on sandy lands it is even superior to the old well known Wilson, producing frequently twice and thrice the quantity of the former. It is too soft for market, but of favorable qualities for a home demand. It is a little acid, but not as much so as the Wilson. We observe Southern growers commending it highly, as of good size, solid and handsome, unaffected with severe drouth, "resisting the sun's rays like a salamander." One grower states that it is the most successful out of forty-two varieties in his possession.

The Western Pomologist.

THIS is a new publication devoted to the horticultural interests of the West, published by Mark Miller of Des Moines, Iowa, price \$1 per annum. Mr. Miller has been favorably known to the public through a series of years of editorial connection with many of the most prominent agricultural journals of the Western States, and is fully capable of appreciating the necessities of Western readers.

New journals, exclusively horticultural, have hard work to establish themselves, and need the kindest sympathies of the press to encourage them. We greet our Western kinsman with cordial good feeling, and trust "*its shadow may never be less.*"

Delivery of Premiums.

WE shall commence sending off premiums of Roses, etc., on the 15th of April, and continue until the 15th of May. Better plants can be obtained about the 1st of May, than at any earlier date, and we wish nothing sent but will be of superior merit, and become perfectly satisfactory.

Berry Baskets Too High.

THE conviction is general among small fruit growers that the prices of first class berry baskets are much too high for the low profits and uncertainties of the business of growing fruits for market.

With many basket makers, where hand labor is used principally, we cannot expect a very great reduction, but where baskets are turned off by the tens of thousands by machinery we certainly think it is fully time to reduce prices to a *living level*.

We speak from personal knowledge, that in many cases there is no reason for the excessive rates, and the profits of some manufacturers too large.

A president of one large company, in response to our inquiry as to the actual cost per M for making, said that the actual cost was but \$2.50 to \$3, while the retail price was \$25 to \$30. Here is a profit of one thousand per cent the fruit grower is obliged to pay to his basket maker, and too many know it is the hardest money they ever paid in the world. We believe a really good basket is worth \$15 per M, and no one should grumble at such a price; but over this is too high altogether.

Protecting Evergreens during Winter.

SEVERAL years since H. W. Sargent contributed to one of our horticultural journals some valuable facts concerning the effects of close planting and protection of Evergreens during the winter. We have thought of it often since then, and reproduce here the most important portion:

"The writer starts with an assertion which upsets the theory of close protection altogether, namely, that those things protected or sheltered the most, have suffered the most. All things planted on the west side of a wood have been the next greatest sufferers, from the fact, he thinks, that they are in shadow (in any place) up to 10 or 11 o'clock, and then suddenly receive the warm rays of an almost meridian sun, while the sap vessels are in a frozen or congealed state of an excessive low temperature of the preceding night; while trees on the east side of a wood receive the early and weak rays of the rising wintry sun, and the congealed sap vessels are thawed gradually and without much or any harm.

"As a proof of this, he mentions a specimen of *Wellingtonia*, thirteen feet high, feathered to the ground, standing on the west side of a plantation, every branch dead to within six inches of the top, while, on the contrary, another specimen nearly as large, standing in a most exposed position with no protection near, but receiving the early rays of the morning sun, was so little damaged that at a little distance it could not be observed. Another specimen, *Pine's Lam Certiana*, fifteen feet high, had not a single green leaf on it in August; buds, though plump and green, had not bushed, wearing the appearance of being completely paralyzed. This on the west side of a wood. A similar tree on the north side of a wood untouched. Trees protected on the east side and receiving the sudden rays of the mid-day sun, have either nearly all died or suffered so much as to render them nearly worthless. Those immersed in a wood and protected on all sides have generally died. Those planted on the north side of a wood have hardly suffered at all. Those on the east side of a wood very little. Those on the west side very much. It appears from this, that if trees have too much shelter the wood will not ripen well in the autumn, and are consequently more liable to damage from frost. That a shelter to break the force of the wind should be at a sufficient distance to allow of plenty of air and sun getting at the trees, or better without any.

"The conclusion to be arrived at from the writer's experience is, never to plant any but the very hardiest tree on the western or southern side of a wood or plantation. The north or east, or even an open location is better."

We find nearly a similar result in fruit trees or vines. We have seen blackberry vines on the south side of a close fence entirely winter killed, while on the north side, not a yard off, entirely uninjured. Apple trees and pears, on hills exposed to winds, have lived and borne fruit regularly, while in the valleys beneath they have suffered from the frosts. Hence, among horticulturists, it is considered quite desirable to have a *free circulation of air*, as well as protection against our most damaging winds.

Horticultural Societies.

AN unusual degree of activity and interest seems to have attended the fall and winter meetings of nearly all our principal State Horticultural Societies, and from the reports of their proceedings forwarded to us for our notice, we observe there has been elicited a vast amount of really useful information.

The Illinois Horticultural Society

HAS been more successful than usual. Its meeting was well attended, and its finances are "*above par*." Consequently we have great reason to rejoice. We give them great credit as the most practical and enterprising horticultural society in the entire country.

The Wisconsin Horticultural Society,

UNDER the persistent efforts of the President and Secretary, and also the help of the *Western Farmer*, has also been quite revived, and created a redoubled interest in horticultural subjects. The officers for 1870 are Joseph Hobbins, M. D., President; O. S. Willey, Recording Secretary; and F. S. Lawrence, Corresponding Secretary. In a country so fine, and among a class of people of so excellent taste and abilities, a horticultural society should be abundantly successful.

The Alton Horticultural Society, Alton, Ill.,

Is a genuine model, to which we can point with great satisfaction. Combining in one gathering both practical and scientific talent, with editorial abilities and assistance of the highest character, the interest of the meeting seems never to flag for an instant, and we doubt whether in so short a time any organization has ever gained so wide and so worthy a reputation.

The Western New York Horticultural Society

HELD its annual meeting at Rochester in January of the present year, and with far greater interest than ever. Active part was taken by all our prominent nurserymen in Central New York—Barry, Maxwell, Sylvester, Babcock, Hooker, Smith, Hoag, Ellwanger, Frost and others. The discussion on apples, pears, grapes and small fruits was quite full and entertaining. The Society has made an excellent reputation, and is in a locality where it can command at all times an abundance of practical ability to sustain it.

The New York State Horticultural Society.

WE have received circulars from eminent nurserymen in the centre of this State, proposing to form a State Horticultural Society similar to those already in existence in Illinois, Massachusetts, &c.

We second the proposition most heartily, and do not doubt that it can be made without a rival in practical influence. While there is such a large number of active horticulturists in our large State, there will be abundance of material to make its meetings and discussions the most valuable in the entire country. We do not think it will be possible to obtain any aid or assistance from the Legislature, although it is their duty to encourage horticultural progress as well as public agricultural institutions.

Geneva Horticultural Society.

THIS young association, only organized within a late date, has held several successful exhibitions, and gathered a large concourse of appreciative listeners at their gatherings. Geneva is second to no other place in the country for the number of her acres devoted to nursery products, and with such well known names as Graves, Willard, Maxwell, Smith, Herendeen, Bronson and others, we see no reason to doubt that an influential organization can be permanently maintained.



Hints and Helps to Cottage Gardeners.

BY THE EDITOR.

Experiments with Peas.

FROM seeds presented to us by James Vick, of Rochester, N. Y., and also by the Commissioner of Agriculture, we make the following notes of our experiments last season:

McLean's Little Gem Pea is of very dwarf growth, growing in a cluster close to the ground, and not over eight or ten inches high. Pods are small, but well filled with plump-sized peas of delicious flavor; is not valuable for market purposes, but is worth cultivation in the home garden, both as a curiosity and for flavor; is the best and most productive of all dwarf peas we have seen.

Dan O'Rourke Pea has had a very extensive cultivation and sale for the past three years for market and family use, and has been considered the *staple early variety*. But we think its day is, or ought to be, over. We find it fairly productive, and does not need much staking, but is of so poor quality that we have discarded it altogether for future use in the home garden. It is superseded by other peas of far better merit.

Landreth's Extra Early.—This is known in different cities, by different seedsmen, as the *Philadelphia Early*, *Extra Early*, &c., and nearly every other name but the *right one*. This pea is the result of years of experiment by the Landreths of Bristol, Pa., and has been tested by the side of every other pea now known to the American market. We do not see why others should refuse to give it due credit.

We purchased a parcel for trial, which were duly sown, and the produce gathered and tasted. The flavor is exceedingly sweet and delicious, cooking with plenty of well flavored juice. The plants are of compact, sturdy growth, about two and a half to three feet high, and very productive. In fact, the bushes seemed entirely covered with the pods, while the pods themselves were always well filled with fine plump peas. We found this variety excelling all other peas in productiveness and earliness, being ripe a week before the O'Rourke. As soil and climate differ with a great many varieties, we could not speak of the possibility of so good success in other parts of the country, but with us we have no hesitation in expressing the candid opinion, it is the best pea for early family use we have ever known.

Carter's First Crop is quite early filling the pods full with peas of excellent quality. The vines are of moderate growth, quite productive, and it seems among the most desirable of our recent importations from England.

Laxton's Prolific, Long Pod Pea, is hardly equal to the high commendation bestowed upon it. We do not find it of superior quality nor of very great productiveness.

Waite's Caractacus differs very little from the O'Rourke in desirability. It is not as productive as the latter, although a little better quality.

Champion of England.—The best late pea for family use. Flavor delicious, a very strong grower, fully six feet high, very productive, universally commended. It should find a place in every garden.

McLean's Premium is also a strong grower, but later than the *Champion of England*.

We have not tested all the prominent varieties as yet, but thus far our own personal choice is in favor of the *Landreth's Early* and the *Champion of England*.

Experiments with Vegetable Seeds in the South.

DR. SWAZEY, of Yazoo City, Miss., has also been experimenting with seeds, and chronicles his results in his own journal, *The Southern Horticulturist*:

Bates' Early Sugar Corn.—Proved to be an early, productive and delicious variety of small-eared red corn, and from its color quite a novelty. As a first early sort it is desirable, but for the main early crop we decidedly prefer

Brills Early Sugar Corn, which ripens a little later, but is of equal excellence and productiveness, and is much larger. This is one of the best early varieties of sweet corn that we have ever tested out of a dozen or more. Indispensable to every amateur and market garden.

Early Wakefield Cabbage.—This, as usual, proved to be the best early variety, and should be planted extensively as the earliest good cabbage. The heads are small, but solid, tender and of excellent flavor, and as the plants can be set a foot apart in two feet rows, perhaps as large a weight of solid white heads can be raised of this variety as of those that are larger.

Epicurean Pea.—This is one of the most delicious peas that we have ever tasted, and was it a first rate bearer—which last year it was not—and the pods better filled, we should unhesitatingly pronounce it the best of its season, which is second early.

Bossin Lettuce.—A magnificent variety of the Cos family, and beyond all comparison the best of that class we have ever seen. Planted in March without extra manuring, many of the plants attained to a diameter of more than twenty inches and single leaves to over one foot in width! And its delicious tenderness remained unimpaired to the very last, even through the hot and dry weather of July. The flavor was as delicate as its texture, having scarcely a trace of that bitterness so common to the non-heading varieties. Of all lettuces this is our favorite; but we don't know where to get seed, as we can find it mentioned in none of our catalogues, and of the plants we left for seed, only one sent up a seed stalk, and that proved almost abortive.

Simons Early Blood Turnip Beet is much like the old Blood Turnip Beet, except being of a little lighter color and somewhat smaller.

Melons.

THE *Cassaba* is a new variety introduced by the Department of Agriculture, and yet not generally known. A correspondent of the Department writing from Chico, California, in relation to his experiments with seeds, states that "several varieties of the cantaloupe seed produced melons which the world cannot surpass, the Japan White Cantaloupe, the Cassaba Cantaloupe and the Phinney's Early water melon being particularly fine. The Cassaba, imported from Smyrna, produced the finest melons ever grown on this continent, being as far superior to the choice Hunter melon as the latter is to the common musk melon. The whole appropriation made by Congress for your Department is repaid by the introduction of this one excellent variety of melon."

Goodwin's Imperial.—Another correspondent from Illinois tried it and reports as follows:

"The Goodwin's Imperial watermelon seed received from the Department March, 1869, was planted for trial. The melons are excellent. They were of medium size, round, light green, and with a very thin rind; flesh red, fine grained, and very sweet; seeds small and red, with black eyes. A few of the melons differed from the above description by being larger and of a dark green color. The Goodwin's Imperial is certainly the best watermelon I ever tasted. The only objections to it are that it is not quite so early as some others, the Mountain Sweet for instance, and for show in market it is rather small."

Phinney's Early.—A California correspondent of the Department writes concerning this: "Phinney's Early water melon has done remarkably well, attaining a large size, and being of most delicious flavor; in fact, I may say I have found none to equal it, even here, where the melon grows to perfection, and where the varieties are very numerous."

Experiments with New Varieties of Peas.

A MICHIGAN correspondent reports as follows: Peas were all planted May 6th; the earliest were Carter's First Crop, five days earlier than the Philadelphia Extra; the Eugenia were the best flavored, and the Peabody the poorest eating; the Advancer—all the crop can be picked at the same time—very fine flavored; the Surprise and Leviathan yielded heavy crops of very large peas. The past season has been very favorable for peas; I never saw them yield heavier nor last longer.

Training of Tomatoes.

I HAVE tried this season seven different ways of cultivating and training the tomato, and like training to a single stake the best, as they ripened ten days earlier and yielded better than the others. The plants were set out the 21st of May, three feet apart, and manured with old barn-yard manure, and furnished with stakes six feet long, and trained according to directions given in the *American Agriculturist*, viz: The plant as it grows is tied to the stake. When the first cluster of blossom buds appears, the lateral shoots which appear in the axil of each leaf below it, are carefully pinched out, leaving but a single stem, surmounted by a cluster of flowers, and a bud which will serve to continue the stem. This bud will develop three leaves and a cluster of flowers, and all the axillary shoots upon it are removed, and the stem is kept carefully tied up; and so on. The vine is kept to a single stem without branches, and bearing only leaves and clusters of fruit. The vines, with the exception of two, grew to the top of the stakes, the first cluster growing within three inches of the ground, and the first ripe tomatoes the 25th of July.—*A Mass. Cor. of Co. Gent.*

Early Tomatoes.

IN my opinion, the extreme point of earliness in tomatoes has been reached years ago, and now all further improvement must be in point of size, smoothness and solidity; and that any one laying claim to have varieties a specified number of days or weeks earlier than those we already have, does so without having a knowledge of the subject, or with the desire to impose on the public. The tomato is a plant requiring at all times a certain high temperature to ripen its fruit; and though it may ripen in Georgia in May, in Virginia in June, in Delaware in July, or in New Jersey in August, it requires the same aggregate amount of heat to do the work. The same is true of most fruits and vegetables; we reach a certain point of earliness with a given variety in a given locality, when the temperature tells us we must stop. If improvement in earliness was progressive, we might have reason to expect that the radish or lettuce, which matures with us in the open ground here in May, would yet mature in April.—By Peter Henderson, in *American Agriculturist*.

Necessity of Pruning Raspberries and Blackberries.

It stands to reason that any fruit tree or plant must get *well rooted* before being allowed to yield a full crop; and, too, it is an admitted fact that if any tree or plant is checked in its growth, it will throw out stronger and more side branches, and grow much more stocky; consequently it seems strange to me that any person who has had any *experience* in growing fruits should argue against trimming back raspberries. Now, we have simply *practiced both* plans, side by side, and know if they are not pruned they must be staked. The crop will not average half as much, the plant is but short lived, and it is impossible to get among them to work them out as they should be if left unpruned; while if cut back the first season to within one foot of the ground, and after that three to four feet (if the growth attains that height) they will be long lived, and yield immense crops every season.—*Countryman*.

Select List of Flower Seeds for Planting in Family Gardens.

THE following list was adopted by the Galesburg Horticultural Society, Ill.:

Asters.—Truffaut's new French peony flowered, Giant, Emperor, Peony flowered globe, New Victoria, German quilled, and Dwarf pyramidal bouquet.

- Balsams.**—Improved double rose-flowered, Camelia-flowered.
Delphinium.—Hybridum Novum, Chinese pumilum and Hendersonii.
Dianthus.—Heddewegii Diadenatus fl. pl., Laciniatus, Chinensis, Imperialis, Heddewegii fl. pl., and do alba.
Lychnis.—Grandiflora gigantea.
Nasturtium.—Golden King of Tom Thumbs, King of Tom Thumbs and King Theodore.
Nemophila.—Maculata grandiflora and do purpurea, Atomaria fl. variegata.
Pansy.—King of the blacks, mixed English, German and French.
Petunia.—Buchanan's hybrid, Flore pleno (double) Marginata, Striatiflora, Countess of Ellesmere.
Phlox Drummondii.—Queen Victoria, Rosea Alba-occulata, Chamois Rose, Isabellina.
Portulaca.—Double rose flowered.
Rhodanthe (Everlasting flower).—Maculata atrosanguinea and alba, Manglesia Major.
Stock (Ten Weeks).—New largest flowering Dwarf, New largest flowering Dwarf, blood red.
Sweet Williams.—Hunt's Perfection, Auricula flowered, Double-flowering.
Sweet Pea.—New Scarlet Invincible.

Climbing Annuals.

- Climbing Cobæa (*Cobæa scandens*).—A rapid growing vine of great value where immediate shade is desired.
 Cypress Vine (*Quamoclit vulgaris*).—A plant with elegant cypress-like foliage; requires warm soil and exposure to succeed well; flowers of various colors, as scarlet, white, and rose.
 Morning Glory (*Ipomæa purpurea*).—A well-known plant of much beauty and variety; flowers variously colored, but blue prevailing, more or less striped or margined with white.
 Balloon Vine (*Cardiospermum halicacabum*).—A fine growing plant, climbing by tendrils, chiefly ornamented on account of its inflated pods, which give to it its common name.
Calamopsis Scuber.—A plant of rapid extension; foliage thin and scattered; valuable for partial shading; flowers tabular, orange-colored.
Lophospermum Scandens.—Equal to the Cobæa in rapidity of growth, and valuable where a large surface is to be covered in a short time.
Maurandea Barclayana.—A small foliaged graceful-growing plant, with trumpet flowers of various colors; the white variety very delicately beautiful.
Thunbergia Alata.—In rich soils this will make a good display; on dry light soils it burns out in dry weather; flowers orange, white, and yellow, with dark edge.—*Report of Com'r of Agriculture.*

Hardy Herbaceous Perennial Climbers.

- Everlasting Pea (*Lathyrus latifolius*).—A very desirable Summer climber, very profuse in flowers; a much neglected plant.
 Chinese Yam (*Dioscorea batatas*).—This plant, of which so much was expected as a valuable culinary root, has had the misfortune of at first being overpraised, and then underrated. It is, however, well worthy of praise for its mere ornamental beauty, as a covering for arbors, &c. It spreads with great vigor, covering a large surface in a few weeks; and while the roots are perfectly hardy, they possess the additional merit of affording nutritious food. A plant combining these qualities merits attention, and should not be consigned to neglect.
 Virgin Bower (*Clematis*).—There are many species and varieties of this plant in cultivation, some of them with brilliant flowers, mostly of blue.
 Passion Flower (*Passiflora incarnata*) and double Convolvulus (*Calystegia-pubescentis*).—Both of these climbers, although desirable in a collection, are inclined to spread and to send up suckers from the roots so that they are apt to become troublesome in some situations.
 Climbing Fumitory (*Adlumia cirrhosa*).—A native plant of very delicate foliage; requires to be grown in a shaded place where it can find support on a low trellis.—*Report of Com. of Agriculture.*

New Flowering Shrub.

Hydrangea Paniculata Grandiflora.

THE grand panicle-flowered Hydrangea, or, as more often called, the Deutzia-flowered Hydrangea—because in many catalogues it is classed as *Hydrangea deutzifolia*—is one of the new but really valuable and desirable choice shrubs of recent introduction. The leaf is somewhat like a Wiegela and the growth generally more like that shrub than the Hydrangea, as it makes a rapid upright spreading growth, strong and vigorous, to about eight or ten feet high. It may, and should be, however, kept at from two to four feet high. Its flowers are borne on the ends of the present year's shoots, and vary in length from three or four to nine or ten inches. The lower buds of the panicle open first and continue until sometimes there are over one hundred flowers, pure white, on one panicle. It is not every new shrub that is specially desirable; but this is worthy a place in every garden. It blooms in July and August.—*Rural New Yorker.*

New Dwarf Hardy Evergreens.

At the last meeting of the Western N. Y. Horticultural Society, this subject called out prominent horticulturists. T. C. Maxwell named the *New Dwarf Norway Spruce*—also the dwarf pine. Some of the newer dwarf Arbor Vitæ had proved hardy and very ornamental. There was a great variety in the shade and color and in the form of the trees. G. Ellwanger named the *Abies Nordmaniana* as the handsomest of the new evergreens, and likely to prove extremely desirable. H. E. Hooker regarded the *Pinus cembra* as one of the hardiest and best of the pines of moderate growth—and he had seen the *prostrate Juniper* at the West, covering large patches of ground by its luxuriant growth, and presenting a fine ornamental appearance. G. Ellwanger named the *Chinese Juniper* as very hardy and quite handsome. Information being called for in relation to the Rhododendrons, several members said that the *R. catawbiense* was the only sort that had proved perfectly hardy.

Garden Culture of Strawberries and Raspberries.

PLANT your strawberries in rows, two feet apart, and fifteen inches apart in the row. Keep off all runners as fast as they appear, and keep the ground stirred. Do not, however, permit your hoe to go nearer the plant than six inches, as you will injure the small roots of the plant if you do. Just around the plant pull all weeds, etc., with your hands. In October, late, put straw in between the rows, and in November all over the plants an inch or two deep. In the Spring, remove the straw from the crown of the plants, and let it remain under and around it until they are done bearing. Then remove the straw of one row into another, loosen up the soil, and put it back again. So on, until the whole bed is gone over. This will keep down nearly all weeds, and will keep the ground moist. But little work is then required this season, as you have only to keep off runners as you did the first year. If you desire the best results, permit no fruit to set the first year, by pulling off all blossoms as soon as they appear. After the second year you may allow the runners to take possession of every alternate row, and when it bears one crop let the runners, that same year after bearing, take possession of the other rows, and cut up for a path the old rows which have borne early in the following Spring. In this way one may have a succession of this best of all small fruits. For raspberries, in garden culture, set the plants three in a place, four feet apart in hills. Cut down to within three inches of the ground the year of planting, and when your plants are two feet high, pinch off the top shoot; and when the laterals are a foot long pinch them off. The next year these will bear a fair crop, provided you have kept them clean and the ground either loose or mulched. When they are done bearing, cut out the old wood, and when the new growth is three feet high, and the lateral branches a foot or two long, pinch off the end of all, and in this way you may avoid the necessity of stakes. Keep them no higher after this.—*Rural American.*

Notes from Our Contributors.

Girdling Trees to Produce Fruitfulness.

I THINK it is not generally known that *girdling* apple trees will cause fruitfulness. If so, the people here in Massachusetts, knowing the fact, have been blind to their own interest, to see hundreds of acres of orcharding barren of fruit for the last eight or ten years, with apples at six dollars per barrel.

Last fall a friend from a neighboring town called at my place, and being much interested in fruit, the conversation turned in that direction. In commenting upon the failure of orchards, he gave me an account of his experiments, in a small way, during the last year.

In the spring of 1869, his orchard, which is a young one, was full of bloom and promised a rich harvest. A gentleman, who happened to be stopping with him at the time, told him that if he would have a crop of apples he must *girdle* his trees. The idea seemed preposterous, and the owner urged that to girdle them would kill the trees. But the gentleman insisted that that was the only way by which he could get a crop, and that he would pay for all the trees that were injured by the operation. But my friend being a cautious man, and not daring to venture far on untried ground, simply girdled a branch or two here and there, which he thought might be cut away in case the girdling proved fatal. But to his surprise the girdled limbs immediately commenced forming a new bark where the old one had been removed. The blossoms on those branches set fruit, and in the autumn bent under the weight of luscious apples, while those trees and branches not girdled scarcely produced enough fruit to pay for picking.

He also tried the experiment in the garden of one of his neighbors, which he was cultivating. In the centre of the garden was a large tree which the owner desired him to remove to the wood-pile. The tree had for years loaded itself with bloom, but never with apples, and had been suffered to remain, hoping that the next year it might prove fruitful. My friend urged that it might have one more trial. The tree was girdled and allowed to stand. The result was sufficient to satisfy the heart of any novice; the branches bent to the ground with the weight of fruit.

And now for the experiment that was tried at Benton Harbor, Mich., last spring, when a large orchard of fifteen hundred trees were girdled by an enemy, to destroy the orchard; which, on the contrary, caused it to produce such a crop as was never before known in that region.

So confident am I of its practicability, that I intend girdling an orchard of a hundred trees next spring, should they show signs of bloom.

I hope some one will try the experiment upon pears as well as apples, and give us the result through the columns of your magazine.

I would state that to girdle before the sap starts would prove fatal. The operation should be performed when the bark will slip.

Yours,

JOHN F. JOHNSON.

NORTHBORO', February 14, 1870.

Pears in Connecticut.

The Bartlett.—In the valley of the Connecticut I have seldom seen a tree of this variety that did not amply satisfy its possessor. Our soil is the red sandstone, or generally a deep strong loam. On an orchard I planted one acre of pear trees; this variety occupies one fourth the area, and has thus far returned at least three-fourths the profits. The trees have been moderately vigorous, healthy without exception, and highly productive. Thinning, of course, must be resorted to—taking out every imperfect specimen (nothing pays better); thus a crop matures on the tree, every specimen of which is worthy of a place on a retail stand at the highest price.

There is no danger of barrenness in this variety. With good cultivation and moderate manuring, just to secure a healthy growth every year, the result is as sure as a crop of corn or oats. If anything is to be dreaded with this variety, it is excessive growth, if over-manured or over-bearing. Bartlett pears once set, are sure to remain, unless thinned out; therefore thin out remorselessly early in the season, and as a reward there is double the value of fruit, with trees in good condition for the future.

The value of the Bartlett pear, as a fruit for canning, is universally known and needs no comment. Its value in market, and its value on the table, is too well known to need a word of commendation. As an orchard crop it is surely remunerative. Every man who owns a rod of land should have good home supply of this delicious pear.

The Talmage Pear.—Among the new pears claiming attention now by the public, is the pear bearing the above name. Its origin is Northford, Ct., and was a chance seedling in the garden of Levi Talmage, Esq. The tree has a remarkably vigorous habit of growth, always maturing its wood, and may be justly regarded as hardy and vigorous. The fruit ripens with the Seckel, which it much resembles. The Talmage, being a little larger and more uniform, is almost identical in form, with the same russet ground, but perhaps a little less ruddy coloring. The flesh is whitish, very juicy and melting, closely resembling the Seckel, but I think slightly inferior to a No. 1 Seckel. The tree is an early and abundant bearer, well suited to the orchard.

P. M. AUGUR.

MIDDLEFIELD, Ct.

Wisconsin State Horticultural Society Annual Meeting.

THE Society convened in the Historical Rooms, at the city of Madison, Tuesday evening, Feb. 1st, President Joseph Hobbins in the Chair.

The President read his annual address, congratulating the members upon the success of their last exhibition and the great want of more room on future occasions, the necessity of the committee on nomenclature prosecuting their work with more energy, and advised discarding from the list for competition all unnamed or wrongly named sorts; urged to prosecute with vigor the enterprise so favorably begun in the experimental garden; denounced tree peddlers and the indiscriminate planting of untried sorts; urged the planting of Siberian varieties, as the sure road to success, and the planting of something better. He said, this is what I call beginning at the right end—at the bottom, and not at the top of the ladder. Let us teach people to grow that which they can grow with a certainty, and afterwards they will learn to select for themselves. I would educate up from the Siberian, and not as is so often the case now, down to nothing.

This was intended especially for beginners, and even some long in the orchard have come back to the foot of the ladder and are working up our men. He urged the appointment of a State Entomologist, and showed the need of an appropriation from the State to aid in the enterprise; said that this is pre-eminently an agricultural State; that it joins hands with horticulture at every farm house; insisted that this Society is far in advance of any other State society in its efforts to spread horticultural knowledge, and referred in terms of praise to the fact that this was the only society which was conducting an experimental garden.

The address was listened to attentively.

Following this, the Secretary referred to the peculiarity of the season as affecting many of the small fruits; paid a tribute of esteem to the help we derived from horticultural journals; mentioned the increase in the number of journals devoted either in part or wholly to the horticulturist's interests; inferred the demand was equal to the supply, thus giving token that horticulture is progress-

ing; thought the danger of the times consisted in the discrimination of new varieties untried, and naming new fruits unworthily; urged the continuance of the experimental garden, as being one of the strongholds for the ultimate success of horticulture in the State, and said there is great good in store for our laborers. Shall we put our shoulders to the load, and with our joint action resolve that the sons of Pomona in the Badger State will lead the van in the successful organizing and carrying out an experimental garden? A State like ours needs just such a garden, a place where every known fruit, vine, and especially the small fruits, may be tested, not so much for profit, though in time it may grow to be a source of income, but particularly as a source of information to those who would be encouraged to plant orchards and ornamental trees if they know what to plant. Another reason for requiring the continuance of this work is that we may have some place where all the old and new sorts may be congregated, worked in some manner so that they will fruit at the earliest possible moment, and by comparison of sorts very much can and would be done to correct the nomenclature of our present list, and these lists so corrected should become the authority of the State. This garden in time should grow to an influence of no mean proportions. Imagine for a moment a thousand varieties of apples growing there, five hundred of pears, one hundred or more plums, and as many grapes and strawberries; not to mention other fruits, ornamental trees and plants. With a managing committee of say three of your best pomologists and botanists whose duties it should be to visit as often as might seem necessary, the garden, comparing the various fruits and noting its progress and condition. Will any one present say that such a work is not worthy your best efforts? Might it not become a labor of love of this society and the pride of the State, to which other States may point with envious pride? Still another benefit, and one which to my mind is of incalculable benefit to the State is, the influence it would have upon the young men, students, who will see with honest pride the fruit resources of their State, and in their leisure learn to study its development, from this the fruit sections or localities of their own homes, and when they leave their college life they have learned what the books do not teach—practical horticulture. Its effects will be known and read of all men in the renewed activity in tree planting.

The exhibition of fruits was very fine, consisting of apples, pears and grapes, in all about three hundred plates. We never saw finer specimens and well kept. The Siberian crabs are shown in quantity, and being a novelty at this season of the year, drew much attention.

Mr. McAfee, of Freeport, Ill., shows a Lignarium representing the timber growth of Stephenson county, Illinois, consisting of forty-nine genera and about one hundred and fifty species. This has attracted a good deal of attention, and was the subject of a short paper in which the uses and abuses of the different timber was named. The example of Mr. McAfee in this collection is worthy of praise, and well may be followed by students in botany. Every horticultural society should have its Lignarium.

Five local societies were represented, and all reported in a prosperous condition. Three others are in working order in the State. The question how to increase their usefulness and to make them more efficient auxiliaries to the State Society, elicited a very spirited discussion, and resulted in the resolve to hold a summer exhibition in the strawberry season.

Mr. Scofield, of Illinois, read a paper strongly urging the necessity of united action on the part of all horticulturists, especially those of the West, to secure by exemption from import duties foreign trees, plants and seeds. He referred to the necessity of replenishing our forests or planting new ones; instanced with what rapidity many sorts of timber grew upon the Western soils, and thought it the duty of every society to take such measures as would tend to cheapen the production of young plants; compared the native with the foreign sorts; thought the European larch most valuable, as it was a very rapid grower, durable and hardy; in four years are valuable for posts, and in ten years will make from two to four posts. American larch grows on low ground, while the European grows on high ground, which adds to its value.

G. Emerson, of *The Western Farmer*, read a paper on "The Production of New Varieties." He said this was accomplished by three methods—selection of native varieties, new seedlings, and by hybridization. Thought that while rapid growth was desirable, it was not a sure indication of ultimate value; for the West, hardiness and productiveness are qualities that should be first watched for; thought all horticulturists who had novelties to sell were not reliable; that the experimental garden afforded a fine field for usefulness to this Society.

A very interesting discussion followed upon the production of hardy sorts and the stock to be used. The cultivation of the crab for root grafting was recommended. Mr. McAfee thought that the impression sought in the improving process is to be provided by the conditions of the parent. We should subject the parent plant to a severe course of discipline by exposing it to all the vicissitudes of heat and cold, by which process we would arrive at the value of fruits of Northern origin.

I have not time to touch upon all the valuable papers and discussions which were presented at this meeting. There were many papers and reports from different committees, all able and valuable, and will form their part of a published volume of transactions. Altogether, it was much the best meeting of fruit growers that ever assembled in Wisconsin, and the Society now occupies a position quite satisfactory to its founders and all interested with it at the present time.

A Profitable Apple Crop.

WE have just closed out the last of our apple crop, netting, from forty-eight Smith's cider apple trees, the sum of six hundred dollars. The same trees netted about the same amount three years ago, making a return of twelve hundred dollars for one acre of land in three years. The above trees were grown from suckers, and are about thirty-five years old.

TITUSVILLE, N. J.

BLACKWELL BROTHERS.

Editorial Notices.

Notice of Removal.

THE office of THE HORTICULTURIST, on and after May 1st, next, will be permanently located at No. 5 Beekman street, rooms 5 and 6, first floor. The new offices are in a desirable location, and very convenient of access, being but a few steps from the street.

Perry's Scarifier.

F. L. PERRY, of Canandaigua, N. Y., has invented a cultivator, especially adapted to the use of nurserymen, small fruit growers, vineyardists and seedsmen, intending to produce a thorough stirring of the soil, deep cultivation, ease of draught, and easy adaptation to different crops and width of rows. We believe it a valuable implement, and think it will be found, by all cultivators, one of the most thorough and serviceable implements of the kind yet introduced.

Fruit Preserving Houses.

IN nearly every device for the preservation of fruits, without decay, for any period beyond that of natural ripening, there has been something wanting to preclude absolute success. Wherever there is *moisture*, there must be *decay*, and hence *dryness* as well as *coolness* are indispensable. The Rees & Houghton new method of preserving fruit, vegetables, meats, etc., is an advance in the right direction, and as a committee of the American Pomological Society, after an examination of it, express themselves well satisfied with the results, we shall watch it with interest for future developments of its practicability.

Washburn's Catalogue, published by Washburn & Co., Boston, Mass., for 1870, has been laid on our table. We have always admired the excellent taste with which it has been compiled, and the neatness of its typographical appearance. The contents we know are trustworthy, and the novelties described are recommended with care and true judgment, according only to their real merit. Such catalogues as these deserve to be highly appreciated, and found in every garden in the country.

Manning's Descriptive Catalogue of Fruit Trees for 1870, by J. W. Manning, of Reading, Mass., appears in an improved form, and well illustrated.

Curtis & Cobb issue a very handsome and well illustrated catalogue of flower and vegetable seeds, comprising nearly 150 pages. The publishers are entitled to great credit for their useful volume.

John Saul, of Washington, D. C., has fairly eclipsed all other catalogue makers, in the elegance of his frontispiece, a colored lithograph of the new pelargonium, Andrew Henderson. The catalogue comprises over seventy pages of closely printed matter, with descriptions of many new and valuable novelties, and is worthy of more than usual notice.

Transactions of the Mass. Horticultural Society, 1869.—The Society continues in excellent financial condition, and its various exhibitions have been well attended. The most valuable part of the volume is the *report* of the fruit committee, by W. C. Strong, which we think is the most valuable ever written. It is exceedingly interesting, and does credit to Mr. Strong.

Olm Bros., in their Spring Catalogue for 1870, have introduced an illustrated frontispiece, exhibiting a plan for the improvement of ground connected with a country residence. With the exception of one or two curves, which a landscape artist might improve a little, it is excellent, and will give some good ideas to those about to embellish their grounds. The interior pages of the catalogue are well filled with new and choice illustrations.

The Cranberry Culturist, by F. Trowbridge, Milford, Ct., is a little pamphlet detailing the experiences of cultivators in Cranberries.

Landreth's Rural Register and Almanac, 1870, contains, in the last few pages, a choice of best varieties of vegetables for kitchen gardens, the best we have yet seen, being a record of personal experiments and tests.

Ellwanger-Barry Catalogues reach our table promptly, most excellently compiled and illustrated.

Mackenzie's Horticultural Establishment, Philadelphia.—His catalogue of plants, small and dainty, is the most elegantly printed list of the season.

Frost & Co.'s Catalogue.—We have received the catalogue of ornamental trees issued by the above firm, Rochester, N. Y. The illustrations are printed in a new and attractive form, with colored borders, which add greatly to the attractiveness of the catalogue.

Ferre, Batchelder & Co.'s Catalogue of Seeds is splendidly illustrated, printed with excellent taste, and contains an abundance of attractive horticultural information.

R. J. Halliday's Catalogue.—We have received his catalogue for 1870, containing descriptions of many novelties. We observe he has introduced the feature of special collections of plants for flower gardens and borders. The idea is excellent, and should be appreciated.

Catalogues Received.

Henderson & Fleming—Descriptive Catalogue of Vegetable and Agricultural Seeds.

Hargis & Sonner, Quincy, Ill.—Cat. of Fruit and Ornamental Trees; Wholesale Catalogue, 1870.

Thompson & Adams, Brookfield, Mo.—Catalogue of Fruit and Ornamental Trees and Small Fruits.

J. M. Thorburn & Co.—Catalogue of Vegetable Seeds, 1870.

Storrs, Harrison & Co., Painesville, O.—Wholesale Trade List, 1870.

J. C. Plumb, Milton, Wis.—Trade List, Autumn, 1869.

Robert Douglass & Son, Waukegan, Ills.—Wholesale Catalogue Tree Seedlings.

Alfred Bridgeman & Son, 876 Broadway, N. Y.—Catalogue of Vegetable Seeds; Catalogue of Flower Seeds.

John Cadness, Flushing, L. I.—Greenhouse Plants.

R. H. Allen & Co., New York—Seed Catalogue.

Ellwanger & Barry, Rochester, N. Y.—Catalogue of Fruits, do. Ornamental Trees, do. Greenhouse Plants.

P. J. Berckmans, Augusta, Ga.—Catalogue of Fruit and Ornamental Trees.

Barler & Condon, Upper Alton, Ill.—Price List of Garden Seeds.

Hoopes, Brother & Thomas, Westchester, Pa.—Annual Trade List, 1870.

Calkins & Brooks, Bricksburg, N. J.—Price List of Nurseries.

James Draper, Worcester, Mass.—Catalogue of Small Fruits; Circular of Wauregan Raspberry.

H. B. Lum, Sandusky, O.—Catalogue of Small Fruits.

Filmorin, Andrieux & Co., Paris, France—Catalogue of Novelties, 1870.

William Parry, Cinnamonson, N. J.—Catalogue of Fruit and Fruit Trees.

Hubbard & Davis, Detroit, Mich.—Catalogue of Greenhouse Plants.

Loud & Trask, Adrian, Mich.—Catalogue of Trees and Vines.

Storrs, Harrison & Co., Painesville, O.—Chestnut Circular.

Blackwell Bros., Titusville, N. J.—Catalogue of Fruit and Ornamental Trees.

A. M. Purdy, Palmyra, N. Y.—Wholesale Price List, 1870.

Dexter Snow, Chicopee, Mass.—Catalogue of Verbenas, etc.

W. F. Massey, Chestertown, Md.—Catalogue of Flowering Plants.

Henry A. Dreer, Philadelphia, Pa.—Garden Calendar, 1870.

Frost & Co., Rochester, N. Y.—Trade List, 1870; Catalogue Greenhouse Plants.

J. Wentz, Rochester, N. Y.—Catalogue of Fruits; Catalogue of Ornamental Trees.

T. C. Maxwell & Bro., Geneva, N. Y.—Trade List of Clematis, Roses and Soft-wooded Plants.

Lister Bros., Newark, N. J.—Circular of Bone and Fertilizers.

S. B. Fanning, Jamesport, L. I.—Price List of Choice Farm Seeds.

R. D. Hawley, Hartford, Ct.—Circular of Tomato.

Reisig & Hexamer, Newcastle, N. Y.—Circular of Seeds, Potatoes and Small Fruits.

Edward F. Jones, Binghampton, N. Y.—Catalogue of Scales.

S. L. Goodale, Augusta, Me.—Address on Commercial Manures.

G. E. Cleeton, New Haven, Ct.—Catalogue of Poultry Breeders and Fanciers.

Bennett & Davidson, Flatbush, L. I.—Spring Catalogue of New Plants.

Suel Foster, Muscatine, Iowa.—Catalogue of Nursery.

Jos. M. Wade, Philadelphia, Pa.—Price List of Fancy Fowls.

F. K. Phenix, Bloomington, Ill.—List of Fruit and Flower Plates.

Charles Arnold, Paris, Ontario, Canada.—Wheat Circular.

Hamlin & Barnum, Edgefield Junction, Tennessee—Trade List Cumberland Nurseries.

F. L. Perry, Canandaigua, N. Y.—Price List, Spring, 1870.

O. J. Weeks, West Webster, N. Y.—Price List of Plants.

W. S. Little, Rochester, N. Y.—Trade List, Spring, 1870; Mount Vernon Pear Circular.



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No. 287.

Climbing Vines.

II.

BY THE EDITOR.

WHEREVER we plant our arbors and rustic structures, there we find need of the help of some graceful climber, and though the list from which to choose is large enough, yet few feel the energy necessary to try them and produce the best effect. We have referred in a previous number to that most beautiful of all varieties, the *Scarlet Trumpet Creeper* (*Bignonia radicans*). If our readers have none of it growing, by all means procure it and train it up your porch, or on the side of the house. Its brilliant blossoms are always a gladsome sight.

The Virginia Creeper.

Next in beauty, both a living beauty and a beauty even in death, is the Virginia creeper, or American ivy (*Ampelopsis Hederacea*). The Virginia creeper, like the bignonia and ivy, throws out roots at the joints by which it fastens itself to anything it touches, but the vine is more hardy, more luxuriant and rapid in growth. In its native woods it will be seen climbing rocks and trees to a great height, while in the cultivated pleasure grounds of the gardener, it is made to cover walls of houses forty or more feet in height. The flowers can hardly be called of much value, being of a reddish green color, not showy, and succeeded by clusters of berries of a dark blue color. As the berries reach maturity the fruit-stalks and tendrils assume a rich crimson or red color. This vine will grow with very little attention or trouble, and it only asks to be planted to begin its years of grace. It is less planted than it should be, for the reason this plant is confounded by many persons with the poison ivy vine, which resembles it. The Virginia creeper is, however, perfectly harmless, and may be easily distinguished from the poison variety, from the fact that the latter contains but three leaflets to a leaf, while the former has five.

The greatest charm of the vine is, in its foliage, which, while green, is exceedingly beautiful. If planted in a cool, moist soil, to which it is best adapted, it will climb rapidly, sending off long branches, which sway gracefully in the breeze or attach themselves to adjacent points, and form rich and beautiful festoons of verdure. But the culmination of its beauty appears in Autumn, when the foliage assumes the most brilliant crimson hues, and it seems as if the live plant were about to meet its death in a blaze of glory. Even then the effect is best seen when running up the centre of a dark cedar, or climbing frequently on the edges of some compact evergreen. The October frosts change its color in the space of a single night, and the morning finds it shining like a line of crimson fire

over the dark foliage beyond or beneath. Emerson, one of our most enthusiastic admirers of forest verdure, says of it :

"The great variety of rich colors, shades of scarlet, crimson and purple, which the leaves and stems of this plant assume, and the situation in which we see it, climbing up the trunks and spreading along the branches of trees, covering walls and heaps of stones, forming natural festoons from tree to tree, or trained on the sides and along the piazzas of dwelling houses, make it one of the most conspicuous ornaments of the Autumnal months. Often, in October, it may be seen mingling its scarlet and orange leaves, thirty or forty feet from the ground, with the green leaves of the still unchanged tree on which it climbed."

Transplanting the Ivy.

Several years since, a Baltimore gardener pruning some locust trees rapidly being destroyed by the borer, determined to remove them, but there was one tree, standing on the south side of the house, affording a shade to several windows, that he felt could not be dispensed with without great inconvenience. Although the tree could not live long, yet by planting the Virginia creeper at its foot and allowing the vine to mantle the dead branches, it would afford some shade until another tree could be reared. The creeper was removed from another location, and replanted with great success. Its stem, nearly or quite an inch in diameter, was twined about the trunk and principal branches, to the height of perhaps twenty feet, and moderately pruned. The gardener says that the experiment was so entirely successful that, by being enveloped in the broad foliage of the vine, the tree was saved from the ravages of the insect to such an extent that it lost only a part of its top, and continued to live in fine health. But the creeper grew with the utmost vigor, notwithstanding it was planted four feet off the tree, so that now the vine overruns nearly the whole of the latter, hanging in masses and festoons from the higher branches, a perfect wilderness of foliage. Says he :

"I do not hesitate to say that it is the most beautiful object on the place, its young shoots, with their small and delicate light green leaves forming a remarkably fine contrast to the immense foliage of the darkest green, which clothes the old wood. In addition to this, the gorgeous appearance of the whole mass after the October frosts have changed the different shades of green to the most brilliant and varied tints of crimson, scarlet and yellow, is beyond my power of description."

Although I could wish to describe the attractions of the morning-glory, so common around all our country cottages, or the many climbing roses, every one a bright particular star of beauty, or dilate upon the exquisite perfume of the honeysuckle, still I reserve a choice position for modest worth in

The Chinese Wistaria.

The wistaria species, as a rule, is perfectly hardy, grows with great rapidity when well started in rich soil ; but among the six or more varieties known and named, the Chinese (*Sinensis*) has received the verdict of popular preference, surpassing all others in the great development of its stems and the astonishing profusion of the flowers and the size of the azure-colored clusters. The foliage is noticeable for its delicate beauty, while the flowers hang in rich purple clusters like grapes. They appear about the last of May in the open ground, but if trained to the rafters of the green-house, they will be found in full blossom in March, while the rampant growth seems to occupy the entire space and fill it with thousands of the delicate purple clusters. There is often a second period of flowering in the late Summer months. But the blossoms can bear no comparison with those which appeared in the Spring. The flowers appear in racemes or clusters, each raceme six to twelve inches long, and containing fifty to one hundred or more blossoms. The united bouquet, as it really appears, is highly attractive, and emits a delicious perfume. It is as hardy as the American ivy, grows in almost any soil, will bear a temperature of ten or fifteen degrees below zero, and if planted in a deep, rich loam, will make shoots twenty to thirty feet long each season.

How to Propagate Climbing Vines.

The "Chinese" is easily propagated from cuttings or layers, or in a more simple way, by taking some of the long shoots of the present years' wood, burying a portion midway

between the root and end, under the surface, wounding or slitting the bark here and there before covering with soil. If done thus during the month of July, they will root finely by November. Amateurs after receiving plants from some of the nurseries, have difficulty in inducing an early and vigorous growth, the plants remaining dwarf and stunted, with little or no disposition to climb freely. This may arise from the possibility of propagation from a downward or impoverished branch, and the only course to be pursued, which in fact is best for all plants, good or bad, to head the vines to a single bud, as near the ground as possible, and make the ground rich, mellow and deep. This will give them a fair start, so that ever afterward they will maintain their natural luxuriance. If it is desirable to induce the "Chinese" to flower several times during the year, the following simple treatment can be observed:

"After the first flowering is over, strip off all the leaves, and cut off all young and superfluous branches which have been formed, to within a few inches of the stem, which causes it to throw out fresh leaves and to flower again. After this bloom is over, the same process will produce a third bloom, later in the season. The plant does bloom naturally twice and even thrice, but the flowers are so very weak, and so few, that it is hardly worth notice, whereas by the above simple process an abundant succession may be insured. This system cannot be applied to young plants, but only to those well established. By severe trimming the wistaria may be grown as a shrub or bush."

When age has given to the vine a character almost venerable because of its unusual luxuriance, far surpassing all other plants of a climbing nature, we find here and there isolated instances of specimens which have achieved a high celebrity. The finest specimens of the wistaria in Europe is trained upon the walls of the London Horticultural Society, where it occupies a space three hundred and seventy-five feet in length. Downing, who seems to have been a special champion in its behalf, describes it as the "loveliest of all vines," and speaks of one that covered the side of a small cottage completely.

Imagine a space of ten by twenty feet completely draped with wistaria shoots, on which hung, thick as in a flower pattern, at least five hundred clusters of the most delicate blossoms, of a tint between pearl and lilac, each bunch of bloom shaped like that of a locust tree, but eight inches to a foot long, and most gracefully pendent from branches just starting into tender green foliage. If you could see all this as we saw it, you could not fail to utter exclamations of delight.

The noblest specimen we can call to mind at the present time in this country, may be seen at the corner of Second avenue and Seventh street, this city. It is planted at the end of a large brick house, which forms the corner, but has grown with such amazing rapidity that it not only covers the front of the house to the roof, but an arbor over the steps, the entire side of the house on the cross street, and likewise the entire side of a house in the rear, an area of 10,000 square feet—a curiosity of unexampled merit. It is trained gracefully, and is preserved with the tenderest care by the owner, who appreciates its value; but when in bloom, it is such an object of splendor as to excite the wonder and admiration of the passer-by.

Flower Beds for The Central Park.

Hints for The Central Park Commissioners.

A FEW months ago *The Rural New Yorker*, in giving some illustrations of the styles of ribbon lines or massing of color in flower gardens, took occasion to remark on the absence of all such decoration in the grounds of the Central Park of New York, or the Prospect Park of Brooklyn. To those who have recently seen the display made by this style of decoration in the parks in the vicinity of Dublin, London, or Paris, these remarks would seem to be not uncalled for. That our Central Park is grand in conception and execution there can be no question, but there is a sameness in its beautiful green swards and well kept walks which could well afford to be relieved now and then by a blaze of color such as we see by the massing system in the English or French parks. A few thousand dollars, spent by the Commissioners for this purpose, would be gratefully appreciated by the thousands who would feast their eyes by such a display. Who will lead in this matter, New York or Brooklyn?

A. B.

Design for a Farm House.

FARM houses are better intended for *convenience* than show, hence they are so generally plain and unpretending without, while we can all testify to much cheerfulness and comfort within. Very few farmers have the means for adding architectural ornaments to their dwellings, and although we believe farm life would be far more agreeable and alluring, if there were thrown in a few more touches of rural taste and architecture, yet if a house is surrounded with an abundance of verdure, shady trees, flowering shrubs, a nice bit of a cottage flower garden, and here and there arbors, verandahs, adorned with climbing vines, it far more compensates for the absence of architectural beauty, while costing far less.

In the design here given, there is nothing showy, either in perspective or detail. It is a plain, substantial farm house, nearly square, with an L on one side, and from the tasteful touches of the artist, is intended to become a cozy comfortable *home*, rather than a gilded cottage.

The plan of rooms is as follows:

- No. 1. Hall, 7 feet 8 inches by 19 feet.
- " 2. Parlor, 15 feet by 16 feet.
- " 3. Living room, 15 feet by 16 feet.
- " 4. Kitchen, 15 feet by 20 feet.
- " 5. Bed room, 15 feet square.
- " 6. Back kitchen, 16 feet by 12 feet.
- " 7. Pantry, 7 feet by 10 feet.

- No. 8. Wood room, 14 feet by 15 feet.
- " 9. Work shop.
- " 10. Carriage shed.
- " 11. Dairy, 7 feet by 14 feet.
- " 12. Store room, 7 feet by 13 feet.
- " 13. Back entry.
- " 14. Sheltered porch.

The kitchens are amply provided with large closets, and every household convenience.

The second floor contains eight chambers, besides bathing room, dressing rooms and closets. The attics may be left unfinished.

The house is intended to be built of wood, and covered in the common manner with clap-boards. The roof of the main house projects two feet and a half, and that of the L one foot and a half, the cornices are supported in brackets three inches thick. The windows and doors inside and outside, have plain architraves, five inches wide. Cost in the country, about \$4,500, but where timber is high will run over that estimate.

Pencil Marks by the Way.

BY OCCIDENTALIS.

About the Ailanthus Tree.

I HAD often thought of the Ailanthus, as timber suitable for transplanting and growing upon the broad prairies of the West. It certainly possesses some of the qualities that will make it a very desirable tree for stocking the thousands of treeless farms to be met with in all portions of the Great West.

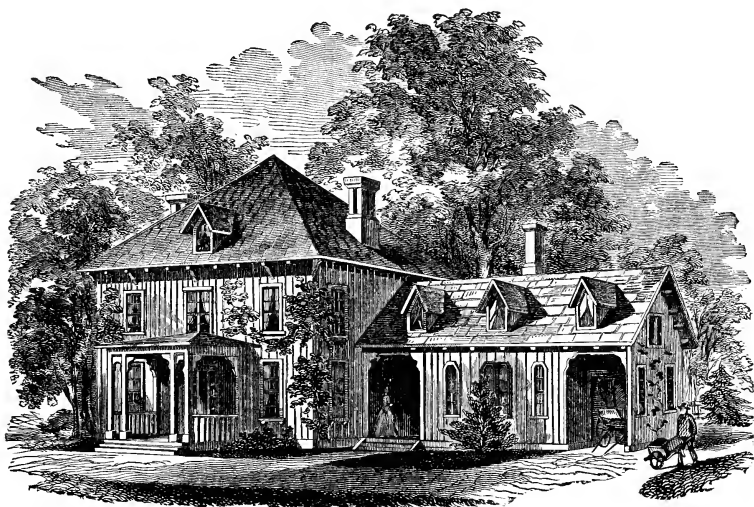
1. Its growth is very rapid. I know of none to excel it—not even the rank Cottonwood, or the silver-leaved Abele. I have known it at two years old to be as large as my wrist; and two of the three sprouts from a stump, at three years old, were large enough for grape stakes.

2. Though such a rapid grower, its wood is fine-grained and solid; and when seasoned, I believe will be full as lasting as the Mulberry. I have not known of any fair trial beneath the ground.

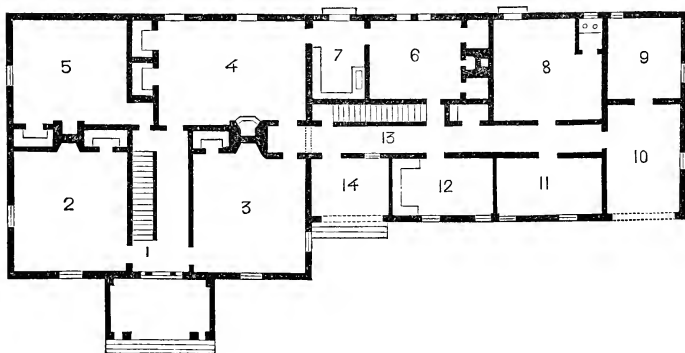
3. It is handsome and stately; in this respect not excelled by many of the deciduous trees.

It has one quality which I scarcely know how to class, whether favorable or unfavorable: It suckers badly, and is very hard to eradicate. You cannot kill it by cutting it down. Cut it off at the roots, and it will throw up a number of shoots around the original stem, which will make an amazing growth in one season. Cut and mangle its roots, and they will throw out a number of new trees.

I am confident that an acre of our rich prairie soils of Illinois or Iowa, planted with ailanthus, at distances of three to ten feet, would in four years yield three-fourths the



Design for a Farm House.



Ground Plan.

original number of grape stakes, and at six years three times the number—and so on continually increasing. But whether it could ever be exterminated, or kept within its original limits, I am unable to say.

The offensive odor of the only ailanthus with which I am acquainted, I confess, has been a strong argument against its introduction. Hence, I was much pleased and interested in reading the article in your October No., by General STROTHER, of Berkeley Springs, West Virginia, calling attention to its *congener*, grown in that vicinity. But, if, as he affirms, the Berkely ailanthus is only the *female* of the same tree, and not a variety, how is it that trees produced from the seeds should not be found to be promiscuously *male* and *female*? Is it possible that the seeds of this inodorous kind produce trees only of the same, while those of the “fetid ailanthus,”—as he terms the male,—produce only the offensive sort? I should rather incline to the opinion that the two are distinct varieties. They are certainly distinct in several particulars, and especially in regard to the suckering propensity. At any rate, it is to be hoped that General STROTHER, or some one else, will give the public, through your journal, more light upon this Virginia ailanthus.

Are the Vexed Questions Settled?

MR. EDITOR:—Are any of the many questions that have been agitating the horticultural world, within the past year, been settled—beyond a peradventure?

For instance, 1. Is the “Mexican Everbearing” strawberry a new variety, or is it the old Alpine?

2. Is it, in either case, of any value as a garden fruit?

3. Is the Mammoth Cluster identical with the Miami raspberry?

4. Is the Early Richmond cherry more prolific on the Morello stock than on its own roots?

5. Do barn-yard fowls or birds eat the curculio?

6. Is the cause or cure of pear blight known?

These, and a hundred other questions that have been discussed during the last and former years, are still open questions,—many of them perhaps no nearer a solution than at first. I am at times almost ready to conclude that nothing is absolutely known—that no theory of growth—of culture—of disease—of remedy—or other horticultural phenomenon—but is liable to objection and doubt. And why is this so? I am led to conclude, that, in our investigations and researches, we are too apt to “jump at conclusions.” We decide too hastily. We build our theories, and then seek for facts to sustain them. We do not sufficiently weigh and analyze, compare and combine results.

But there is another reason. Conditions of plant life, and of insect and animal life, differ. The same application that will produce fruitfulness, for instance, in one tree, will fail in another. The same remedy for a disease, successful in one case, will be unsuccessful in another. And why? Not only because of different surrounding conditions, of time and of circumstance,—but perhaps of inhering constitutional properties.

So it may be fair to conclude that many of these questions never will be settled; but that we must bring to bear upon each case, a sound judgment and a patient spirit.

Raule's Janet.

There is a great deal of confusion among writers as to the true name and orthography of this much esteemed and valuable apple.

Many call it *Jeniton*; many others *Jeniting*; some use the G, and spell it *Geniton*, or *Geneting*. Others give the name of the originator, but render it *Raule*—*Raule's Janet*; while others again get the originator's name right—*Rawle*,—but misspell the lady's name for whom it was given—*Jannel*.

I notice that Hon. W. C. Flagg,—than whom there are few better authorities,—lately called the attention of the Alton Society to the subject, and referred to Downing as authority; calling attention to the fact that they had formerly voted to follow him as a guide. In that standard work, it is given as at the head of this article—*RAWLE'S JANET*.



A Robin's Nest in Fernery.

OUR illustration is taken from the pretty little fernery of a lady in England. A pair of robins in their flight discovered this sunny little retreat, and in it have built their nest. After a little time, they became so tame and used to visitors, as even whilst seated on their seat they would eat the food handed them by delighted friends.

Can we not, as we plan our beautiful little village gardens and snug summer retreats, provide some cosy corner for the dear little birds, "*messengers of heaven*," and by treating them kindly, add to the pleasure and happiness of ourselves and our families?

The Mammoth Cluster Raspberry.

BY A. M. PURDY.

IT is becoming too common with the Yankee nature of fruit growers to express an "opinion" on every new fruit, whether they have ever seen it or not. This has been done too much by many who simply know nothing about the fruit. For instance, the Mammoth Cluster has been pronounced a "humbug," "no better than the Miami," "no improvement on the wild black cap," and all such stuff, and in every case where we have questioned these parties or traced it up, we have found they had never seen it in fruit, but simply expressed their opinion from what So-and-so said.

We need not refer to the many reliable horticulturists who have seen this variety in fruiting to prove that it is far superior to any black cap grown, and in fact, we are yet to meet with a person who has seen it in fruiting but what pronounce it superior to any black raspberry they ever saw. Hence it is so strange to us that persons will express opinions that cannot be substantiated by the facts. For instance, I notice on page 43 of Feb. HORTICULTURIST that D. McLaury, of New Brunswick, N. J., says: "I doubt if the Mammoth Cluster, about which so much noise has been made the past year, is much 'if any superior to the Miami.'" Now I have cultivated the *Miami* for years and have fruited the Mammoth Cluster for three years, and can simply say that the last is as much superior to the first as is the *Miami* to the old seedy black cap of the woods, and in proof of my position please permit me to copy the following testimonial:

Messrs. E. W. Herendeen, T. C. Maxwell, E. A. Bronson, J. B. Jones, A. Merrill, and L. Herendeen, all well known nurserymen of Geneva, say:

"We found the Mammoth Cluster bearing immense crops of large, beautiful and excellent fruit, the finest display of black raspberries we have ever seen. We carefully examined it in comparison with the *Miami*—a sort claimed by some to be identical with it—and were fully convinced that it was a distinct sort. The points of difference are decidedly marked and evident to any one."

J. J. Thomas says: "Growing along side the *Miami* and other sorts, it was obviously distinct from all." In size it rather exceeded any other, many of the berries measuring three-fourths of an inch in diameter. The *Miami* measured not over five-eighths. The flavor of the Mammoth was generally regarded as superior to most others; while its more fleshy and less seedy character added to its value."

Charles Downing, after seeing it on our grounds, says: "It is very much the largest and most productive black cap I have ever seen, and coming as it does, after other black caps are done, it is a valuable addition to that class of raspberries."

Andrew S. Fuller, in a letter dated August 15th, '68, says: "You sent me a few plants of this variety, and they fruited finely this season. It is the largest black raspberry that I have ever seen, and I have some twenty-five varieties on my grounds."

Let it be remembered that the two last gentlemen had both grown the variety known as *Miami*, and readily recognized our plants of that sort.

D. D. T. Moore says in the *Rural New Yorker*, of Aug. 1st, 1868: "We are indebted to Messrs. Purdy and Johnston, of Palmyra, N. Y., for specimens of this black raspberry on the bush. Judging from the samples received we think the Mammoth Cluster the largest and most productive black raspberry we have ever seen, and of superior flavor. We hope to visit the plantation soon and will then be able to speak advisedly as to both plant and fruit."

The next issue of the *Rural* reports as follows: "We received an invitation to visit on the 23d of July, 'Purdy & Johnston's Fruit Farm,' located at Palmyra, N. Y., to meet some distinguished Pomologists and inspect, among other things, a new and promising variety of the Black Cap Raspberry, named the 'Mammoth Cluster.' Business prevented our making the visit at that date, but receiving samples of the fruit later, its size and other good qualities induced us to take a look at the bushes whereon it grew, on July 28th. 'We only expect,' we said, at the entrance of the grounds, 'to see the bushes, at this late day, but we know the berry by sample, and the fruit stems will yet tell of its productiveness.' But they led the way to a plantation of rank growing, stocky bushes, where the pickers were gathering the berries for market, and showed us a patch which was then dark-

ened and bending from the profusion of 'Mammoth Clusters.' Near by were acres of the Doolittle, but the pickers had ceased work among them for more than a week, beginning next on the Mammoth Cluster. The Miami had also failed, though later than the Doolittle, but the Mammoth Cluster still yielded fruit, and there was a fair showing of green berries yet to ripen. And they have written us since, under date of July 29th, that 'we shall make a fair picking from it to-morrow, and probably next Monday, which will be just two weeks lacking one day from the last picking we make of the Doolittle.'" So much for its period of ripening. The canes are stockier, and more erect growth than those of the Doolittle or Miami, and the color of the foliage a shade darker. The difference in the varieties could be plainly seen from a spot which overlooked the entire plantation. The fruit stalks are long, and the fruit chiefly borne on the ends, in magnificent, heavy clusters. The berry is larger, and therefore juicier and more acceptable to the taste than the Doolittle. These qualities, and its prolific habit and late period of ripening, render it a valuable acquisition. It also has indications of the habit of throwing out fruit stalks to quite an extent for some time after the main season had passed."

We should think the above ought to suffice to show any person the superiority of the Mammoth Cluster and that when people are expressing their opinion as to its value, they should respect the statement drawn up from *actual* observation. We simply say it is *not* the *Miami*, and is *superior to it every way*.

The Gooseberries of the Future.

NO one can now believe that we are to receive these from England. So great are the climatic differences between that country and this that the vast improvements there secured in many fruits and flowers can be of but little avail to us. We do well, after a sufficient trial of them, to accept this fact and turn ourselves cheerfully to the development of our own native species.

From the single species of wild gooseberry growing throughout Northern Europe, the English have produced by cultivation so vast a number of kinds that the lists of the Lancashire nurserymen are said to include above 300 names. While the fruit of the wild sort weighs only about a quarter of an ounce, they have obtained kinds whose fruit weighs nearly two ounces.

What has been done in England, we may suppose can be repeated in America. But, instead of a single species, we have four that are indigenous to this country, and of so diverse habits as to be adapted to almost every condition of soil or method and purpose of culture. In the half-dozen improved seedlings which we now possess, we have already made a good beginning in the right way; and from judicious and well sustained crossing of these, and between these and the wild sorts, we may hope for the highest success in the end. I recommend crossing, from the belief that it is a fruitful cause of speedy variations. Thus far cultivators have mainly relied on sowing seeds raised without any special pains; and it is probable that the gains appearing at rare intervals are mainly due to crosses affected by insects. But, with careful fertilization of the flowers and due attention paid to securing the most perfect development of the seed afterward, by rigorous thinning and high cultivation, the probability of obtaining valuable new sorts will be much increased, while the labor, owing to fewer seeds being employed, will really be much lessened. Before leaving this subject, I would caution the operator against using pollen from foreign kinds, lest his seedlings inherit their disposition to mildew.

The most eminent physiologists concur in the belief that though hybrids themselves may be intermediate in character between their parent forms, and when there are several from a single cross there may be no wide difference among them; yet, when interbred with each other, they yield, during many generations, offspring astonishingly diversified. This is believed to be specially the case when natural species are crossed; for intercrossing of the offspring of long cultivated species or races sometimes favors uniformity, or on the other hand, offers opportunity for reversion to the first wild forms. So he who attempts the improvement of wild species may command the aid of two harmonious means of variability—that of repeated hybridizations, and of changed conditions of life by cultivation.

CHARLOTTE, VT.

C. G. PRINGLE.

Ornamental Lawn Trees.

The Purple Beech—Fagus Sylvestris Purpurea.

THIS is one of our most strikingly beautifully lawn trees. In spring or early summer, when the leaves are still tender and but partially developed, the effect produced on them by the bright sunshine is really marvelous, and when the foliage is viewed under certain conditions is beautiful in the extreme. If the tree is brought in the range of vision between the spectator and the sun, it will have the appearance of being on fire, and lit up, as it were, with an intensity of color that any painter might love to dwell upon. The purple beech is a native of Germany, and all the varieties which now exist sprang from a single tree which was discovered by accident in a wood sometime during the last century. There are now many fine specimens of this beautiful tree to be found in many parts of the United States. Both in nurseries and in private grounds it is so much admired that wherever it is known in this country the demand has been generally greater than the supply. There is a variety of this which is also quite conspicuous in its foliage and is much sought after. It is called the copper beech, on account of the foliage being of a deep coppery hue, that continues to grow darker as the season advances, until it becomes almost black. It has always been my aim to introduce the purple beech and its varieties into both public and private grounds as the opportunity presented itself and the trees could be obtained, as objects worthy of a prominent place on the lawn; as it is suited to almost any kind of soil that is dry, but grows with most vigor on a clay loam.

The Ash Leaved Maple—Negundo Fraxinifolium,

Is a very handsome medium sized tree. It should be planted singly on the lawn and allowed sufficient room for a free and full development of all its parts. When thus treated it forms a wide-spreading head, and as the branches spring from near the ground, they will continue to spread over the surface for a considerable distance, until the tree arrives at maturity. It grows rapidly, and with its light green pinnated foliage, that sways with the slightest breeze that is wafted to its surface, it becomes an object of great beauty, and presents a striking contrast to the sombre hue of the Norway spruces and other evergreens that have obtained such prominence of late in most grounds. The young shoots of the Negundo, which are of a beautiful green, also presents a marked contrast to the other part of the tree, the branches and trunk of which are of a dark gray when young, but as the tree attains age, are merged into a brown. It is found growing on the Alleghany mountains, and it succeeds well in all the Northern and Middle States. It will grow in nearly every variety of soil, and is the kind of tree that is adapted to almost any situation.

ROCHESTER, N. Y.

WILLIAM WEBSTER.

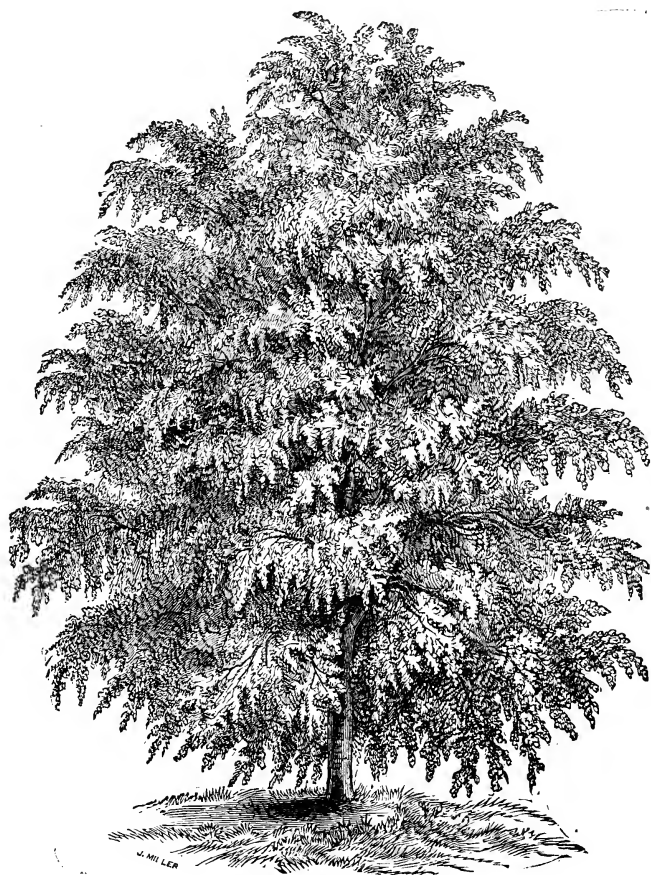
The Weeping Linden as an Ornamental Tree.

IN our American climate the Linden tree can hardly be called a success for ornamental planting. Its susceptibility to the attack of insects, and its liability to sudden disease, affecting the leaves and general appearance, transform it in a few days from a beautiful lawn and shade tree, into a mess of dry rustling leaves and stems, repulsive and unpleasant.

In many localities, however, such as private lawns, where the soil is cool, and yet well drained, with an abundance of other lawn trees in the vicinity and where there is a partial shade, we have seen Linden trees flourish admirably, untouched with insects or disease, and developing rapidly into a noble vigorous form, and retaining their large luxuriant foliage, green and glossy, until the fall of the leaf in autumn.

But all ornamental planters will do well, notwithstanding these risks, to make room for that most beautiful of all trees of its class, the *White Leaved Weeping Linden* (*Tilia alba pendula*).

It grows very rapidly, but does not exhibit, while young, very marked characteristics of a drooping habit; like the Weeping Birch and others, this peculiarity seems to increase with age. The tree has large broad foliage, deep green surface, nearly white beneath, with slender drooping shoots, which, with the rustling of a gentle wind, give a swaying motion at once graceful and beautiful. The tree grows to large size, 30 feet or more in height, has a fine symmetrical head of oval form, and if successfully grown, it becomes one of the finest ornaments of the landscape.



The Weeping Linden.

Growing Currants.

BY P. T. QUINN, IN "N. Y. TRIBUNE."

The Currant.

AMONG the list known as "small fruits," which have been cultivated for market with a view to profit, the currant has not, until quite recently, received the attention it well deserved. For a dozen years past, the popularity of the currant, as a table and dessert fruit, has steadily increased, and it is destined to become a general favorite with consumers. The subacid flavor of the cultivated kinds is agreeable to most persons, and considered by all as a healthy sauce to any feast, especially in midsummer.

To the practical fruit-grower, the currant possesses special characteristics, which are worthy of thoughtful consideration. Take, for instance, the strawberry, and when ripe, two days' rain often spoils one-third of the crop, and of course lessens the profit to that extent. With the currant the case is different. The fruit has a season of six or eight weeks, and even when fully ripe, two or three days rain does not injure the fruit—the storm simply stops the "pickers" while the rain is falling. During the season, if the price of currants fall below a certain figure the grower can turn his crop of fruit into jelly, which is a merchantable article, kept on sale at the present time by every first-class grocer.

Uses.—When green, the currant is made use of for pies and tarts. When the fruit is ripe, the bulk of the crop is sold to manufacturers of wine and jelly. The demand for table use has increased rapidly within the last four or five years, and this demand will be more each succeeding year. I know of many instances where families that six years ago hardly knew currants, that for the past two seasons have had them on their tables three times a day as long as the fruit lasted.

Propagation.—There are none of the small fruits more easily propagated than the currant. In the Northern and Middle States the currant ripens its wood in the latter part of August. When the wood is ripe, the surplus may be cut from the parent bush, and made into cuttings about six inches long, cut square on the lower end, and obliquely on top. These cuttings may be planted at once, in well-prepared ground, in a narrow trench five inches deep, and as long as required. The cuttings are placed in an upright position, two or three inches apart, in the trench. In filling in the trench, the earth should be pressed very firmly around the lower end of the cutting. This can be done with a wooden pounder, or by stamping the earth with the feet. It is important to do this in planting all kinds of cuttings, as well as the currant. When the loose earth that was taken from the trench is replaced and the surface leveled, two eyes of each cutting should be above the surface.

When the cuttings are made and planted in September, young roots are pushed out. Soon after planting, and before cold weather sets in, the cuttings are well rooted. At one year from the time of planting the young plants will be as strong as the year-old plants, when the cuttings are set out in the spring.

Culture.—The currant will grow in any soil that is properly fertilized, but will do best, making more wood and producing larger fruit, on a well-prepared clay soil. It is a rank feeder, and will produce beautiful crops annually, when the soil is kept rich.

When the ground is prepared, the rows may be marked out four feet apart, and the plants set in the row three feet. This will give ample room for cultivating, gathering the fruit, etc. Like the pear, the currant is social in its habits, and will do better with close planting and careful pruning. The main object in pruning the currant bush is to keep the surplus young and old wood thinned out and shortened in, so that the bush will be open and spreading. If the young wood is permitted to grow up in the centre of the bush, the fruit on the inner branches will be small and inferior.

A neighbor practices an excellent method of pruning on his bearing bushes. Instead of waiting until the end of the growing season, when the wood is ripe, he removes the superfluous young shoots in the early part of June, nipping them off with the thumb and finger. By this simple and effective method the labor and expense of pruning is reduced, and the yield of fruit is very much larger than when treated in the ordinary way. To insure paying crops of fruit it is quite as important to give the bearing currant bush an annual pruning as it is in the grape vine, although the currant will stand the "rough and no-treatment" system better than the grape. In most cases the grape vine will receive some

attention during the year, in the way of manure, digging around the roots, &c., &c.; but I have known many instances when currant bushes were allowed to stand in a neglected part of the garden for five or ten years without manure or cultivation, and still bear some fruit every year.

Varieties.—For many years the general favorite, the Red Dutch, was the only red currant cultivated to any considerable extent in this country, and it was principally grown in gardens for home consumption. The introduction of the Cherry and La Versailles at a later period gave an impetus to the culture of the currant on a large scale for market. The large size of berry of both of these sorts attracted the attention of fruit-growers, and, as a matter of course, they were propagated and planted extensively for market. For a number of years there was little or no demand for plants of the Red Dutch. Every one who planted wanted the large kinds. However, when the excitement subsided, and growers compared notes, under the same treatment, the Red Dutch was found nearly if not quite as profitable as either the cherry or La Versailles. There is very little difference, if any, between these two last named varieties, either in growth, size of berry, or length of bunch. The quality of the La Versailles is bitter, and the bunch more shouldered than the Cherry; but when the two kinds are placed alongside of each other on separate plates, good judges of fruit are puzzled to decide the difference. There have been a number of new varieties introduced within a few years, but their culture have been very limited. Of white currants, the White Grape is the most popular with growers.

Profit from the Currant.

During the years 1855 and 1856, we had on our farm a few hundred bearing currant bushes, and commenced sending some of the fruit to the Newark market. The demand for currants at that time was very light, and our commission men were constantly complaining that they had to "work them off" the best way they could. However, even with this discouraging state of affairs, we kept planting out more bushes, and although the demand was slow, there was a decided improvement each succeeding year, which gave us hope, that sooner or later, the currant would become a favorite.

In the same market, that in 1856, we experienced some difficulty in selling a dozen twenty-quart baskets of currants a week, at prices ranging from 75 cents to \$1.25 per basket; in 1867 and 1868, we were selling from twenty-five to forty baskets per day, with a brisk market, and orders frequently one week ahead. The prices kept pace with the demand.

We found from experience that the fruit carried better, and brought higher prices in square packages, and so we changed the size from 20 to 12 quart, or "pony" baskets. The fruit is packed by German women and boys, at fixed rates for market, according to the crop. These rates are from 18 to 24 cents per basket. A smart boy will make \$1.50 per day at these prices, working only nine hours. We prefer employing the same "pickers" from year to year, and can afford to pay them more than "new hands." To command the highest market rates it is essential that the fruit be not bruised in picking, and persons not accustomed to the work, are likely to do it, unless they are constantly watched and instructed the first season.

The subjoined statement from my neighbor, Wm. H. Goldsmith, will give an idea how much fruit currants will produce to the acre. Mr. Goldsmith has been engaged for many years in growing fruit for market, and is a careful and intelligent cultivator.

The amount of land occupied is 1800 square yards (or three-eighths of an acre). There are 16 rows of currants, 300 feet long, and the sales for the past four years were as follows:

1866.....	\$209 89	1868, 2,160 lbs.....	\$281 63
1867, 4,080 lbs.....	293 49	1869, 2,750 lbs.....	287 12

The currants were planted in 1860 and 1861 on good ground and cultivated three years, then mulched with salt hay, and in the spring of 1866, mulched with coarse manure, which had a very marked effect, and gave a very heavy crop of fruit, but I think injured the bushes for the succeeding crop; but the light yield of the two past seasons has allowed the formation of more new wood, and they look better at present than for the two previous seasons. The ground is hoed late in the fall and mulched in spring after pruning the new wood back two-thirds, and cutting out the old limbs that show signs of failing, which are

renewed by shoots from the base, two or three being left in June for that purpose, and the balance taken off at that time when about eight or ten inches long. The variety cultivated is the Red Dutch, excepting about a dozen bushes of La Versallaise, said dozen not having produced the fourth part as much fruit as the adjoining dozen of Red Dutch.

The greater part of the crop in 1867, was sold on contract to a pie baker in New York, at six cents per pound; and the last season the most of them were sold in Newark at about nine cents per pound, some last picked bringing fifteen cents at wholesale readily for Red Dutch in New York.

Taking the four years' results, the crop averaged \$252.53 each year, from three-eighths of an acre of ground, or at the rate of \$673.20 per acre. Now deducting, say one cent per pound for picking the fruit, and \$50 per acre for manuring and labor, there would still be left a handsome margin for profit. So far the currant in New Jersey has been comparatively free from the ravages of insects, enemies which have in many sections rendered its culture, with any degree of success, an almost hopeless task.

Notes on New Jersey.

THAT portion of New Jersey immediately surrounding the city of Burlington, has long been famous for its crops of truck, and of later years for its small fruits. The soil is a sandy loam, sometimes very light, mostly underlaid with clay, and easily worked with one horse. The lighter land responds with astonishing quickness to the application of manures. But little broadcast manuring is done. The truck crops are manured in the rows when planted. When two to three of these crops are grown on the same ground in one season, every one is manured. A three year course of this kind becomes in reality a broadcast dressing. No one thinks of farming here without plenty of manure. Vast quantities are brought up from Philadelphia, and from numerous landings on the Delaware, are distributed for miles away from the river. The supply of this manure is inexhaustible. The collecting and storing of it for sale to the farmers, is a great business in the city. The war sent up the price beyond what we considered its value, but it is now even lower than old figures, and we shall consume as freely as ever.

The year 1869 was memorably bountiful. Almost every thing planted bore a full crop, and generally low prices prevailed. Asparagus, which is a great crop here, paid probably better than ever. The yield was large, the price high, and the canning establishments here, three in number, kept it up to the very last. Some 30,000 bunches were canned in this city. This process is rapidly extending. It brings out this popular esculent, in midwinter, as tender and fragrant as when cut in the open ground, and there are always wealthy consumers ready for it, no matter what the price. But the planting of new beds does not keep pace with the increasing demand, hence the price will certainly be maintained. An acre of good asparagus will yield a clear profit of \$200 yearly. Even more than this has been realized. But with ordinary good care, it may be set down as one of the best modes for investing money. One has to wait two to three years before gathering his first crop. This discourages men from planting; but they continue to plant peaches and grapes, though they also withhold their first fruits for as long a period. All our very lightest lands are great producers of asparagus. A dozen acres thus planted will make a family comfortable, as the returns are sure.

It was generally supposed here that grape growing would not pay. But though every garden in and near this city contains vines which never fail to bear, yet no one embarked in the field culture of the vine. Of later years, however, numerous small vineyards of Concord have been planted. Every one of them has fully succeeded. The owners have gathered large crops, and sold them last year at paying prices. The soil, whether light or heavy, has been thus shown to be congenial to the Concord. At least ten thousand ConCORDS will be planted in this vicinity the present season. So far, all our vines are supported on stakes.

The peach crop of 1869 was so unexpectedly large that its abundance reduced the prices for all cotemporaneous crops. It affected raspberries and blackberries very disastrously.

The former were never before sold at so low a figure. Blackberries felt the full force of the peach glut. They sold freely and at good paying rates, until peaches came into market, and then, as all the world prefers peaches, the low prices at which they were sold induced the fruit consuming public to switch off from the berries. The result was that blackberries, of which there was an enormous crop, ceased to sell, and thousands of bushels perished ungathered. Such a conjuncture of things had never occurred until then, and it is not likely that so damaging a peach crop will be gathered for the next twenty years. Hence the owners of berry fields are far from being discouraged. Such portion of their crop as ripened early, paid well. It was only the tail end that produced no money. If some one had then been prepared to buy that tail end and convert it into juice or wine, a good business could have been done for all parties interested. Notwithstanding the general drawback of low price for blackberries, an owner of a six acre field, where the soil is very light, and consequently very early, informed me recently that he cleared from that field \$900 over cost of picking and marketing. His early soil brought his berries into market in advance of the peach glut, and hence his better success over many of his neighbors.

The strawberry crop came into market before the peaches, and was not injured by the glut. We had a large yield on the vines, as well as millions of them. I have occasionally, for months past, been catechising my neighbors touching results with their strawberries. The testimony is universal that all who had good fruit realized handsome profits. There was no time during the season that prime berries did not bring a top price. I saw two crops that all sold at from sixty to seventy-five cents a quart. I saw another, of the Albany, covering an acre, which yielded \$540. It cost about \$100 to cultivate it. All these were prime berries. If the owners had had five times the quantity of fruit, they could have found as ready sale at like prices. It was the poor, mean, slipshod growers, who were unable to obtain over six to ten cents a quart. The case, as regards strawberries, has, therefore, become a plain one—the mean fruit has ceased to pay the producer, and he must cease growing it. It has become equally plain that prime berries invariably command paying prices. Of poor berries there is a regular annual glut; but in choice ones it is unknown.

Our three large canning establishments put up last summer about a million quart cans of tomatoes, besides immense quantities of corn, asparagus, pickles, beans, peas, &c. They use up the produce of a thousand acres around them. The practice has been for them to purchase, by contract, the future crops of the neighboring farmers. But this winter they have refused to give us old prices. Instead of thirty to thirty-five cents for a three-peck basket of tomatoes, they now offer to buy at a half cent a pound, about twenty cents a basket. It is doubtful if farmers will produce them at that figure. But the low bid is symptomatic of lower wages for labor. If the price of produce is to come down, wages must follow suit. Taking the average results of last year's operations, it is found that farm labor has been too high. We must, therefore, in some way reduce our expenses. Labor must bear its share of the reduction. If the commission men who sell our products in the great cities would join in the movement, it would be quite an item to us. M.

Wanted.

INFORMATION, as to a cheap, effectual plan of a small home Conservatory, and the best means of heating it in cold weather. How much coal will it require for 24 hours to keep up a proper and regular degree of heat, and at what temperature should it be kept during the different months, from September to May? I am aware that there are books treating on these subjects, but none I have ever seen fully answer my questions. A detailed plan of one attached to the south end of a dwelling, which is to be entered only from that dwelling, and hence with a roof sloping only one way (south); also, as to whether or not there should be glass except on the roof, and whether a stove or furnace is adapted to it—and if either would do, how made, etc., etc.—would convey the information herein sought? I desire to erect one, and doubtless thousands of your readers would be equally benefitted as I would be.

STANFORD, KY.

WOODMAN.

Design for a Bird House.

THIS design was erected for Prof. Silber, Berlin, Germany, and our description is from the original text in the *Generbe helte*.

This house, intended for a Pigeon Cage, was planned for the decoration of a garden, and is, therefore, somewhat richer than usual in its appointments.

The material is of wood, principally spruce and oak. From the base rises the column, varying in height, according to taste, from 10 feet to 20, or more, which must be well fastened and braced beneath, to guard against the possible overturning by a strong wind. The column should pass through the pigeon cage until it reaches the rafters of the roof. Into the top of this column is fastened the iron bar, which bears all the brass ornaments and the flag-staff. A gallery surrounds the entire house for alighting, or to permit the birds to move around, and eat of food that may be strewn on the floor. Being constructed of neat carved work, it is very ornamental. The shape of the house is that of a sexagon; in five of the walls are little glass windows, and the sixth, which is the passage door, is also provided with a glass window, so as to afford a thorough inspection with regard to cleanliness within, which is indispensable.

The walls are made of solid boards, each division having two parts, which can be easily detached so as to allow all the operations of cleaning and fixing the nests to be performed. The interior boards are fastened by hooks; the exterior ones by means of wooden screws. The remaining space of two to three inches can be filled with straw, so as to give more warmth. The nests are all fastened around the column. The passage hole is covered by a perpendicularly-moving window, with a colored glass, and can be opened or fastened by means of a cord.

It was the desire to adopt such forms as would correspond with the material and its construction; especially care was taken that the whole could be constructed with the simplest tools, such as saw, gimlet, plane and chisel, and by the simplest of workmen—a point in architecture quite desirable.

Fruits of the West, Old and New.

HAVING been one of the first settlers of the prairie country of the West, it may be interesting to some of the numerous readers of the *HORTICULTURIST* to have a short account of our native fruits, as found in its wild state.

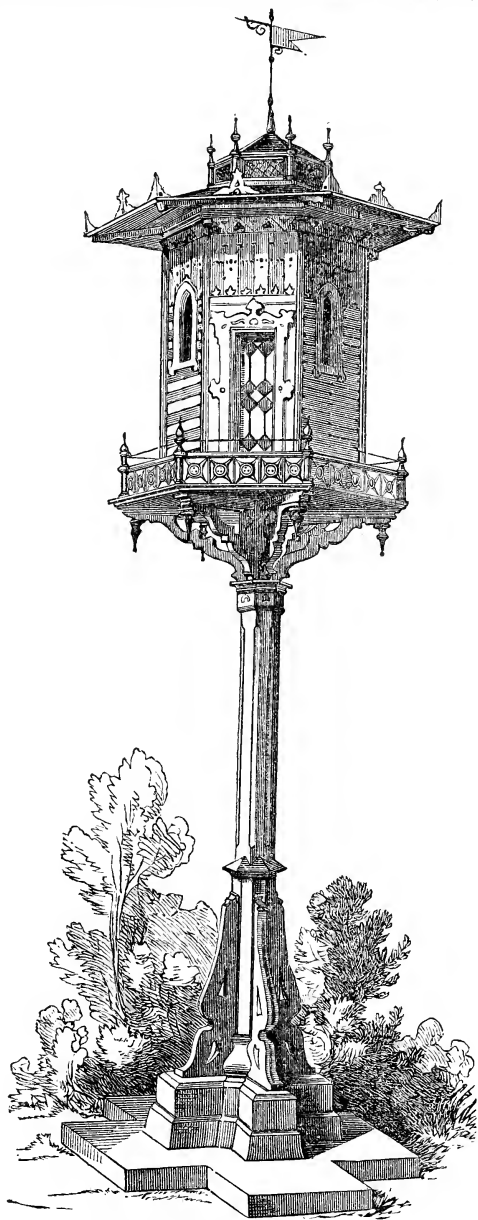
Strawberries were plenty, and larger and better than those of the meadows of New England, because they grew in a soft, rich soil, not so sward bound with grass. Much of our native prairie had a sward as hard and stiff as any blue grass sod I ever saw; but we found no strawberries there. They usually grow at the edge of the timber, where there were some scattering trees and some decaying logs, with a dry, loose soil. In such places I have found them very plenty, of medium size, and rich in flavor. The hogs were the greatest destroyers, by devouring the roots, and of late years we find none worth picking in this part of the country, of thirty years settlement.

Raspberries.—None were found but the Black-cap, though north of the middle of Iowa and in Wisconsin, the red raspberry grew.

Blackberries were plenty in many places, and are to this day—about the same in quality as the wild ones of the East.

Plums.—I think the curculio must belong to the civilized world, for the wild plums were quite free from the attacks of these pests; but of late years all the best and sweetest flavored, wild as well as tame plums, are stung; yet in some of the plum thickets, a little remote from the garden and farm, very good plums are occasionally found. The trees are about ten feet high, many of them less, and from one to four inches in diameter. They were very plenty and abundant bearers, and some of the fruit equal in size and quality to the second-rate cultivated plums. They were of various hues, from golden yellow to almost crimson. Some were green, but we seldom found them of good flavor.

Crab Apples.—Very plenty, but of a sour, astringent flavor; yet the people made sauce, and pies, and preserves of them, and a thorough lover of fruit, like myself, accepted such cookery without a murmur—yes, with thankfulness and hearty good relish—best could be done.



Design for a Bird House.

Grapes.—One variety only—the little blue, sour grape—made a good pie, with plenty of sugar. They also make a good red wine, with one half water and plenty of sugar. The pure juice is as thick as blood.

Of *Nuts*, we have the hazle, the hickory, the butternut, and black walnut, but no chestnut, or beech. I have planted the chestnut, and they bear nuts at seven to ten years, and continue to bear regular. Thus we see that the early settlers were better provided with fruits than they were with many of the other necessities and comforts of life.

We are making good progress in the way of introducing new and valuable varieties of fruits. No sooner do you start the Wilson seedling strawberry than it is transported to Iowa, in 48 to 60 hours. We are enthusiastic and impulsive, and some among us will buy a humbug as readily as a genuine—that is, a Mexican everbearing as soon as a Wilson—but our noble Horticultural Societies soon separate the genuine from the bad.

We think we excel the East in the apple and the grape, while you excel us in pears and quinces. I have succeeded with the pear very well. I have commenced a young pear orchard, by mixing in evergreen trees, which will somewhat modify our hot, dry climate.

SUEL FOSTER.

Landscape Gardening.

BY ROBERT MORRIS COPELAND.

Forethought Better than Afterthought.

THE necessity for deliberation and forethought in planning country improvements becomes more apparent as we progress in the development of a place—the site selected by its peculiar characteristics involves and compels a certain amount of expenditure, which may be increased by the unwise location of buildings, avenues, &c. It is the duty of an architect to adapt his house to the place where it is to be built; but it would generally be to his business advantage to put it in the most conspicuous position, in order that passers by may see and appreciate his skill. Many questions group around the house, the relation of the rooms to the view, to the lawn, to the garden; how the avenue may best approach the house, and many other considerations which are not the architect's speciality. To understand these questions perfectly and be able to guide his client aright, the architect must acquire a particular knowledge of an art which is sufficient in itself to occupy a man's whole attention. If the architect tries to acquire this knowledge, and practice both arts, he will be likely to excel in neither, and to give unreliable advice, although there are men whose natural aptitude for the treatment of grounds, enables them to give valuable general advice without undertaking to enter into minute details.

The proprietor must, therefore, control the architect, and settle for himself many of the important points of location and aspect, and on the wisdom of the decisions he makes must depend the future economy of his undertakings. At this point, then, if not before, he should step in, cease his constructive labor and make a plan, which will show him just what he would like to do, and enable him to judge of the relation and balance of parts, and the effect of the whole work.

As he makes his plan, he will find questions continually presenting themselves, of what it is best to do, or to avoid; how much will be the cost of proposed improvements, &c., all these questions his plan will enable him to estimate, before he has committed ir retrievable acts and spent his money. He can easily decide on paper, by the aid of pencil and india rubber, whether it will be best for him to go on, recede, or change his entire plans. As he tries to make his plans he will learn to value the counsel that experienced men can give him, and to understand that it may be better to pay outright for education, in the form of advice, rather than to stumble into it through heavy bills for needless labor, lazy workmen, careless nurserymen, attended by constant vexations and disgust.

A house represents labor and materials, plans, skill, and taste in arrangement and design; the same is true of the surroundings of the house, and if we use unlimited labor and materials, minus skill and taste, the result will fall far below what might have been produced. As we study our ideas out on paper the things we have read, or which have been told us—which, as they passed through our ears, made little impression—acquire real significance.

To make a terrace here, fill out a slope there, raise a hollow to give good grade to the avenue, which seems so easy in talk, we find will require gravel and loam, and excavation, which is measured by dollars, and the amount of money we must spend to make our place, gradually appears; the necessary quantity of gravel and stones takes shape in yards and squares; the number of feet of sods, and hundreds of trees and shrubs stand definitely before our eyes. By thus forecasting the work, we can prepare to meet contractors or decide to employ workmen; can make ready to find our supplies of materials, visit nurseries, and select our plants, and by removing the sources of trouble prevent their ever becoming formidable. Such analysis of the work proposed enables us also to understand the value of special education, and we learn that education is necessary if men are to deal efficiently with the earth and develop out of it, by the aid of grass, flowers and trees, the beauty which we have learned to value and desire.

No amount of study or education will prevent many unexpected delays and unforeseen expenses, but we can fit ourselves to meet them calmly, and reduce their number and amount by plans made in advance. We can also, by this preliminary survey, decide whether it will be best for us to have the pleasure or vexation—as it may turn out—of doing our own work, or being our own superintendent and counsellor, or to employ some competent person to expand his or our ideas without our having any personal responsibility and annoyance beyond the first decision as to what shall be done, and the payment of the necessary bills.

Whichever course we take, will be beset with more or less difficulties; contractors and workmen will be unreasonable, and expenses heavy; but having thoughtfully studied the dangers at a distance, they will seem less when we approach them; and not expecting the path to be free from stumbling blocks, we shall take our falls with some composure.

In making a country place, the most fertile source of disappointment lies back of the actual cost and amount, of the work we propose to do upon our grounds, in the disproportion which exists between what we want and what we can afford.

We know that the peculiar pleasure which distinguishes a home in the country from one in the city, lies outside of the house; we expect our pleasure to come from the lawn, the groves, the garden, or the landscape. But when we begin to build we remember most keenly all the discomforts of an ill-arranged house, and the ugliness of many of the houses which are built, and we hope to combine in our own all that is comfortable and tasteful inside, with external beauty. As we discuss what we want, and decide upon what we must have, a house gradually develops which will consume more than all we ought to spend on both house and grounds; and we see that if we build the house we must starve the grounds, and if we save for the grounds, we must content ourselves with an unsatisfactory house.

Most men escape this dilemma by presenting to themselves the lavish generosity of Nature, who, for one bushel of seed gives forty fold, and teach themselves to believe that the house once made, the grounds will in some way make themselves, and when the time comes to do the work, instead of being calmly and philosophically prepared to undertake the necessary expenses, hate the idea of spending another dollar, and even grudge the cents.

Under such circumstances it is impossible to have a satisfactory country place, whoever is to plan and carry out the work; but the irritation and disappointment do not belong to Nature or the landscape gardener, they are the usual attendants on desires, which are larger than the money which can satisfy them.



The Culture of Small Fruits.

An Essay read before the Concord, Mass., Farmers' Club, January 6, 1870. By Capt. JOHN B. MOORE.

IT is generally understood by the intelligent portion of our community that the use of well-ripened fruit at all seasons of the year, is necessary, and really essential for our health and comfort. That in the long-continued terms of heat which we are subjected to almost every summer, when we become debilitated to some extent, small fruits, the strawberry, raspberry, currant and blackberry, are particularly agreeable, not only as an article of food, but as a cheap luxury; cheap, because they promote health, and because they can be so readily served upon our tables. They are also a cooling and invigorating article of diet for the invalid, and a preventive of sickness in many instances.

In the cultivation of the strawberry, I would select a good, strong soil, rather moist than dry; but if quite wet I should want it underdrained. With us it would be sandy loam, as that is the nature of most of our soils. Many growers prefer a mixture of clay, but a good sandy loam is a good soil for strawberries. It should be old ground that has been cultivated with some hoed crop one or two years, and should be free from weeds and foul grasses. As a rule, strawberries should never be planted on sod ground, as on such they are very liable to be destroyed by the large white grub. The soil should be well enriched with manure, somewhat decomposed, and a portion of it should be near the surface, for the purpose of giving the plants a quick start. The soil should be thoroughly worked both with the plow and harrow. If there is danger of water standing on the surface, either in summer or winter, it should be ploughed into beds, leaving the dead furrows open for surface drains.

Having prepared the soil and made it perfectly fine, the next thing is to prepare the plants. Let this also be done well; be sure and have good plants; cut off all the runners and dead leaves, and about one-third in length of the roots. If the runners are left on, many of the plants will be pulled out of the ground with the hoe. When the plants are ready for setting, see to it that they are not exposed to the drying winds before planting. Set the plants in straight rows, and of a uniform width, as early in the season as possible after the soil is dry and in good condition, say last of April or early in May, so that the plants may become established before dry, hot weather. The next thing is to cut away all the blossoms as soon as they make their appearance, or the plants will bear fruit and become exhausted the first season. The after cultivation is simply to keep the ground loose, and entirely free from weeds, not only in summer but through the fall, even to snow time.

To secure a good crop, it is necessary that a large portion of the labor for its growth should be performed the first year. About the first of December, the bed should be covered with coarse hay or straw, rather thin, but evenly, to protect the plants in winter; this completes the first year's work, and it is now too late to remedy any defects from bad cultivation, bad plants, or want of manure. If the grower has unfortunately allowed anything of the kind to happen, he must take the consequences, which will be a less crop of poorer fruit.

In the spring, as soon as the ground becomes settled, the hay should be raked from the bed, the spaces or paths between the rows worked over, and the whole bed thoroughly cleaned from grass and weeds, and some time in May the paths and all vacant spaces covered with hay to keep the fruit clean. This constitutes the labor until the time of picking, which should be carefully and cleanly done, and without bruising the fruit.

After gathering the crop, the question of a second crop from the same bed, is to be considered. If the plants have been cultivated in rows or hills, and the runners kept cut off, then I would keep it over the second year; but if in the matted bed system, I would plow them up immediately after the fruit is all picked, and sow with turnips or oats. If a bed is to be kept over the second year, it will be very much improved by mowing the foliage off clean to the ground, as soon as you have finished picking the fruit.

Raspberries.

Raspberries require a strong, rich and rather moist soil to succeed best, and should be planted in rows from six to seven feet apart, and three feet in the rows. When planted, the canes should be cut away nearly to the ground, so as to prevent their bearing the first year. Late in the fall, the tops should be bent over to the ground and covered with soil taken from between the rows. Almost every variety would winter-kill unless protected in the winter. In the spring, as soon as the frost is out of the ground, the canes should be uncovered and tied to stakes or a wire. I find a wire as large as a telegraph wire, fastened to posts and stretched directly over the middle of the row, about three feet above the ground, the best. Have the canes tied to the wire with a matting string, and spread evenly on the same. Do not save too many canes, or at least more than the roots can support vigorously, if so, the result may be poorer fruit and weaker plants. The ground between the rows should be worked over in the spring, and kept level, and, if possible, mulched with cheap hay. I use the same hay that has been used on the strawberries for that purpose. Raspberries are very sensitive to the drought, and mulching often saves the crop. With good care and manuring, the bushes will continue to bear a number of years.

Currants.

The currant is another small fruit, and is a general favorite, as it can be used in so many ways, and continues in bearing so long a time. It is also easily grown, but to grow it in its greatest perfection, the soil must be rich and well cultivated, and a portion of the old wood cut out every year.

There are two insects that trouble the current very much in some localities. I mean the borer that works into the center of a branch, and eats its way through the pith some distance, and finally destroying the entire branch. He can be kept down by frequent attention, cutting out all weak and sickly looking branches, and burning them. The other is the leaf worm, and is more to be feared than the first. They come at two or more times in the season, and if not prevented will eat up the entire foliage, which often causes a loss of the crop. They can be destroyed by dusting the leaves when wet with white hellebore, powdered, or by syringing with carbolic acid soapsuds.

Blackberries.

The high bush blackberry, when grown in perfection and well ripened, is one of our finest small fruits. This fruit was not cultivated until about the year 1840. The Dorchester was the first variety cultivated to any extent, and was brought into notice by the late Capt. Lovett, of Beverly. This variety was soon followed by the Lawton or New Rochelle, Newman's Thornless, and some others, and still later by the Kittatinny, Wilson's Early, and other kinds. Both of the last named varieties are thought to be more hardy, and to produce larger fruit than the Dorchester, but probably of no better quality.

The high blackberry is liable to have its canes killed in our severe winters, unless covered. The canes are stiff and brittle; some varieties more brittle than others, and are difficult to lay down and cover with earth without breaking them more or less. The riper the wood of any plant in the autumn, the more successfully it can withstand the cold of winter; therefore, it would be better to select a soil that is high, dry and warm, where the canes will ripen thoroughly, and not allow them to be stimulated by high manuring to make a large and late growth.

Many persons fail to produce satisfactory crops of fruit from planting varieties not naturally productive, or not adapted to their particular soil; for that reason it becomes very important to select the right kinds.

We want a variety that will grow well, be productive, of large size and regular form; of a bright, handsome color; of good quality, and firm enough to bear transportation without injury. It will be impossible to get all these qualities in one fruit, therefore, get as near to it as you can; but at any rate, if you are growing for market, see that you have a variety that is productive and marketable.

A person growing strawberries for market ought to plant two or three varieties coming in at different times in the season, if he can find them adapted to his soil. For profit there is nothing better than the Wilson's Albany,—for eating without cooking, there is nothing poorer in quality; still, it is good to yield, to ship and to can. Of raspberries, Knevett's Giant and Franconia are the principal varieties grown for this market. The Clara and Philadelphia are attracting considerable attention, and are said to be sufficiently hardy to bear our winters without protection. The two varieties of currants now thought to be the best for general use are the La Versailles and Dana's New White Transparent. Both of these have large bunches and berries; the white is tender fleshed, and not quite so acid as the red varieties, and is undoubtedly the best white variety in cultivation.

Now as to the future or continued demand for fruit, what will it be? A friend of mine, one of the best and most skillful growers of strawberries in the State, says that the market of Fall River consumed 2,400 boxes of strawberries in 1861, at an average price of seventeen cents per box; in 1868, 11,000 boxes, at an average price of twenty-five cents! The population increased in that period forty per cent; the consumption of strawberries over three hundred and fifty per cent!

There is a certain fascination attending the cultivation of fruits and flowers, and to be successful, it requires a more thorough knowledge of cultivation, preparation and adaptation of soil to the particular plant, including manuring, than it would require for some other crops. This, with the originating of new varieties, either by hybridization, or the natural variation from seed, is really the *poetry* of farming.



Editorial Notes.

Our Silver Wedding Presents.

OUR editorial duties are frequently relieved with the occurrence of many pleasant little episodes, and items of genial reminiscences. In this, the twenty-fifth and *silver wedding volume* of the cherished *HORTICULTURIST*, we receive from many of its old subscribers, who have taken it from its very beginning, redoubled tokens of esteem and good will. From far-off California, Canada and England, subscribers remember our anniversary with *silver* gifts, and as we write, the messenger of the mails lays in our hands the following dainty note:

LILLY POND COTTAGE,

SAG HARBOR, LONG ISLAND, N. Y.,

February 10th, 1870. }

HENRY T. WILLIAMS, Esq.:

Dear Sir.—Your January number of our favorite periodical informed us 'tis the anniversary of its Twenty-fifth Birthday—"The Silver Wedding Reception."—Our subscription we therefore send you in silver, a silver coin for each year—25 10c.—\$2.50, and the pretty pursemym wife insists you will value more than its contents, as it will tell you our love and grateful appreciation for the dear old *HORTICULTURIST*, associated with so many pleasant memories of the past.

With best wishes for your health and happiness, and a successful career towards the anniversary of the golden wedding of "our journal."

Sincerely yours,

J. W. S.

We open the letter and box, and find a tasteful purse full of the real old fashioned silver, and for once specie payments are resumed in our office. Thanks, friends, for your continued affection. It is the privilege of such a position as that we hold to talk so familiarly of such little incidents as this; for the circle of our readers, though not as large as that vast crowd of profitable journals whose issues are so large and frequent, are still none the less interested than ourselves in maintaining, with willing hands and unfailing zeal, a journal whose true field is to add happiness to rural life, and help to adorn country homes with the best of Nature's fir gifts. Our Silver Wedding Reception thus favorably begun, we hope will still continue, and the best evidence of our efforts are the excellent illustrations and contributions with which we fill our pages. Time will show that even these improvements will be succeeded with others still more tasteful and pleasing, and these again by others of increasing beauty. We mean "not to be weary in well-doing."

Small Trees.

QUITE a number of nurserymen have told us lately of the wonderful change in the sentiment of *orchard planters* in behalf of *young trees*. Where once large trees of at least three years growth were demanded at rates of \$40 to \$60 per 100, now the tendency is to trees of not over two years growth, and with a large proportion only one year old trees are preferred. We count this a healthy sign of horticultural taste. This is fulfilling the principle we have endeavored to inculcate, *beginning right*. Many who purchased *large trees* for *immediate planting*, now find that if the soil is well prepared, and young trees are well planted and taken care of, these will, in five or six years, be in a better condition than the others. The gain is not to the planter alone, but to the nurseryman, for land and capital which has hitherto been tied up for three years, can now turn itself over yearly, and prove doubly profitable. If the agricultural and horticultural press still continue to advocate as wise and excellent practices as this, we may expect in course of time not only a greater horticultural improvement, but unparalleled prosperity.

Tree Peddlers.

THE story reaches us that a tree peddler, in visiting a town in the West, returned after a few weeks sojourn, with orders for nursery stock amounting to \$7,000, while the local nurseryman could hardly count a \$1,000.

A tedious tirade is poured forth at intervals against these traveling agents, with how much justice we cannot say, for in many cases we think it possible the buyer does not get the best of stock nor the best of the bargain, still we do know a great many plant trees, and good ones, who never would have done it had not the agent visited them. The traveling agent is but a running advertisement for the house he represents. If he always sells good stock in any place, at any time, he can usually count on a good trade, and a good reputation there every year he revisits the same locality. Many nursery firms have built themselves up into a profitable and enviable eminence, in a strictly honorable manner, by the use of *agents*, who could never have advanced one-fourth as far as they have without them.

Good agents and good nurseries are an honor to the community, and the usual complaints against the short-comings of irresponsible parties, can hardly affect those of good established reputation.

We must in all candor say, that he who buys of an agent *on time*, as is usually the case, has generally to pay from fifty to one hundred per cent more than if he ordered direct for cash from the same parties. We know two parties who bought pear trees lately, one *on time* at \$450 per 1,000, while another for cash at \$125 per 1,000. Both were good trees, and equally good, but one was bought from a tree agent, and the other ordered direct from the nursery.

The principle of *long credit* is equally disastrous to the nursery trade as to the usual lines of mercantile business, but those who employ *tree agents* must expect to assume great risks and occasional heavy losses from irresponsible or really malicious purchasers.

The Grant Raspberry.

A NEW variety now grown at Canandaigua, N. Y. Is a cross between the Franconia and Brinckles' Orange, of delicate flavor, conical shape, very solid, productive, earlier and larger than the Philadelphia.

Fertilizer for Greenhouse Plants.

MESSRS. LISTER BROS. have favored us with a box of their new preparation *The Vitalizing Compound*. It is in the form of a fine powder, pulverized bone, and of the finest possible particles, almost so fine as to float in the air with the slightest possible breath. It is soluble immediately in water, and when used in moderate quantities as a liquid manure for greenhouse or window plants, it quickens them immediately into life and vigorous growth. As we have had a personal acquaintance with Messrs. Lister Bros. for several years, we can only add, that we have always found their statements perfectly trustworthy, and their articles perfectly pure.

Bicknell's Village Builder.

THE *Village Builder* is the title of a new architectural volume presented to us by Messrs. A. J. Bicknell & Co., of Troy, N. Y. It contains a few designs of cottages of moderate cost, and tasteful yet inexpensive exterior, but the major part of the book is devoted to larger structures, villas, churches, stores, country houses and public buildings. There are upwards of fifty large lithographic plates, well executed and explained, and to the professional architect it will be found a valuable accompaniment to the other excellent architectural works published by the same firm. Price \$10.

Editorial Acknowledgments.

WE are indebted to the following for flower and vegetable seeds: Alfred Bridgeman & Son, a selection of flower seeds. Hovey & Co., a collection of flower seeds. Commissioner of Agriculture, a large assortment of vegetable and flower seeds.

Pleasures of the Garden.

As the taste for the improvement of small fruit gardens increases and extends, we see the evidences in the disposition of the proprietors to order a *greater variety* for the purpose of experiment. That family that commenced two or three years ago with only the Wilson Albany strawberry in the corner of their vegetable garden, will feel this year a desire to add *something else*, perhaps a few more varieties of strawberries, the latest and best; or, perhaps, try some of the new raspberries, blackberries, currants, grapes and vegetables. As our country becomes more and more populous, small farms and village gardens will become more numerous, and choice fruits for these purposes will become in greater demand. To those who have a genuine taste for horticulture, nothing gives so excellent a satisfaction as the *specimen grounds*, containing all the varieties cherished by the cultivator. How interesting in fruiting time to test the difference in flavor, the size, color, firmness, productiveness, hardness; or, if shrubs are cultivated, to watch their beautiful bloom and habits of growth. We cannot fail of an intense gratification in a study so simple and useful as this, for while instructing ourselves it is an incentive to others to adorn their homes with similar improvements, and though disappointment must be expected, still the good success obtained in other ways must be more highly appreciated. A true horticulturist is not dismayed by occasional failures. There is enough, more grand and delightful beyond.

Iron for Fruit Trees.

WE have seen some notable instances of success from the application of iron filings to fruit trees.

A peach tree becoming affected with the yellows, and its long, wide, straggling branches having split apart in a storm, one of the gardeners took an iron spike and drove through the split parts, firmly fastening them together. The tree gradually recovered its health, and for several years afterwards bore very fine crops of finely colored fruit. The result was attributed, and we think justly, to the action of the iron on the sap of the tree.

At a recent meeting of the Farmers' Club, New York, Mr. J. A. Wagner, living on Long Island, about fifty miles east of the city, brought for exhibition prunings from his orchard, illustrating the effect of putting iron around the roots of peach trees. He took an old place, with twenty trees in the orchard, full of dead limbs, with yellow leaves, and the crotches oozing thick gum. He gave the earth a good top dressing of iron, breaking up old ploughs and stoves, and filing and scattering them well. The effect has been marvellous. The trees have renewed their growth, look strong and thrifty, the bark is tight, the leaves all green, and the borer has disappeared. He thinks the slag of iron furnaces ground up and spread in orchards, would prove a very valuable fertilizer for all orchards.

We have no doubt this success was attributable entirely to the application of the iron, but the rule will not always hold good for all trees, or all soils—there are conditions to success:

1st. In soils that are already heavy, and contain considerable mineral matter, the application will be of little or no value.

2d. Good, light, sandy or loamy land responds most quickly to its use, and if warm and well cultivated, the benefits are almost immediate.

3d. The kind of trees is also more important than all other points. On apple trees we think there would be very little benefit. On pear trees we know it is of the highest value, both in adding to the health of the tree and imparting a splendid coloring to the fruit at time of ripening.

But the *peach* tree is most sensitive to its effects. The specimen branch shown at the club by Mr. Wagner, was remarkable for its perfect health and luxuriance of growth. We could not say whether iron would be a perfect protection against the borer and other insects, as we think every tree needs an annual examination with the *fingers*, and no other specific will answer.

Iron slag is a poor article to use. *Blacksmith filings are always the best*; and a peck scattered around the roots of a tree is a sufficient application at one time.

Take Care of your Fruit Trees.

Nor long ago we saw two men endeavoring to plant a pear orchard of one thousand trees, and we watched their methods of planting.

They dug holes not quite two feet deep and two feet wide, into this threw a little muck, and then planted the trees. The field was naturally wet, and we thought should be drained. On looking for tiles we found none, and no evidence of drains except one drain of poles, running through the lowest part of the field, and not more than two-thirds of the way across. We could not help expressing the feeling that these men would see the day to regret so slight an attention to the necessities of fruit planting.

What will be the result? In holes with cramped space, cold ground, unpruned limbs, standing water, etc., these trees, costing fifty cents each, will in three years be reduced one-half in number, and the rest live an indifferent existence.

It would have been better to have spent one-half that sum on but *one acre* of land, simply planting one hundred trees instead of one thousand, preparing the ground well, draining thoroughly, manuring well, and then every spring and fall prune and search for insects and worms. At the end of ten years this little orchard would be in perfect health, a beautiful sight, and wonderful in productiveness. Most fruit growers attempt *too much*. Instead of concentrating their efforts upon a few acres, they spread their capital over many, and lose on all. True success in fruit culture comes only in *careful beginning, moderate progress, and thorough work*. *A little land well tilled brings a good purse well filled.*

Importance of Good Plants.

A CLASS of cultivators too eager to realize large profits, and with too small capital to cultivate properly, buy yearly an immense quantity of *cheap plants*, grown broadcast in some second-class nursery, hastily gathered, as hastily packed, and, if surviving the journey, are more hastily planted.

We have had ample opportunity to see the class of articles sold by these *cheap dealers*, and in nearly every instance we found them the *dearest* purchase one could make.

For instance, if we go to a responsible man, who asks ten dollars per thousand for strawberries, we are pretty sure of getting *good plants, genuine, well packed*, and at the end of the season we find them all alive, vigorous and healthy; but if we purchase from a *cheap nursery*, we find after many disappointments our plants are *mixed*, poor quality, starved, poorly packed, and have a natural tendency to *die away*, so that at the end of the season the living plants have cost as much as those bought at ten dollars.

The effect of such *cheap prices* is simply this, it creates a class of poor cultivators, who produce

only poor fruit, which practically ruins the market, and we see glut after glut, when there should be a steady advancing tide of prosperity.

We say to all purchasers *get good stock*; do not aim to put out too much the first year, avoid cheap dealers, grow only choice stock, and your visions of good fruit and steady prices will be realized without great effort.

Greenhouses of George Such.

WE spent a few hours lately very pleasantly in the greenhouses of George Such, at South Amboy, New Jersey.

Mr. Such has made the *Gladiolus* a speciality, cultivating several hundred varieties, and having in front of his residence, in a long bed, as high as 100,000 at a time. This flower, so beautiful and delicate, needs still greater popularity than it has yet gained, and a bed of these in full bloom, is a reminder of our obligations to those horticultural patrons who take delight in introducing and improving lists of new and superior varieties.

In Mr. Such's houses are many rare and beautiful *Orchids*, *Marantas* of exquisite foliage, new varieties of the *Coleus*, and other horticultural varieties not often seen or even heard of.

Mr. Such has remarkable success in production of plants, and the quality, health and vigor of everything in his collection, speak highly for his floricultural skill and taste.

New Roses.

WHEN in Philadelphia a few weeks since, our attention was called to a few new varieties of roses lately imported by Mr. Dreer, from England and France.

Aurora de Malin—New hybrid perpetual, delicate pink color, very fragrant.

General Desaix—Hybrid perpetual, deep red, petals well turned, beautiful blossom.

Comte Ruinebaud—Very deep red, has little fragrance, but a flower almost perfect in form.

La France—New, hardy, very free bloomer, and fine perfume. Hybrid perpetual.

Jean Hachette—Brilliant crimson.

Prize for a Blue Dahlia.

A BOTANIST in England has offered a prize of \$20,000 for a blue dahlia.

The Flemish Beauty Pear.

IN many localities this beautiful variety is a perfect failure, owing to blight, but in others it escapes for a long series of years. For instance, we have just taken up a western journal containing an account of a visit to four different orchards in Wisconsin, in every one of which the Flemish Beauty was a perfect success, and the owners were intending to plant largely. In one orchard a Flemish Beauty pear tree yielded two and a half bushels; in another was a tree seven inches in diameter, and had borne for a number of years.

We say now as we said before, *plant moderately* of doubtful varieties, but we would be loth to omit the Flemish Beauty from any list for a fair trial.

Belle Lucrative Pear.

WHEN the *good time* comes, in which people will judge of fruit by *quality* rather than size and color, we speak a good word for the Belle Lucrative pear, a splendid grower, a beautiful tree, productive, healthy and *perfectly delicious* in its quality. Fruit growers do not omit it in your lists for garden or field planting.

Attar of Roses.

THE beautiful perfume known as *Otto of Roses*, is made (the genuine article) at Umritsur, India, and is produced from a rose that blossoms only once in a year. Ten tons of petals of the ordinary country rose (*Rosa centifolia*), are used annually in attar making at Umritsur, and are worth from twenty to thirty pounds a ton in the raw state. The petals are placed in the retort with a small quantity of water, and heat is applied until the water is distilled through a hollow bamboo into a second vessel, which contains sandal-wood oil. A small quantity of pure attar passes with the water into the receiver. The contents of the receiver are then poured out, and allowed to stand till the attar rises to the surface in small globules, and is skimmed off. The pure attar sells for its weight in silver.

The Gardeners' Monthly.

UNDER the direction of Mr. Meehan, the *Gardeners' Monthly* has closed its *tenth year* and enters upon its eleventh. Besides the *HORTICULTURIST*, this is one of the instances of successful horticultural journalism in the United States.

We always read Mr. Meehan's articles with appreciation, and believe no horticultural writer has a better practical knowledge of rural life, gardening and floriculture.

Other horticultural journals occasionally appear, with ambitious pretensions, but fail sooner or later, because they are not practical enough, and have not measured sufficiently well the difficulties of publishing a horticultural journal.

It is of very little use to aim to maintain a *high tone* in a journal at the sacrifice of matter of *interest*. In no other kind of journal does success so much depend, as in providing reading matter of simple, plain, unpretending, practical, every-day gardening character. If we forsake this, *every thing is lost*. The *Gardeners' Monthly* and the *HORTICULTURIST*, are both established successes, travelling nearly the same path, well appreciated every where, and not likely to be run off the track by more ambitious rivals.

Cannas as Ornamental Plants.

STOKE NEWINGTON, LONDON, *March 26, 1870.*

EDITOR HORTICULTURIST: Take pity on a poor unfortunate fellow who has lately had too many irons in the fire, and has been, and gone, and burned his fingers. When I wrote on 18th Jan. last, the heavens and the earth appeared to be changing into Irish stew, so absurdly warm and wet was the atmosphere, and the barometer high and steady as a rock. A few hours after winter returned; the rivers and lakes were frozen, and for a time the traffic in the Thames immediately about London, was very nearly brought to a dead lock. With the exception of three or four halcyon days, it has been winter since then, and it is winter *now*. Snow is falling fast; the world is wrapped in a white blanket; not one leaf of thorn or lilac has expanded yet in this district, nor one flower of apricot or peach is open. The British horticulturist can take comfort of this state of things, for a late spring with us is usually the harbinger of an abundant summer. The variableness of our insular climate is most strikingly displayed in spring; we may have the heat of June in March, and vegetation be aroused into full activity ere its wonted time. But April may be characterized by keen frost, biting north-east winds, or a freezing slop made of rain, snow, sleet and fog, all mixed together, and the end may be the total destruction of the fruit crop, and the blackening and shriveling of every green leaf. We are proud of James Thomson, and delight to invoke the season of renewal in his words:

Come, gentle spring, ethereal mildness, come;
And from the bosom of yon dropping cloud
Veiled in a shower of shadowing roses,
On our plains descend.

But you may depend upon it, every home-born Briton dreads the spring, and as the dreary days go by, with sleet, and snow, and rain, and delusive sunshine, sighs for a more constant clime, and would gladly exchange for a summer of only three months duration, if he could only be sure of it. Depend upon it, the frequent renewal of a feeling of discontent, which the changeableness of the spring induces in men's minds, is one of the principal causes of emigration from these parts, for it prompts many to quit the country who could do well, and have been doing well, and have positively no reason for emigrating except that they are sick of the climate. In my journey home from town yesterday by train, the talk of the whole company—consisting almost exclusively of city men—consisted more or less in abuse of the weather. One young fellow, apparently fit for any climate, and any sort of work, heaved a sigh as he stepped in, and said, "I should like to get out of this beastly climate." An old man of the most venerable cut, responded, "so should I, but I couldn't get my living any where else—your time's all to come." These matters may not interest you, but I shall justify them because they interest me, for the chief consideration in the endeavor to convey any useful information to readers on your side, appears to be, to what extent do our respective climes agree and differ.

Now here's a case which interests me much. In the first place, the varieties of the *Canna* are acquiring immense popularity in this country, and indeed throughout Europe, both as necessary and noble elements in "sub-tropical" gardening, and as suitable subjects for conservatory decoration. You do not need to be told that in the books the *Cannas* are described as stove herbaceous perennials, but it may be news to you that the *Cannas* are now established here as hardy plants that may be left in the ground throughout the winter without the least fear of injury, provided they are sheltered by a thin sprinkling of litter. In 1857, we had a large lot of *Cannas* in the experimental garden, and they ripened seed abundantly. In 1858, a stock was raised from our home-grown seed, and hence every year until 1865, we grew *Cannas* from the seed of the previous year, and only left off then because we were tired of it. This was virtually to bring the *Cannas* into the category of half-hardy annuals, because, of course, the seeds were always started in heat. It was reserved for one of our ablest men—I will say also for one of the gentlemen of the profession—to do better for the *Canna* than that. Mr. Gibson, the superintendent of Battersea Park, took to leaving beds of *Cannas* in the ground, giving them the protection of a coat of straw, over which a little earth was thrown for the sake of appearances, and the experiment proves first, that these noble plants may be safely kept that way; and secondly, that the proper way to grow *Cannas* is to treat them as hardy plants. When thus left out, the next growth is gigantic; they flower profusely; their ample leafage determines for them the highest place in the ranks of decorative plants for the summer garden.

So far good, but the subject is not disposed of. In the southern parts of France and Italy, where the climate is favorable to the undertaking, the improvement of the *Canna* is being carried on in a systematic manner, and the results already obtained are at once valuable and wonderful. First amongst the practitioners in this line, I must name my excellent friend, M. Jean Sisley, of Lyons, who has originated an entire collection of cross-bred *Cannas*, possessing the most various, and the most pleasing characters. M. Sisley gives this simple prescription for the cultivation: "treat the

Canna precisely as you would a dahlia." His practice is to take up the roots in autumn, and store them in a cellar. At the end of March he brings them out, and starts them into growth in a temperature of about 60° Fahr., and in May the roots are planted. Last year M. Sisley sent me dormant roots of all the best *Cannas* known, and instead of starting them in heat, we simply potted them in sandy stuff in small pots, and put them on a top shelf of a cool greenhouse, where the heat of the sun started them nicely, so that in the second week in June they were fine strong plants, fit to make an immediate effect in the flower garden. I shall not attempt to enumerate the species from which the improved varieties have been bred. You will find them in the books. It must suffice to say, that in characters the new varieties take a very wide range; some are tall and stately, with immense leaves of the brightest shade of green, and pale lemon colored flowers. Others have become tinted or purple, and even black is blended with scarlet or crimson flowers. The more robust kinds will attain a height of six or seven feet (or more); others are so drowsy that they rarely exceed fifteen or eighteen inches. The sorts selected by M. Sisley, which have all been grown at Stoke Newington, are, I believe, the best among hundreds, and I think I may safely say, that amongst hundreds, a really bad one is not to be found, for in its original unimproved form the *Canna* is one of the most beautiful herbaceous plants in the world.

Amongst the newest field plants which are fast becoming favorites here, is the group of flourishing *Begonias*, as introduced by Messrs. Veitchii. One of the first in the series to make a sensation was *B. Pearcei*, named in honor of a brave collector who died honorably in harness. This is a charming plant for the stove or intermediate house; it has fine dark leaves and bright yellow flowers. Then *B. Veitchii*, with scarlet flowers followed, and with it a whole batch of varieties (not species certainly, though named as if they were), closely related to *B. Veitchii*, the best of which, because the most distinct, is *B. roseiflora*, with large rose-colored flowers, and extremely elegant habit of growth. We have lately flowered a still newer kind, which we prize beyond them all; it is called *B. diversifolia*, on account of a few slight variations in the prevailing outline of the leaves. The flowers are most abundantly produced, and being of a most cheerful tone of deep rich pink, are most welcome in the early months of the year. So far good. Again, these pretty plants thrive with the simplest treatment under glass, and flower in winter and early spring, if young plants are grown in an intermediate temperature for the purpose. But at least half a dozen of these new flowering *Begonias* promise to prove hardy in the milder parts of Britain, and it may be safely said, that *B. Veitchii* and *B. diversifolia*, the two best in the batch, are the hardiest of all. They will be invaluable for sheltered nooks in rookeries, and also for cultivating in unheated houses, with other plants that need a little shelter for their perfect development. We shall probably never see the Chinese primrose (*Primula sinensis*, or *P. prairiensis*), established in Britain as a hardy plant, but in France it is being done, and we may even cherish the hope that in the southern parts of Europe, and especially in the mountainous lands, this beautiful plant may soon become a common inhabitant of the wayside and the wild retreat. I went into a very old and dirty greenhouse of vast dimensions the other day, and saw the chinks between the stones of the pavement, and the whole surface of the brick walls, from the ground to two or three feet high, dotted with little tufty self-sown plants of this primula. On making inquiry about the origin of the crop, my friend, the owner, said, "oh, we grew a tremendous lot of seed last year for the trade, and towards the end of the business we were careless, and allowed the seed to ripen and run to waste." Having touched on the acclimatization of tender plants, it may not be uninteresting to you to learn that during many years past, hardy herbaceous plants have been shamefully neglected or cruelly abused in this country, but the taste for them is reviving, and they consequently occur as interesting features of floral exhibitions. A persevering neighbor of mine, Wight Ware, of Tottenham, has established a great trade in hardy plants, and of the more popular kinds grows pieces of five or six acres each, and can show hundreds and thousands of potted plants of some of the rarest kinds. The scarlet pelargoniums were the usurpers of the space and the attraction once bestowed upon herbaceous plants. But our amateurs now are less afflicted with the scarlet fever than for many years past, though the Zonale pelargoniums will never cease to be favorites, for the very good reason that we cannot do without them. One reason why the herbaceous plants are regaining ground is, that the pelargoniums have been so much improved that attention has been somewhat diverted from the parterre to the greenhouse. Sheets of glaring colors out of doors are less thought of than tri-color leaved and double flowering geraniums. Taste soars higher; the eyes are less wearied with intensity of color, and the quieter beauty of the herbaceous plants obtains recognition. A few bold spirits here have labored by pen, by tongue, by example, to tone down the misdirected rage for color, and show that amateurs were sadly limiting the range of their out door pleasures, by giving overmuch heed to mere bedding effects. This sound argument has been thrust home again and again, that large quantities of a few sorts of plants afford less entertainment (to say nothing of instruction), than small quantities of many sorts of plants, and therefore collections are more to be desired than mere stocks. The argument has taken hold, taste improves, mere color and tinsel is less sought, and beautiful plants of all kinds, whether hardy or tender, obtain more and more attention, to the improvement of our gardens, and the enlargement of our recreative resources. But pray do not suppose that pelargoniums are going out of cultivation, for the truth is, the Zonale group, with its almost endless varieties, and striking dissimilarities of character, are now,

as for many years past, the most popular of all plants grown for ornamental purposes, and the first thing every amateur does on receiving a florists' catalogue, is to turn to the section devoted to "geraniums," and there lose himself for a season in names and descriptions, and by the mere black and white think "his very een enriched." In my next I shall endeavor to weave up a little geranium story, and perhaps offer you something new on the subject.

SHIRLEY HIBBARD.

The Best Cannas at Present Cultivated for Garden Ornament.

Auguste Ferrier (Chati).—Rhizomes small; stalks very thick, green; leaves very wide, oval, stiff, acuminate, deep green; fine carriage; flowers medium, clear orange, uncommon; height 3 m. or more. One of the finest Cannas after *Barilleti*.

Ann'ei rubra (Ann'ce).—Rhizomes good thickness; stalks medium, purple; leaves acuminate, deep green striped purple, good size, fine habit; flowers bright orange, well formed; one of the most free-flowering Cannas; height 7 feet.

Bihoreli (Jules Chretien).—Rhizomes conical; stalks purple, numerous; leaves deep green striped garnet; flowers medium size, clear vivid red; very free flowering; height 1 m. 60 c. to 75 c.

Barilleti (Chati).—Rhizomes conical; small stalks, very vigorous, garnet; leaves very large, wide, deep purplish green; habit magnificent; flowers small, orange, uncommon; height 10 feet. One of the finest Cannas after "A. Ferrier."

D'put Henon (Jean Sisley).—Rhizomes cylindrical, elongated; stalks green, of medium size; leaves glaucous, elongated, stiff, sharp; flowers large, well formed, clear canary-yellow, guard petals bright nasturtium, very floriferous; height 7 feet.

Daniel Hooibrenk (Jean Sisley).—Rhizomes big; stalks strong, green; leaves large, glaucous green, acuminate; flowers large, bright orange; free flowering; fine habit; height 6½ feet.

Edward Morren (Jean Sisley).—Rhizomes conical; stalks green, numerous; leaves clear green, longish; flowers large, well formed, yellow, very much spotted with bright nasturtium-color; very floriferous; this is the finest Canna with spotted flowers; height 6½ feet.

Grandiflora floribunda (Ann'ce).—Rhizomes cylindrical; stalks middle size, clear green, numerous; leaves medium or small, clear green; flowers bright orange, middle size; very floriferous; fine panicles; a fine plant of grand effect; height 1 m. 35 c. to 50 c.

Insignis (Chati).—Rhizomes cylindrical; stalks medium, violet-purple; leaves oval, sharp, delicate green rayed and edged with purple; very fine habit; flowers orange; very uncommon; plant remarkable; height 7 feet.

Mar ch'al Vaillant (Jean Sisley).—Rhizomes rather large, conical and cylindrical; stalks strong and abundant, deep purple-green; leaves large, elongated, erect, deep purple-green; flowers large, well shaped, pure orange; very free flowering; height 8 to 9 feet.

Pr mices de Nice (Ann'ce).—Rhizomes conical, cylindrical; stalks clear green, good size; leaves clear green, fine form; flowers large, very well shaped, very lively yellow; very free flowering; the finest Canna with yellow flowers; height 4 feet.

Rubra superbissima (Ann'ce).—Rhizomes large, conical; stalks of great size, garnet-red; leaves wide, round, large, deep very purplish green; flowers medium, orange-red; this is the finest Canna with purple leaves; height 7½ feet.

LYONS.

JEAN SISLEY.

Notes from Contributors.

Stable Manure, Muck and Commercial Fertilizers for Poor Sandy Land.

I AGREE to what you say about these in your March number, page 84; but when neither muck nor manure are to be had, as is the case in many a barren region, the only resort is to commence with guano, bones, superphosphate, or some special commercial fertilizer. I have plenty of muck adjoining my poor sandy land, near the sea coast of New Jersey, and am making a liberal application of it, also of all the stable manure I can get, which costs at least ten dollars per cord delivered on my farm. Still, as I had not a sufficient supply of these last season, I was obliged to resort to fertilizers for some part of my productions. The very dry season from early in July to late in September, told greatly against all my experiments, yet I found I could grow good corn, buckwheat, oats, peas, clover, beans, turnips, melons, pumpkins, and some other crops, with these fertilizers alone, on the poorest of Jersey sand and gravel. The smaller seeds, such as lettuce, parsnip, carrots, &c., did not vegetate at all, and beet seed very poorly. Whether this was owing to the drouth, I cannot say, but think not, as we had plenty of rain in May and June. The first seven products mentioned above may be turned in as green crops, more seed and fertilizers sown upon these, and then turn in again, till the soil is sufficiently enriched to bear large crops. Feed these off on the farm, and return the manure to it, and then you may do well enough. I will grant that the above is a slow and somewhat expensive process; but what can one do better when it becomes necessary to cultivate such land?

When Squankum marl is conveniently and cheaply obtained, it is especially good for grass lands. You can also raise fair crops of potatoes by composting one hundred pounds of Peruvian guano with one hundred bushels of the marl, and applying about one-third of a shovel full at the time of planting directly on the seed. More of this compost, however, will give larger crops, and enrich the land. One need not hesitate to apply at the rate of four hundred bushels of marl and four hundred pounds of guano to the acre, for potatoes. Lime has a good effect on poor sandy lands. Give twenty bushels to the acre the first application, following with ten bushels per acre for the three succeeding years. This is considered better by our old experienced farmers, than to apply fifty bushels per acre at a single time.

A. B. ALLEN.

NEW YORK.

Kilmarnock Willow.

I WRITE to request of you some information. If convenient to answer in your journal, please do so in your next issue, and oblige me.

There was a gentleman who showed me a tree he had bought for a Kilmarnock willow, which he said would grow on the Mahaleb cherry stock, but as the stock did not resemble the stocks I bought for Mahaleb, and as it seems to me that willow would not be likely to grow on cherry, I think he is mistaken as to his being a Mahaleb, or I have been deceived in my stock. Now please tell me what kind of stock it (the willow) should be grafted on, and the best mode of grafting them. Also where the right stock can be had. Best time to graft. By answering, you will oblige me very much.

SPRINGFIELD, W. VA.

JNO. C. NEWMAN.

P. S.—Having put out an orchard some ten or twelve years since, and the borers being bad on them, I tried common hard soap on them (having heard of washing with suds, but it being a big job to wash a large number of trees, I took a shorter way). About the last of April I took the soap and rubbed it all over the bodies and large limbs, and pressed lumps of it in the forks of the larger limbs, and during the summer, when it rained, the trees would be in a lather. In the fall, when I examined the trees, in some forty trees I found about six or eight grubs, and they seemed to be in the crevices where the soap did not reach them; in the other trees that were not soaped, I would get as high as half a dozen from one tree, and some of the smallest trees were killed by them. I rubbed the soap on until the crevices in the bark were filled completely. It is no doubt an old thing ere this, but is new to me, and is the best remedy I have tried except cutting them out and killing them.

Reply.—The Kilmarnock weeping willow is but a variety of the *Salix caprea*, one of our old common varieties, always found growing along our brooks and rivers. It was discovered in the west of Scotland, a few years since, and introduced into this country. The usual varieties of the willow are best propagated by cuttings placed in the ground and covered two-thirds their length, but the Kilmarnock can be grafted on the common variety. It must be grafted high, on the top of a strong, straight, stout stem, well rooted, very early in the year. Jno. Grigor, the eminent Scotch arboriculturist recommends this as the best way to graft all varieties of weeping willows.

Defect in Cherry Trees.

I LIKE to inquire if you or one of the readers of the HORTICULTURIST can give me the reasons or a remedy for a defect in the bearing capacity of a Gov. Wood cherry tree of mine. This tree was planted in the year 1854, and is now one of the finest looking I ever saw; it is really an ornament on my ground, and admired by every one who sees it. But where is the fruit? The tree blooms every spring most profusely, and sets its fruit well, but at the time the cherries attain about the size of a pea, the most of them instead of becoming round, grow in an elongated shape, and after awhile turn yellow and drop off, and on this account I never have gathered more than from one to two gallons of cherries from this tree in one season. Can any body tell me what is the matter? There is another malady which attacks our Prior's Red apple trees, which baffles all ingenuity to overcome it. Every June, for the last ten or twelve years, the leaves of the trees of this variety, young and old, are attacked by a sort of fungus, which appears first in the shape of little yellow spots, sprinkled over the whole tree; they grow larger, and become of a darker color, until the tree looks as if it had been scorched; consequently no further growth and no apples. Twenty years ago this variety was as healthy as any other, and it is indeed hard, considering the excellence of this fruit, to give it up as incurable. I am informed that this malady prevails over the whole State of Kentucky, more or less.

HENDERSON, KY.

JAC. REUTLINGER.

Reply.—With regard to your apple trees, we see no other way but to re-graft with some other variety. The fungus may be similar to that attacking the White Doyenne, and other varieties of pear, from which there may be no way of escape. Re-grafting may prove a decided help. The varieties to choose are those that have proved most healthy in your neighborhood. As to the cherry tree we can give no light or advice. Have you observed any insects either in the tree, or worms around the roots? In other respects your statement would seem to imply a healthy condition of the tree. Its leaves are not affected, and the ill maturing of the fruit must be from some other source than the blossoms or leaves.

Flowering Shrubs.

I HAVE been building a country residence, and want to ornament my grounds. Can you give me a list of ornamental shrubs, roses, select herbaceous flowering plants and bulbs, that will prove hardy without protection here in latitude 45°, and also those that will stand with slight protection? What varieties of known hardiness have been introduced in the last few years? Please give a list of the best.

J. T. GRIMES.

Reply.—Nothing adds so much to the beauty and comfort of a rural home as the use of an abundance of flowering shrubs and evergreens. We give a short list of those most easily grown.

Dwarf Double Flowering Almond is a low-growing shrub, hardly three feet high, blooming profusely in April, when its slender twigs are covered completely with delicate beautifully formed flowers, like miniature roses, and of white or rose colors. It is perfectly hardy, and is grown in all parts of the country. It should be planted close to the garden or lawn walks, and the large shrubs should stand more in the background.

The *Deutzia* is another shrub of little larger size, producing an abundance of white flowers, and growing in a fine, regular manner. There are several varieties. The *D. scabra* is a strong grower, and reaches the height of four to five feet, with orange-colored blossoms. The *D. gracilis* is a dwarf grower, hardly two feet in height.

The *Japan Quince* has become quite common in nearly all village gardens. In the early spring months, just as the leaves begin their growth, the crimson blossoms appear in the most wonderful profusion, invariably exciting the attention of the passers-by. It is a handsome shrub while young, growing to the height of three feet, and always beautiful in bloom. It needs severe trimming, as it will become straggling and irregular at the base of the stem and trunk, and lose all beauty of form. If well pruned, it is one of the most showy shrubs for the village garden.

The *Spiræa*, with its numerous varieties, is another interesting class of shrubs. They grow usually two to four feet, and the stems shoot out from the crown directly, and reach to great length, covered with beautiful flowers and foliage. The finest variety is the *Spiræa prunifolia flore pleno*, the flowers of which are pure white. The *Spiræa Donglassi* has pink or rosy flowers.

The *Snow Ball*, or *Viburnum*, is a shrub of largest size, reaching often eight to ten feet; very regular in its growth, and covered in May and June with flowers of largest size, of pure white color, exactly the form of a good sized snowball. Its foliage is large and broad, deep green in summer, but changing in autumn to a bright red, adds greatly to its handsome appearance.

The *Weigela* is another shrub, most beautiful in flower, and of easy culture. It grows in a round regular form, bearing upon its shoots and side branches large clusters of rose-colored flowers, which, added to its slightly drooping habit, makes it appear very graceful. The finest variety is the *Rose*, but the *Anabilis* has a large foliage, with a tendency to flower a second time in the autumn.

These shrubs will be found sufficient for an amateur just beginning gardening. There are other shrubs, which he will in time begin to love and appreciate, but which are not at first as attractive as those more easily grown and a little more showy. To every garden, besides these deciduous shrubs, there should be added a few *Norway Spruce*, either as screens, or to help out the beauty of the place in winter, when the leaves have all fallen, and nothing green save this is to be seen. The commercial value of shrubs in home adornment is very great; for we have no doubt many a place has sold more quickly, and for \$500 or \$1,000 more, because it had an abundance of beautiful shrubs and trees around. So we say no one loses by planting everything beautiful and tasteful.

Propagation of Raspberries.

WOULD it not be a practical suggestion that propagators of raspberries; in describing varieties new or old, give a statement concerning the method of propagating each, whether by *suckers* or by *tips*? It is very rarely done, and it seems to me to be an item of importance to the buyer, as we all know what an intolerable nuisance in the garden is the blackberry, and as we are *compelled* to put up with *that*, let us avoid root propagating raspberries. I am now speaking for those who, like myself, desire to test several sorts, in a small way, but who are not raising fruit as a business. Of course, parties cultivating for profit can afford to spare the necessary time and expense for keeping down the sprouts.

HENRY NEWMAN.

OSSAWATOMIE, KAN.

Reply.—Black Cap raspberries are propagated usually from the tips, but Red and Purple Cane raspberries are propagated from roots. We see no way to prevent the self-propagation of the latter class, than by persistent cultivation and eradication. The Clark raspberry is the worst to sucker of anything we have ever seen, and when it once gets hold in a garden, it can hardly be stopped.

Small Fruits.

EDITOR HORTICULTURIST: I was very much interested in an essay (in the February number), read before the Farmers' Club of New Brunswick, N. J. We think the writer is high in his estimate on the cost of growing small fruits in New Jersey. We are aware of the fact that they have to manure or fertilize their lands more than we do here in the West, but with all that, his figures are to

us fancy. This is certainly enough to disgust small fruit growers with the business, while the berry crops bring such prices as they have the past two years. Better grow corn and grass, or pigs and poultry, if growing small fruits cost \$150 and \$200 per acre for strawberries, and \$80 for blackberries and raspberries. We do not wonder at the wail going out from Vineland, that fruit farmers are disgusted with the business, and selling out at a great sacrifice. I have made small fruits a speciality the past four years; have raised more than one hundred bushels of Wilson's Albany strawberry per acre, and raspberries about seventy-five, the cultivation of which cost me less than \$35 per acre. The past spring I planted a new field of strawberries (three acres), that did not cost me over \$25 per acre to grow, including mulching with wheat straw in November. I never saw better vines, and I am confident I will have one hundred bushels per acre, or as many as my Jersey friend on his patch that has cost \$200 per acre. If our disgusted Jersey friends will come West, even to Missouri, twenty-seven miles south of St. Louis, on the Iron Mountain railroad, we will gladly instruct them in the art of growing strawberries at figures ranging from \$25 to \$35 per acre.

We must grow our berry crops with the least possible expense. These fancy figures will not do for profit. I believe in thorough culture, but when that is done, it is enough. I worked my vines the past season about every ten days, with cultivator and hoe, until 20th September. The second year I cultivate two to three times after the crop is gathered. I will say to our eastern friends, that this part of Missouri, is the finest fruit country in the West. Peaches scarcely ever fail on the high lands (the lands are near all high), and all the small fruits are a certainty. At this place we have facilities for shipping either by railroad or the river. Our river landing is about a mile, while the nearest station on the railroad is a mile and a half.

The flavor of our grapes is equal to any on the continent. Mr. Husman, author of *Grapes and Wine*, says we can beat California. Then this is a romantic country, abounding in ranges of hills, with deep, rich vallies. Many points we can see ten to twenty miles south and west, and a mile or more back of the Mississippi river, we have a magnificent view far over into Illinois. I will close this with a request that persons seeking situations to raise fruit, to come and see.

PEVELY, JEFFERSON CO., MO.

B. FRANK. SMITH.

Horticultural Notes.

Treatment of the Calla Lily.

It is an aquatic plant, and requires a large amount of water to keep it thriving. I have the nicest one I ever saw, and it is admired by every one who sees it. I keep the earth perfectly saturated with water, putting it on *warm* every day, and occasionally a little liquid manure. I shower it frequently. It blossomed in October, and again in January. It has put out some fifteen new leaves, the last of which are fourteen inches long, on a stalk two feet and four inches high. Care must be taken not to break the stalks, else the leaves will die, and the root also be injured.

No plants will *thrive* in an ordinary cellar. The *kitchen*, where the air is moist with the steam arising from boiling water, is the *best* place for house plants. If well "hardened off" in the fall, they will bear a temperature of 34° without injury. Any room containing house plants should have water kept upon the stove; and *should not* be kept *warm* during the night; *hot, dry* atmosphere kills them. Let them have the sunniest place in the house.—Mrs. L. S., Nunda, in *Rural New Yorker*.

New Coleus.

A CORRESPONDENT of the *Rural New Yorker*, who visited the greenhouses of Jno. Saul, Washington, D. C., is pleased with the new *Coleus*, *Her Majesty*. That this is the best one of the new collection, we are not prepared to say; for so many were beautiful, that when we decided upon one, the other presented a claim over which we could not rule. The claim of "Her Majesty" is its free habit, apparent robust constitution, and very broad leaves of deep bronzy crimson red in centre, belonging to *Verschoffeltii*, with a distinct narrow golden edge.

"Queen Victoria" is another, with a vigorous habit that will fit it well for out-door bedding, and many would, perhaps, consider it superior to "Her Majesty." It has bright crimson leaves, with a narrow margin of yellow-veined, or marbled with crimson.

"Princess Royal" is very bright in the color of its bronzy crimson leaves, and especially underneath, but its edge marking is less distinct.

"Baroness Rothschild," is considered by Mr. Saul, as "exquisitely beautiful," its leaves being of bright bronzy crimson, without stains or blotches, having a bright golden margin marked with light carmine.

"Beauty of St. John's Wood," is a compact grower, of a rich crimson color, margined with golden yellow. It is quite distinct, and very handsome. But it is hardly necessary to write of any more varieties.

It perhaps will not be saying too much for the *Coleus*, if we remark that for ornamental purposes, rapid growth, early culture and great beauty, whether in the open bed or border of the garden—in

the green-house, or as plants for table decoration, they are unsurpassed. As pot plants for table decoration, when placed under strong gas light, they are magnificent in their beauty.

Louise Bonne de Jersey Pear.

E. WARE SYLVESTER communicates to the *Country Gentleman* notes of his success with this pear. *As a Market Pear.*—The Louise Bonne sells well in market, and I append statements of the yield and gross proceeds of four rows in my orchard for the years 1868 and 1869. These rows are a part of an orchard of twenty varieties, so that they had no special advantage of sun and space, as do those trees which stand alone in the open ground. The orchard is one of those ridges so common in this region, and has an eastern aspect. These trees occupy four short rows ten in a row, making forty trees in all in the orchard. They were planted in 1858, and were ten years old at the time of the crop, which was in the autumn of 1868. The trees are on quince stock, and are trained to half standards, and are about ten feet high. The trees had received good cultivation, but have never been highly manured, as the soil, which is a gravelly loam, is sufficiently strong to produce healthy trees with moderate fertilizing. They were planted ten feet each way (I should now plant twelve or fourteen), and hence do not occupy but little ground; allowing for five feet of ground outside the rows, the amount of land is about one-eighth of an acre. The forty trees produced in 1868, forty bushels of selected pears, which sold in Washington Market, New York, for six dollars per bushel, average price, or \$240 for the one crop, being at the rate of *nineteen hundred and twenty dollars per acre*. These were not selected rows, but were all together, and all the Louise Bonne de Jersey trees there were in the orchard. In 1869 the same trees produced fourteen half barrels of No. 1, and one half barrel of No. 2. The pears sold in the same market at an average of six dollars per half barrel, and the No. 2 at two dollars and fifty cents, making \$86.50, or at the rate of \$690 per acre.

Quality.—Mr. Barry in the *Fruit Garden*, says, "Louise Bonne de Jersey, one of the finest of all pears, large, beautiful and delicious; it succeeds well both on pear and quince, but on the latter especially, it is all that could be desired." Mr. Downing says, in the *Fruits and Fruit Trees of America*,—"succeeds admirably on the quince, forming a fine pyramid—not of the first quality, but profitable. Tree vigorous, upright, very productive, fruit of better quality on the quince than on the pear." While some amateurs will differ a little as to the precise position in the flavor scale, the multitude, who are always pleased with a juicy, slightly acid pear, which has "character," will give the Louise Bonne a very high, if not the first position. For canning, this variety retains its flavor and firmness in a remarkable degree, and though some may prefer the musky taste of the Bartlett, yet the multitude I have no doubt will award to the Louise Bonne, the position of A No. 1, for preserving for winter use.

Distances for Evergreen Belts.

The ground for the reception of evergreen trees, may be the same as is usual for corn. Though with them, as with farm crops, the deeper the soil is stirred the better. The trees should be planted as deep as they stood in the nursery. The cultivation consists in repeatedly stirring the soil to the end of the season.

If we rightly understand the term belt, it applies to single rows of trees, or to plantations of a greater breadth. If single rows are to be employed, then at the end of ten years, and afterwards, trees standing ten feet apart will be near enough. If the breadth of the belt is to be widened to several trees instead of one line, then fifteen feet will not be too great a distance between the trees. At these distances they will longer retain the verdure of their lower branches than they could at nearer distances. We have a belt of a single row of Norway spruces, six feet apart, eleven years planted, which this early would be better with every alternate tree out. This belt already forms a dense screen to the height of several feet, but the lower branches, pointing in the direction of the row, are fast losing their foliage for want of room. A single look at a spruce twelve or fifteen feet high, will best indicate what its future want will be. So of other evergreen trees; to secure lasting belts, to be both useful and ornamental, room must be given in which the trees may grow.

In planting, especially where the surface would favor, we would avoid straight lines by passing around and near to the heads of ravines, partly over and around elevations. It should not be forgotten that by crossing over irregularities of surface, it is possible to vary the sky line of our trees so that as fine an effect may be produced in this way as could be expected by irregular planting.

However desirable it may be that our timber belts should present an irregular outline, yet in diverging from straight lines we must not lose sight of the future convenience in the cultivation of farm crops.—*Prairie Farmer.*

Removal.

OUR office having been removed to 5 Beekman street, subscribers will please address accordingly. The new offices are on the first floor (Rooms 5 and 6), very convenient of access.

Delivery of Premiums.

WE shall continue sending off premiums of Roses, Lilies, &c., until the middle of June. Subscribers will therefore be patient, and we will send as soon as we can get plants large enough and good enough to give entire satisfaction.



Vol. 25.

JUNE, 1870.

No. 288.

Horticultural Novelties.

BY THE EDITOR.

QUITE a number of Horticultural Novelties have been introduced the past two or three seasons that are of more than usual excellence. In many of the catalogues of dealers we are obliged to take enthusiastic descriptions with some grains of allowance: nevertheless it is a fact some very pretty little plants are not praised half enough, or if noticed do not take rapidly. We mention a few novelties that have come to our attention from reliable authorities, and trust that, wherever tried, they will be generally liked.

Hall's New Fragrant Perpetual Japanese Honeysuckle. (Lonicera Halliana.)

A charming new climbing Honeysuckle introduced from Japan by Dr. Hall a companion of Robert Fortune, and accustomed with him to make rambles through that country and collect botanical curiosities. It is rapid in growth, entirely hardy, producing an abundance of constant bloom, continuing without intermission from early summer until severe cold weather.

New Evergreens from Japan.

We are also indebted to Dr Hall for some valuable new varieties of Evergreens from the same country, which were selected from the best varieties then grown in Japanese soil, and transported by means of a Wardian Case to this country, where they are now being tested. Thus far they seem to have met with no injury whatever from severe weather, and we have reason to believe they will prove entirely hardy in most parts of our country.

Thuyopsis dolabrata,

resembles somewhat the Arbor Vitæ, but has altogether a grander habit of growth, the foliage is also more beautiful, the upper surface, nicked as it were with an engravers style, while the under surface is silvery white, presenting a beautiful appearance when agitated in the wind.

Thuyopsis variegata.

The variegated Thuyopsis is elegantly mottled and variegated on its upper surface with white.

Both attain a height of ten to fifteen feet, have a spreading form of growth and are beautiful, either as single specimens or to intermingle with flowering shrubs.

Retiospora Aurea,

resembles the Junipers, being an upright pyramidal tree, attaining a height of fifteen feet, having an elegant curled foliage turning to a rich gold color in the spring and early summer. It is hardy as well as beautiful, and will become more popular as it is more favorably known.

Dahlia Imperialis.

A Giant Dahlia of great height, from eight to ten feet. The flowers are single, and petals are of pure white with slight crimson spot at the base and radiates from a yellow disc. The flower is bell-shaped, droops, and when the plant is in full vigor some forty or fifty of these flowers are expanded at one time. It is valuable as a curiosity, although the strong upright growth prevents the stem from being very ornamental.

Abutilon Thompsonii.

Not very new, but a very desirable addition to our plants of ornamental foliage and easy culture. It has an erect graceful habit of growth from two feet upwards in height, has strong hardy branches, while the leaves are variegated in spots of yellow and light green over the surface. The colors vary in intensity from bright golden yellow to almost white, and the leaves also vary in amount of variegations, some being almost entirely covered with the variegations, while others are but slightly touched. The entire plant being thus irregularly marked has a beautiful unique appearance, and as it retains its variegations through even the hottest weather, it can be safely placed on the list of desirable plants for general recommendation.

Primula rubra grandiflora.

We met recently in a green house near this city, one of these charming little winter flowering plants; all our readers doubtless know the beautiful *Chinese Primrose*, which grows so freely and blooms so abundantly in our windows, gardens and green-houses during the winter and spring months. The above new variety is of a red or purple instead of white flower, and peculiarly vigorous in habit of growth. In a green-house of some sixty feet in length full of the white variety, we detected this new kind instantly on account of its prominent color and large size. We think it should be brought more prominently forward to the notice of the public. Few of our horticultural novelties can give half the delight to "window gardeners," as can this.

Dr. Livingston Petunia.

Still another beautiful novelty. Flowers very large, double, full, white petals with bright crimson centre, making a large handsome bouquet of itself, very showy and tasteful. Plant is very vigorous, erect, sturdy, yet the flower droops somewhat and needs the stake to support it. We would consider it thus far the finest of all Petunias mentioned in ordinary florists' catalogues.

New Coleus.

Some very desirable varieties are introduced this season, which are of superior richness of color and vigorous growth. The old *Coleus Verschaffeltii*, for so long the principal crimson ornament of the garden, is found almost too strong in its richness and its contrast with other foliaged plants is perhaps too coarse to be delicate. The new varieties harmonize rather than contrast and have a soft delicate shading in all stages of their growth, that chimes peculiarly well in all positions, they may be placed in conjunction with other plants. The kinds most desirable we would name as follows:

Her Majesty—centre of leaf, bronzy red color, with small margin of a greenish yellow color; leaves very large.

Princess Royal—very fine; centre red, with light yellow edge to the leaves.

Setting Sun—centre, dark bronze crimson, with lively golden edge, a very excellent variety, extremely vigorous, disposed to branch freely.

The *Albert Victor* is another new variety of still deeper tint, centre purplish red, with broad yellow margin, leaves spotted red under neath; rather course.

For any kind of bedding purposes, the three first named will be found most effective; their beautiful shades of color appear most vivid when a good side-long glance can be obtained of the leaves, between the observer and the light, or when in the ribbon bed it is contrasted with the Mountain of Snow or Mrs. Pollock Geranium.

Pelargonium.—*Andrew Henderson*,

Imported recently from England, color, rich deep scarlet lake; truss of extraordinary size, containing from sixty to eighty blossoms, the individual blooms are large, well proportioned and very double; habit vigorous, branching, and is undoubtedly a very desirable variety for conservatory pot culture or garden decoration.

Fuchsias.

Our lady readers must not forget that the two varieties, *Elm City* and *Marksmen* are still the best we have, although introduced several years ago. A number of new varieties have appeared, but we like the above the best. The *Elm City* is a large fine grower, flowers double, and dark red.

Marksmen—is very attractive, having crimson tube and sepals, while the corolla is of a rich dark violet.

Lady Cullum—*Pelargonium*.

A very beautiful and attractive novelty. Foliage large, "with remarkably broad and rich leaf zone, tinted with bronze crimson, and bordered with brilliant flame color." So the originators say. Our view of it was satisfactory although not quite as enthusiastic as the description. The flower is of a brilliant crimson, but the foliage is no more striking than the Mrs. Pollock; but no less valuable, one than the other.

We shall speak at some future time more particularly of new varieties of ornamental trees and shrubs.



The Weeping Beech.

Fagus Sylatica Pendula.

THE Weeping Beech is one of the most remarkable among trees of this character. It has less of the graceful than the birch, the willow or the ash, but it is bolder in its outlines, more massive and picturesque.

There is but little beauty in a young tree—it requires age to develop its true character. The main branches have a ziz-zag ungainly habit of growth, but the laterals bend outwards and downwards in grand arches. In large specimens branches may be seen curving down from a height of thirty or forty feet to the ground.

At the age of twelve or fifteen years the tree becomes beautiful. The picture of a young tree fourteen feet high, and another of fifty feet in London's arboretum, afford a good illustration of the fact that time is needed to develop beauty. A tree in our grounds about fifteen or sixteen years planted, is about thirty feet high. It was grafted ten feet from the ground. The trunk is three feet in circumference, and the spread of branches thirty feet in diameter. There is a very large tree in the grounds of Messrs. Parsons, of Flushing, and doubtless there are others about the country. It has always been a scarce and high priced tree, and, therefore, never so largely planted as its merits would justify. I do not know the date of its introduction. London quotes Loddige's catalogue of 1836, and speaks of a portrait taken in 1835, of a tree in the Kensington nursery. It has doubtless been in cultivation half a century at least.

It may be well to add that this tree, as well as the purple, copper and cut leaved varieties, are propagated by grafting on the common beech.

P. B.

Eastman Place, Poughkeepsie.

THE beautiful valley of the Hudson River has more treasures in landscape beauty than the hurried traveler would suppose. Here and there are glimpses of elegant villas and charming cottages, which break upon us like lines of light of exquisite beauty, as we pass rapidly by; but had we the opportunity to pass the portals to these beautiful grounds, and see their interior, we doubt not our pleasure would be intensified beyond description. Our illustration this month represents the villa of Prof. H. G. Eastman, at Poughkeepsie, N. Y., and displays an unusual elegance in style of architecture and richness of surroundings. The property has been reclaimed from a waste, uncultivated field, has been surrounded with beautiful trees, shrubs, flowers and gardens; a splendid marble topped wall graces its front upon all the streets, while a deer park, fountain and a magnificent lawn add a harmonious charm of picturesque beauty to make it perfect in its Eden like loveliness.

In the illustration is seen a fine gateway and a portion of the wall itself. This wall is built of blue stone, handsomely cut, with a heavy coping of white marble, the four gate piers, and the circular entrance being composed of solid marble blocks. It is but three feet in height, affording an easy view of the grounds to the passer-by, while inside the enclosure there is seen only a line of white marble caps above the evenly graded lawn.

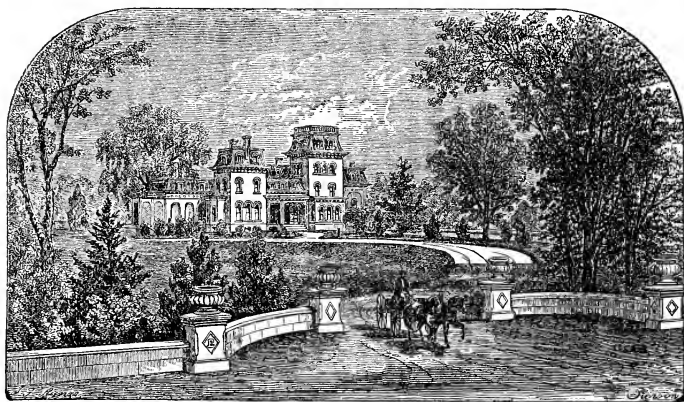
Great taste has been exhibited in its construction, and perhaps more pleasing than all is the generosity with which the proprietor permits his grounds thus to be thrown open to the view of the public or for free inspection within.

The Lawn.

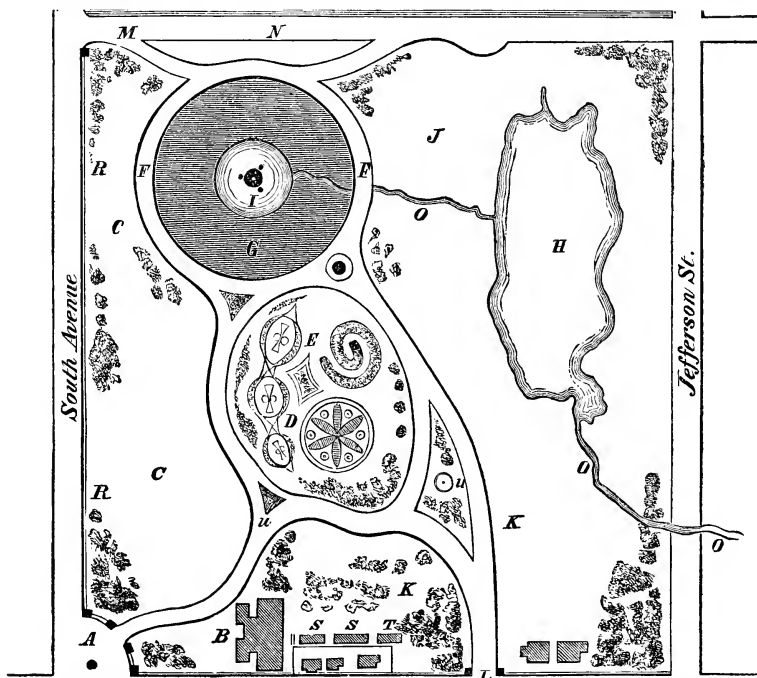
In such a place, perhaps the finest and most appropriate embellishment would be a beautiful lawn. Prof. Eastman esteems it as the most valuable improvement on his grounds, and has bestowed upon it unusual pains and labor. He says: "I read much on the subject, before I made my first attempt, determined that the work should be well and intelligently done. I then commenced operations by *draining, trenching, subsoiling, manuring, grading, plowing, spreading plaster of Paris and Peruvian guano, harrowing, picking off the stones and coarse bits of earth, and finally sowing seeds of the best mixture and quality bountifully, raked again, rolled it and waited for the result.* I had followed directions to the letter, at an *extraragant expense*, and expected to have a perfect lawn in a very short time. I have now waited four years and find it far from what I had reasonably expected it would be the next season. I have added greatly to the expense each year by weeding, reseeding, filling up the uneven places, etc., etc., but my disappointment at the result has been more than all.

"The next season I concluded to lay down four acres more, and to try another plan. I omitted two-thirds of the labor I had expended on the first lawn, and one-half the expense in manure and fertilizer. I simply plowed the ground deep, manured it as thoroughly as for a garden crop, graded and removed all stones and rubbish. I then purchased, for a small sum, from the farmers near the city, sod enough to cover the whole four acres. I selected this sod from low, mucky places, in ravines and between the hills from ground that had long been in grass. Selecting the sod from these uncultivated places enabled me to get just what I required, a sod of fine velvety grass, free from weeds and of unequalled richness, at a small expense. I prepared, at small expense, a cutter resembling a corn marker, except the teeth were of iron and thin and sharp. With this I cut the sod in strips a foot wide and eighteen inches long; then with spades lifted them from the ground at a uniform thickness of two inches. These were at once carted to the ground already prepared and laid down as evenly and firmly as possible, and with much less expense, labor, and time than would be supposed the entire lot was covered. I then rolled it thoroughly with a heavy roller. The sod being two inches in thickness showed no signs of being transplanted, and in *three weeks* from the time they were laid it presented a firm and even surface. I then mowed the lawn with a scythe, and a week later went over it with my lawn mower. This lawn has now been down for three years and speaks for itself. Suffice it to say it is a perfect success. It is the first to respond to nature's call in the spring, and the last to yield to her demands in the fall.

"It has never been weeded but once and has been cut from two to three times a week dur-



Eastman Place, Poughkeepsie.



PLAN OF PROF. EASTMAN'S RESIDENCE AND PLEASURE GROUNDS.—A. Entrance junction South Avenue and Montgomery street. B. House. C C. Lawn. D. Rosery and Flower Garden. E. Labyrinth. F. Circular Road, Terraced. G. Bowling Green. H. Private Skating Park. I. Pond and Fountain. J. Deer Park. K. Garden. L. Montgomery Street Entrance. M. Private Entrance from South Avenue. N. Terraced walk to residences above. O O. Kanning Brook from Fountain and Springs. R. Marble and Blue Stone Wall enclosing Grounds. S S. Greenhouse and Grapery.

ing the summer season with a lawn mower, and grows more beautiful and perfect every day. It is regularly top-dressed every fall with long horse manure.

"The above method has been tried by quite a number on a large and small scale, and found to succeed most admirably. After a careful estimate of the expense incurred in making the two lawns, I found a large balance in favor of the latter, to say nothing of the vexations and delay caused by the first plan. The two inches of sod was equal to a two inch dressing of manure, and the saving in this respect alone, to say nothing of seed and extra labor, was almost equal to the expense of sodding."

Ornamental Trees and Shrubs for Lawn and Cottage Garden.

(An address by O. S. WILLEY, before the Madison (Wis.) Horticultural Society.)

IN no pursuit of life will the time worn adage of "A place for everything, and everything in its place," apply with more force and application than in the successful collecting and grouping of Deciduous Ornamental Trees, Evergreens and Shrubs, for the lawn. Many, and I may say most, look upon Landscape Gardening as one of the intricate sciences of a late day, of which the masses know nothing, and one only to be practiced by the few who have given it their study, time, and attention, and who are classed as Professional Gardeners. I view it in quite a different aspect, as one of the most pleasant pursuits of life, a smattering of which may be acquired by us all, and beautiful in its bearing upon the mind of every man who owns ever so small a portion of God's creation. Now think what embellishment may be given to so many of our homes by a judicious use of trees! Is your building old and unsightly? Then make it the background of groups of trees. It would be nothing very strange to make the most "ugly" place of our city the most picturesque of all. If your front door is of some ancient order of architecture and you have not the means to remodel to a fashionable one, then plant a tree in front of it. And by some slight curvature of your walk to get around the tree, avoid an abrupt approach, and unsightly things may become a charm by combination.

Among evergreen shrubs perhaps nothing will give better satisfaction than the American arbor vitæ, (*Thuja occidentalis*) either for single specimens or hedges. It bears shearing well, and can be grown in any desired form, conical or square. I knew a hedge of this at the East, so firm from the use of the shears, and trained so broad upon its surface, (being nearly three feet) as to make a walk for any ordinary man. I wish we had more of this kind of planting in our western grounds. We are told they do not succeed. I would answer, the cause is in the management; neglect while young to properly shear or cut back, for if this is not done while young, the close planting of our hedges tends to make them lose their lower branches and become scraggy, but after the base is well covered no further trouble exists. Chinese arbor vitæ is equally hardy, finer, dark green foliage, of slower growth.

Hemlock (*Abies canadensis*) in its native habitat is one of the most formidable trees of the forest, but nursery grown, becomes one of our most desirable shrub evergreens; a little particular as to the location given it, delighting more in some cool and shady resort than in the bright sun; should be transplanted in the early spring.

Balsam Fir (*Abies balsamica*) is especially well adapted to our Northwestern, cold climate; sometimes called American Silver Fir, and is one of our most ornamental evergreen trees. As single specimens, forms perfect pyramids of dark green foliage. This and the Norway spruce *Abies excelsa* are the most desirable of the pyramidal growing trees, as well as the most rapid, often averaging more than two feet in height for a term of years. Mr. Barry records the growth of two, which he recently cut down, as being from two to three feet high in 1841, and on Nov. 12, 1869, when cut down, 64 feet high, diameter of trunk 20 inches; branches resting on the ground covering a circle of about one hundred feet in circumference.

White Pine (*Pinus strobus*), native of North America, should be planted much more frequently than it is.

Scotch Pine (*Pinus sylvestris*), is a valuable foreign sort; hardy, and this, as well as the Austrian Pine, (*Pinus Austriaca*) with the heavy green foliage of both, contrasts well with other trees. They are less pyramidal, which makes a happy relief where many trees are planted.

The class of Junipers, of which the American Red Cedar, may be taken as a type, deserves much more attention than they receive. The trailing or prostrate *Juniperus communis Depresso*, is a novelty in its way, scarcely ever attaining a height of more than a foot, but spreading out over the ground, forming a beautiful dark green bed, and so dissimilar from any and all others that it should be in every collection of moderate size.

This evergreen is never ostentatious and aspiring to overlook its entire surroundings, but humble, modest, creeping, as it were, along beneath its proud associates, its spray rising in beauty, but not loftiness, as if to peep about and watch, unobserved, its neighbors. I have seen it upon the banks of Lake Michigan, in the sand, covering a number of feet in diameter. It often grows from forty to fifty feet in circumference, the main branches lying or resting upon the ground in every direction, forming a dense, evergreen bed, often so much desired and sought for in city lots. Many specimens we have seen were as uniform and regular in their native wildness as though they had been pruned and cared for by man. It will answer well for covering mounds or planting in rock work. In the shade of larger trees, in barren soils, the rich prairie or garden soils, it is all the same. It thrives equally well.

The Savin (European juniper) is less uniform than most American junipers; succeeds well in almost any soil and forms a pleasant contrast by its low, dense, dark foliage.

In the list of Deciduous Ornamental Trees there are so many good ones it is difficult to give prominence to any; but probably the American White Elm, is fully entitled to the foremost position. It is a native of the entire United States, often attains an enormous size; prefers a deep, rich soil, but will adapt itself to the various localities of the country. With age it becomes quite drooping, so much so as to have acquired the name of American Weeping Elm. Many not conversant with the different elms make a mistake and dig the red or slippery elm, a tree very much its inferior in every respect. Next to the elm, we would place the Maple, silver-leaved, scarlet, and sugar or rock—all valuable in about the order named. The chief objection to the first is its tendency to split down. To avoid this, cut the top back, say at planting, and then in two years again cut back to nearly first cut, thus forcing a top with more branches, and by so doing avoid crotches. I have never seen a tree split that was thus treated.

American White or Yellow Birch is quite common in this State along the banks of streams and rocky cliffs. It is easy to transplant, and of rapid growth. There are several sorts, some more drooping than others. The European sorts, worked upon upright stems, help to make up that class of weeping trees which should have a place upon every lawn. The White Birch is perfectly hardy and ornamental, very vigorous and seems well adapted to the soils of the West. The beautiful silver or grayish whiteness of the trunk, often shaggy, as it is separable into paper-like sheets, in contrast with its surroundings; its strait spiral form, and, added to this, the long, dark, slender branches which, with age, become very drooping, and I can hardly name a tree that will give better satisfaction than this American weeping birch—either in clumps or single specimens.

The Linden or American Basswood makes a fine, clean shade tree. Its foliage is remarkably large. It delights in a good, rich soil, where its branches will form a handsome, well shaped head.

But it was not my intention to write for you a full description of all the valuable trees that might or should adorn our streets. The task would be too massive and your patience too much taxed. I have described a few, and there are others nearly equal and some may prefer them to these I have named.

In a more extended list we might find the Abele or Silver Poplar, a rapid grower; a sure producer of sprouts for the little ones; not uniform in its growth, but would be placed in that list where, by a naturally crooked body or wayward limb, we give picturesqueness to the scene, and not that beauty of symmetry which we would expect in a well grown specimen of American Chesnut, or Mountain Ash. The former is admissible in large plan-

tations, as well as Black Walnut and Honey Locust. The Mountain Ash is always welcome, and some of the poplars—Lombardy seldom, and never for a street tree, unless in very long avenues. Cottonwood is very much better, indeed it should have had a place much higher in the list; bears hardship well; affords plenty of shade, and is about equally indifferent to wet or drouth; does well everywhere.

Then there are the Willows. I wish we had more of the Golden planted. What is there better? Cut it back thoroughly, feed it well, and it is hard to excel it even as a weeping tree. None will unless it's the Wisconsin Weeping Willow disseminated by J. S. Stickney. This is as drooping as the common weeping, perfectly hardy and its cultivation should be more extended. All the others are tender. But happily we have in the Weeping Mountain Ash a tree that will substitute very well. The very pendulous or drooping branches of this tree gives it a striking and peculiar appearance, and where we have so few good weeping trees, this should be more extensively noticed. The Weeping Ash and Birch also fill a niche in the arborist's collection.

Shrubs.

"Shrubs should be planted early, for some of them are early risers; that is, no sooner than the cold of winter is passed, and a few bright days of spring have told of the joys to come, than we are reminded that summer is near. But perhaps this caution is uncalled for, as most ardent gardeners are found with spade, fork, and rake in hand as soon as the snow and ice have disappeared. It is not for such that I am writing. At their feet I might sit; but for others who can only halt for the moment from the delirium of business to take a hasty look or snuff the breeze as it's wafted from the early crocus, or the snowdrop nodding in content, and the hyacinth and tulips in their beauty. To such, I say: See that your ground is well prepared—that it is mellow, and in such a condition as to be well drained; reasonably rich from nature, or artificially made so; and your plants will be a joy forever.

"In the Flowering Almond Dwarf, will be your first love. Always wanted, popular, and yet not half appreciated. Neglect grows it scraggy and ill-shaped; but with a little attention and cutting back as soon as it is out of bloom, the increased thriftiness and consequent bloom will well repay for the sacrifice. A new white Flowering Almond is said to be very fine and equally hardy; and, like the former, is loaded in the spring with spikes of elegant flowers, almost like roses.

"The Lilac—that good old home adornment when we were boys together—will always be planted. No yard is too small or too large to exclude it. Aside from the common white and purple are the Persian and Chinese. The latter especially desirable; not liable to suckers or sprouts; flowers resemble the common purple, but much darker. In its foliage its chief beauty lies. This is dark glossy green, very large and rich. These plants are so hardy and indifferent to soil and treatment as to have been sorely neglected; but these, as well as the Syringas, should have better treatment, and their beauty would be enhanced. The Syringas are all easily propagated, thrive in a common soil, foliage rich and massive, bloom profusely, pure white and very fragrant.

"Spireas, which list is 'legion,' is not as favorably known as it deserves. This class forms a group of many ornamental shrubs, all quite hardy and thrive with quite indifferent care. Flowers of various shades of color, from pure white, white with rosy tinge, yellowish white, purple rose, lilac, pink, etc. From a very large list probably the best six are: *Spirea opulifolia*, five or seven feet high, flowers white with rose tinge; *Spirea solcifolia*, from two to five feet high, white to rose tinted in June and July; *Spirea tomentosa*, common in wet ground, but none the less desirable, about three feet high, with a semicircular head of purple flowers; *Spirea prunifolia*, larger than the previous, flowers by threes or sixes, white as snow, very durable; *Spirea Reversii*, one of the most elegant of the class, flowers in clusters, white, in June; *Spirea Bella*, dwarf, flowers pink.

"There are a host of other sorts that might be added to this list; but the above is sufficient for any single garden, and, planted singly or grouped, the effect will be equally fine. My advice is to all; Plant more of them.

"The Deutzia, from Japan, is as hardy as any shrub in our list, and far more beautiful than some which receive more attention. A profuse bloomer; blossoms nearly white; of

easy culture; its foliage forms an attractive feature, and none who see it in the early summer can help but admire its beauty. Then we may plant beside it—which will vie with it in beauty of flower but not in shrub—the *Forsythia Viridissima*; which will furnish you with a profusion of rich golden flowers, and, though it is a little tender, it will well repay the care in protection. Don't do without it, nor forget to find room in some shady, protected nook for the Japan Quince (*Pyrus Japonica*). The brilliant, fiery buds and flowers of this plant will attract the most casual observer; and stupid indeed is he who will not find beauty in so fine a flower, for while in bloom there is none more attractive. It blooms very early, before the young foliage is fully grown, and I have known its attraction to be a little premature.

"No sooner is this passed from our sight then comes the *Weigela rosea*, from China. Would that our neighbors there would now send us many more as fine, for this certainly is one of the finest in any garden. Very easy in cultivation, succeeding in any good soil, profuse bloomer, so that its branches are loaded, bending gracefully and beautifully with their load of beautiful rose-colored flowers.

"Tartarian Honeysuckle, a little larger than the last, is always handsome, whether covered with its white or pink bloom or with the scarlet fruit. It is very uniform in growth and forms a fine bush. Equally so the good old-fashioned snow-ball, too common to need description and an ornament to any garden.

"Then there is the Flowering *Acacia*. Though a little objectionable on account of suckering, if planted where the roots are disturbed, yet when covered, as it is sure to be, with its profusion of pea-shaped flowers of a pinkish white in June, this is forgotten, and we welcome it to our home. The foliage is locust like, and though it is not a clear, compact shrub, it is desirable.

"Purple Fringe or Smoke Tree is desirable for its peculiar feather-like blossoms. *Su-mac*, once popular at the East, is now mostly forsaken. Its language, "splendid misery," is too indicative of its general character. Few plant it. *Altheas* are favorites where they will endure the climate, but nature never intended them for a Wisconsin climate. *Magnolia*, the pride of the South, not strictly a shrub, though in this climate it will always be shrubby, is too tender to pay for the room it occupies. Even if they endure the climate for several seasons, I have seldom or never seen them bloom, and in this is its chief beauty, varying from white, rose purple, and bluish white.

"*Mahonia* is an elegant evergreen shrub. The foliage is of a very dark glossy green, almost purplish, with prickly points, and gives the plant a very rich appearance, remaining on the plant all winter. It should be slightly protected if not covered naturally by snow.

"We must not forget our *Privet* or *Prim*, from Europe, where it is an evergreen, with small green foliage. Here it becomes deciduous. *Privet* forms a fine single bush; but for hedges is its chief utility, growing rapidly and forming a very dense mass, purely ornamental, as it has no thorns.

"*Euonymus*, or Strawberry Tree, has been planted quite extensively, but it's too tender. Foliage is handsome—purple flowers, succeeded with brilliant scarlet fruit, which hangs on quite late. Also, a variety with white fruit; but both are equally tender.

"Box—the common Garden Box of the East, and a general favorite for low screens and walk borders—is not adapted to our climate; often tried, and as often failed.

"But can a garden be without its climbers? It certainly would lack one of the

"Bright gems of earth, in which perchance we see
What Eden was—what Paradise may be."

For no shrub, evergreen or tree can take the place of the well-trained arbor, with its vines of Honeysuckles, Yellow Trumpet, Evergreen scarlet monthlies—sweet scented and Chinese. These are always favorites; but scarcely less so than the Trumpet Flower, Dutchman's Pipe, and Virginia Creeper or American Woodbine—perhaps the most ornamental of all—growing with great rapidity, covering, in a very short space of time, whole sides of large buildings and the tallest trees. There is scarcely a yard in our city but may employ this vine to good advantage in screening some out-building, or giving their grounds a varied scene by setting a pole and allowing this vine to climb.

"Then, not forgetting the roses, plant Queen of the Prairie, Michigan. Though the

flower is single, it is almost equal to the former, being more hardy, and such a profuse bloomer that it is very desirable. Add to them the Baltimore Belle, the best of all, (protect it in winter,) and your grounds will be amply stocked—your home will be a Paradise."

Design for a Fountain.

THE design upon the opposite page is entirely of iron, the centre piece and spouts representing the blossoms of the Calla Lily, throwing out a beautiful series of water jets. The fountain is a beautiful specimen of ornamental iron work for lawn and garden purposes, and was built for a gentleman resident near the city. The use of architectural and iron ornamental work in and around our suburban villa grounds is becoming more and more extensive, and in truth is necessary to help out to the full the pleasure and tasteful enjoyment of rural life.

Pencil Marks by the Way.

BY OCCIDENTALIS.

Danger of Over-Production.

SOME people seem to fear that one of these days there will be an over-production of fruit, and then—some awful crisis.

Let us look at it a little. Take any given county in the United States of, say thirty thousand inhabitants, or five thousand families. It may safely be asserted that not over *one thousand* of these families consume more than one-fifth of the apples and other fruits they would wish. Twenty bushels of apples alone, and a proportionate quantity of other fruits, would not be a large estimate for each family a year, could they be at all times obtained as cheaply and as plentifully as other provisions. This will amount to one hundred thousand bushels for the county.

Again, how many of these five thousand families use a dozen cans of small fruits in a year? It is doubtful if one-half of them do. Yet, one hundred cans of such would not certainly be a large estimate, and is not as much as many families require, besides quantities used in other forms. I do not forget that, during the picking season of the small fruits, many families use them quite freely,—but rather as luxuries than as necessary articles of food. Indeed, it is a fact that not more than one in twenty of the entire population have ever yet realized that fruit is an essential article of food at all, that can be and should be brought into daily use.

Then, it may easily be seen, that until the great mass of the people are educated up to a realization of this truth, there is little danger of a very serious crisis arising from over-production.

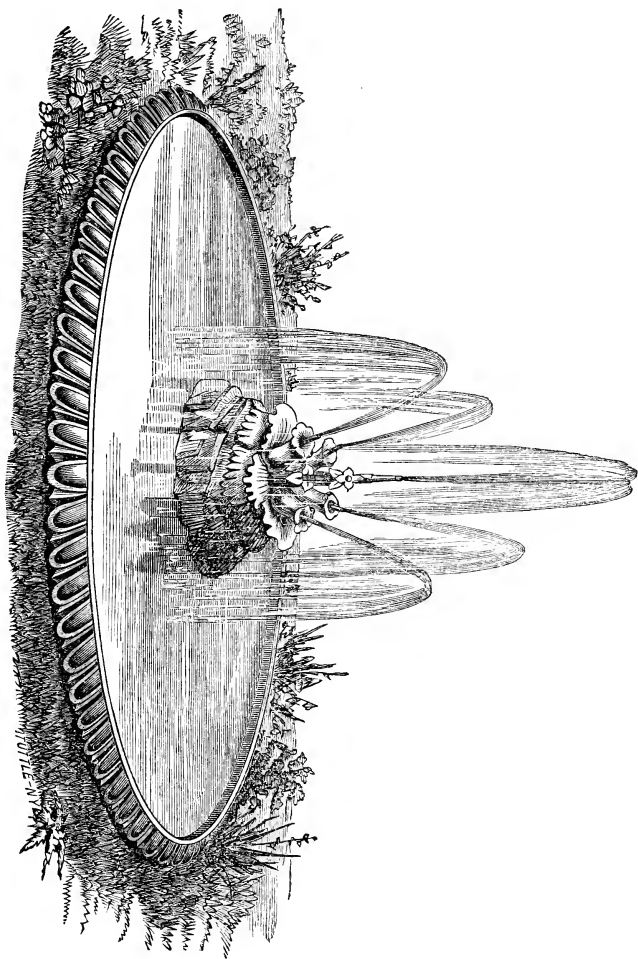
An Inquiry.

The *Cincinnatus*, a western horticultural journal, in 1862, described a new hybrid fruit—a cross between the *wild plum* and the *nectarine*. It was said to be "fiery-red in color, size of the nectarine, almost round, and of exquisite beauty and taste."

What has become of this new hybrid? Can any of the Ohio horticulturists give any account of it? If it really exists, it must certainly have become known to such men as F. R. Elliott and Dr. Warder.

The Crystal-White Blackberry.

My experience with this fruit is unfavorable. In the spring of 1868 I obtained one hundred one-year old plants, and set them in a good clay limestone soil. They made a moderate growth the first season, and ripened their wood about as well as Lawtons in the same kind of soil. They were allowed to go through the winter of 1868-9 without any protection, and the spring found them killed to the ground—not enough of live wood left on which to hang a blossom.



Design for a Fountain.

Thinking they were "gone under," I paid no further attention to them, till, in the early summer, I observed that they were making vigorous shoots from the roots. I then gave them moderate cultivation, clipping them back one-fourth in August, and in the fall treated them to a slight mulch. But they are again winter-killed—not so badly as before; enough, probably, of the wood remaining to give me a quart or two of the fruit. Age may give them hardiness, but at one and two years they are certainly more tender than the Lawton.

Stock and Scion—Their Influence Upon Each Other.

The following paragraphs are parts of an essay read before the Warsaw (Ill.) Horticultural Society, at its February meeting, by its President, A. C. HAMMOND, Esq. You will doubtless deem the subject of sufficient importance to be worthy of a more extended circulation than it can obtain through the columns of the local paper.

* * * * "It is now generally conceded by intelligent writers and cultivators, that the stock affects the fruit of the scion in quality, productiveness and time of bearing; and that the scion increases or retards the growth of the stock, and, in some instances, imparts its own peculiarities to the root. Because a tree, under certain conditions, is tender and unproductive, it does not necessarily follow that under all conditions it will be so. Every observing orchardist has noticed the difference in the growth, hardiness and productiveness of the same variety, when a portion of his trees have been root-grafted and a portion top-grafted. Some varieties succeed best on their own stock, others on a borrowed one. It is therefore evident that we cannot be governed by any arbitrary rules in this matter, but must be guided by the light of experience, and should study the habits and peculiarities of each variety, if we would obtain the best results.

Some horticultural writers tell us that root-grafted trees are short lived and unproductive; others, that they are superior to those propagated in any other way. Probably these opinions have been reached without proper investigation, and both are partly right and partly wrong; for, as I before remarked, it is very evident that some varieties are successful root-grafted, and others are not. For instance, the Red June, which has a great number of small fibrous roots, reaching but a short distance, soon absorbs all the specific elements necessary for the formation of perfect fruit, when the fruit becomes small, scabby and worthless. But if double worked on a strong, free-growing stock, well supplied with strong, far-reaching roots, like the Pennock, or Pryor's Red, it succeeds much better, but it is longer coming into bearing. The Westfield Seekno further and Wagener, when root-grafted, throw up a great number of water sprouts, which affect the growth and health of the tree. But when worked above the collar, this objection is obviated, and the tree is much more healthy and productive. Again, the Yellow Bellflower, Summer Queen, and Red Astrachan root very readily from the scion, and thus soon become established on their own roots, which are very strong and numerous. In this condition they grow very rapidly, expend all their energies in producing wood, and therefore yield little or no fruit. But top-work them on a slow-growing stock, and they become productive. On the other hand, the Ben Davis, Little Romanite and Maiden's Blush, being well supplied with both fibrous and large, extending roots, grow very rapidly, come into bearing early, and annually produce large crops of perfect fruit. Top-grafted, they grow with less vigor and are not so productive.

But, says the planter, if all varieties do not succeed root-grafted, why is this mode of propagation so universally practiced by our nurserymen? Why do they not rather propagate each variety in that way that will make the most successful tree? We must bear in mind that we live in an age of tree planting; that the demand is for cheap trees, and that it often exceeds the supply. And when we remember that root-grafted trees can be put into market in half the time and for half the price of those stock-grafted, we shall be able to understand why all are propagated alike. There are doubtless some varieties that, if double worked on such a stock as the Pryor's Red or Ben Davis, would be intrinsically worth five times as much as when they are propagated in the usual way. And in my opinion, the time is not far distant when our western farmers will understand this matter, and be willing to pay for trees in proportion to their value. And as the demand increases, our enterprising nurserymen will soon be able to furnish the requisite supply.

That I may not be misunderstood on this point, I will say that, in my opinion, root-

grafted trees are just as reliable as they would be stock-grafted on promiscuous seedlings ; and that to secure the best results, we must work those sorts that do not succeed root-grafted, on certain cultivated varieties that we know will produce the desired results.

* * * * * As to the propriety of grafting old orchards, there is much diversity of opinion. In the Eastern States they find no difficulty in changing the tops of their trees from one variety to another ; but our climate is so fickle, and we have such great extremes of heat and cold, that it is very difficult to get a new top established on a tree after it has reached the age of twelve or fifteen years, without a portion of the old wood becoming diseased. Yet we have so many varieties that are but cumberers of the ground, that it becomes necessary to make many changes. And here the question arises—What varieties shall I work on my unprofitable trees to secure the best results ? All of us have more or less of Red June, Summer Rose and Newark Pippin, which are very slow growers, and have been found unprofitable. On these I shall work Yellow Bellflower and Red Astrachan, as the stocks will dwarf them sufficiently to bring them into early bearing. Some of us have planted quite largely of Winesaps—from twenty to fifty per cent. of our whole planting. While I would not think of discarding this variety yet, it has suffered so severely from scab and spur-blight the past season, as to cause it to be looked upon with some suspicion, I would suggest the propriety of reducing it to fifteen or twenty per cent. of the whole number of trees in the orchard. Upon my own trees of this variety, I shall work Red Canada, Grimes' Golden and Willow Twig.

In many orchards we find White Bellflower, White Winter Pearmain, Summer Queen, Limber Twig, Grindstone, and numerous varieties of sweet apples, which have been found to be worthless. On these I should not hesitate to graft Peck's Pleasant, Red Canada, Maiden's Blush and Willow Twig, as these varieties will succeed under any ordinary circumstances. True, many of these trees will not make first-rate or even second-rate stocks ; yet when they are under ten or twelve years old, it will be found profitable to top-graft to some productive variety."

It is a melancholy fact that very many of the orchards in the West are cumbered with unprofitable varieties ; hence, anything looking to a correction of the evil is worthy of consideration. Mr. Hammond's suggestions are in the right direction. The effect of stock and scion upon each other is a subject of greater interest than has been generally supposed, and will require deeper study at our hands, in order that we may be able to correct the errors into which we have fallen in our first tree planting.

BANKS OF THE MISSISSIPPI, *March, 1870.*

Spring Flowers.

An Essay read by Mrs. Harris before the Jo. Daries' Co. Horticultural Society, Ill.

OF all the early spring flowers, the Crocus needs not our vote to crown it queen of the season. But few persons are aware how easily it is managed. The only difficulty is its first introduction. We are obliged, in the beginning, to procure important bulbs, and the Crocus does not like to be imported. It is not fond of being shifted too often, nor of being out of ground too late in the season. When shifted, of newly imported bulbs we generally lost from one half to two thirds the first season. But they are cheap, only \$1.25 per hundred ; we can afford to lose a part of them ; and after being once acclimated, they propagate rapidly and will bear almost anything. Some florists recommend planting them in the sod and letting them take care of themselves like the dandelion. But we think them too good to be treated in that way. As to their planting everybody knows they are Holland bulbs, to be set out in October, in beds made rich and mellow with decomposed manure and sands, the rows 6 inches apart and the bulbs from 2 to 2½ inches deep, that is, covered by that depth of soil. Cover with light litter of leaves in autumn, which rake off as soon as practicable in the spring.

We love the Snowdrop which requires the same treatment, and mostly shows its little white head a few days before the first yellow Crocus looks out, but it is not a showy flower, and so is less sought than the other.

Next to the Crocus comes the Pansy, and of all the rare virtues of this peerless flower, it has no other trait that we prize so highly as its brave cheerfulness in lifting up its bright childlike face to the first fitful sunshine of spring just as soon as the tyrant frost has let go his grip upon its little throat. I shall not here trespass upon the province of the seed catalogues by preparing a treatise upon the culture of the Pansy; suffice it to say the use of sheep manure as a fertilizer for it seems to be the latest and best discovery on the subject.

On another point I can give one item as the result of my own experience, viz: it is not best to sow the seed in the house.

I have sown them in pots of fine soil, with good drainage, then picked out the plants in seed-pans, and grown them there all according to the most approved plans, not omitting to place the pans on the edge of an open window to harden the plants, many days before setting them out in the open ground. Yet, when set out would lose 90 per cent. of them with the best care I could give. If the weather is showery they *damp off*, if dry, *dry up*, and I have resolved to abandon altogether the practice of sowing them in pots. Will start them under glass in a cold frame if I have it; if not, in a hot bed after the heat is partly spent, or lacking that convenience would sow them in the open ground after the soil has become warm and mellow in the spring, turning an old window sash—(with glass in it) over them. If I had no old window, would lay on the bed some small brush and spread a piece of old matting over it, being careful to remove the matting as soon as the plants appear above the ground. We have had good success in starting seedlings in this last manner, in localities where the scorching sun would otherwise have baffled the efforts or the seeds to vegetate. Pansies from seed sown this spring will bloom finely next autumn, and being protected during the winter by a light covering of cornstalks and dried leaves, will be ready to come out in a blaze of beauty next spring. We greatly enjoy an old Pansy bed, where they have been permitted to sow themselves and sport into all manner and shades of color for a number of years successively. We know such flowers will not draw prizes at the Fair, but they are fine "for home consumption."

Next to the Pansy, we rank English violets, white and blue, (single, the double blooms later.) The exquisitely delicate fragrance of these places them beyond all praise. They are of the easiest culture, particularly the white, which is much the most hardy. It propagates itself rapidly both by layers and seed, and only wants to have the soil kept rich and mellow, and clear of weeds, and to be thinned out or re-set occasionally like other perennials. Yet, as the flower buds are pretty well grown in the Autumn, it is necessary to protect the beds well during the winter, otherwise the buds will be destroyed and there will be no bloom. They may be covered like Pansies, with Corn Stalks and dried leaves; they also keep perfectly when, after the ground is frozen in Autumn, they are covered with sods, these to be removed as soon as thawed in the spring.

We have often had them show such a quantity of flowers, that for profusion we could compare them to nothing but a bed of white clover in full bloom, while the air loaded with their perfume seemed like a breath from the regions of the blest.

We have two shrubs valuable for early blooming, viz: *Forsythia Viridissima*, and the wild June Berry or Service Berry.

The former is a vigorous growing, sturdy, soft-wooded shrub, and if laid down in Autumn and covered with sods, in order to protect the flower buds, will, soon after it is uncovered in the spring, have its shoots thickly covered with a bright, lemon yellow fringe of pretty four petal'd, bell shaped blossoms.

The Service Berry, which is indigenous in this vicinity, needs only to be planted, and it will take care of itself.

We do not see how any real lovers of plants, can, at the season of which we are now speaking, afford to dispense with a bed of the early wild flowers. Let it be located in some sheltered nook, half sunny, half shady, where the Autumn leaves huddle themselves together to escape wild, hurrying winds. Let there be a liberal supply of leaf mold, in the beginning, replenished, occasionally, in succeeding years, and it will require little other care, save that of setting the plants. Plant here the wild *Dielytra* (Dutchman's Breeches) with its spikes of funny little gems. The *Hepatica* (Liverwort), whose profusion of bloom renders every shade azure; the delicate *Anemone*, (wind flower), one species pure white,

and another of the faintest shade of rose purple, the bright golden *Corydalis aurea*, whose great vigor will require that it should be kept a little apart from the rest, the pretty spring beauty, *Claytonia Virginica* with its pink and white striped bells, the snow-white *Sanguinaria* (Blood-root), and by no means the least of all, the deep blue Violets, these last are so kind and accomodating in their habits, that I am afraid they are like some people who seem to be slighted and imposed upon simply because they are so kind and forbearing. Easter Flower, *Anemone pulsetilla*, the best of all the early flowers, should have the best place. Many more might be added to our list, did we desire to make a complete catalogue of these children of the early spring.

We should most certainly include the Dandelion (*Leontoiden taraxicum*) did it come as a volunteer, and just where its bright golden flowers are set off to the best possible advantage, viz : in a ground work of fresh green grass.

But these are sufficient for our own purpose. Every lover of wild flowers will be constantly making additions to her collection, from wayside, wood and field.

The Howell Pear.

By Parker Earle in "The Prairie Farmer."

THERE is no pear that merits more attention or that will better reward the planter than the Howell, according to my observation and experience in Southern Illinois. There are but two or three other varieties which, in my judgment, come nearer fulfilling all the requirements of a perfect pear for the market (and these others belong to a different season), and by market pear I mean one combining all excellent qualities in the highest degree; for any fruit fit for market is fit for home use. It is possible that it develops greater excellencies on the hill lands of Egypt than in other parts of the country, but I conclude that there is a large territory in the southwest at least, where it will do equally well.

As a tree, the Howell is admirable. It is a very free grower, equaling the Vicar of Winkfield in this respect, but unlike the Vicar, and most of the fast growers, the wood is entirely hardy (with us); and I say this after seeing the sad results of the terrible freeze of last December, when more than three-quarters of my list of a hundred and fifty kinds were seriously damaged, many of them fatally. In fact I cannot name a dozen varieties that came through that trial without some trace of injury. This quality of hardiness will be more regarded hereafter by intelligent planters, even in the southwest. There is but one requisite more essential, and that is the holding the foliage well into autumn. In this respect the Howell is nearly first-rate—a few kinds retain their leaves longer, but it holds them late enough to perfect its fruit buds very handsomely.

There are but few varieties of pears with us but are faulty in this matter of persistence of foliage. Several popular kinds are rendered almost worthless by the loss of leaves in summer. No tree can ripen its fruit without leaves, even if it matures its fruit buds sufficiently to blossom at all.

What will be considered very desirable by most planters, the Howell is a very early bearer, both as standard and dwarf. It is wonderful for the vitality which enables it to form fruit buds freely while making an enormous growth. I have lately visited a block of several hundred standard Howells, three years from the bud, two years planted, which have made a growth I never saw surpassed, and which now show a generous quantity of fruit spurs, many of which seem matured for blossoming.

Our pear has two defects, one as a tree and one as a fruit—who will name a variety without any fault?—its fault as a tree is that its very "sanguine temperament," if you please, make it too sensitive to the spring sunshine, and its fruit buds are the first to expand, and its blossoms among the earliest to appear, sometimes to be blasted by the frosts that its more sluggish neighbors escape. In some situations this may prove a serious drawback; and in the most favored localities it is likely to cause the loss of an occasional crop.

As a fruit the Howell is superb, with but one fault, which is a quite too common one of rotting first at the core. It is not nearly so bad in this respect however, as the Flemish Beauty, and many other kinds; in fact it is but little worse than the Bartlett, which usually don't show this defect at all; but a pear to be quite perfect as a market variety, should be above suspicion of any frailty. But passing this sometimes weakness, what can we say in its praise that would seem extravagant to a familiar acquaintance? In size it is as large as a pear ever ought to be, averaging with Bartlett in weight. In form it is the perfection of beauty, when well grown, its lines curving as gracefully towards the stem as an artist's pencil could draw them. It is very free from blemishes when grown on high ground—or in a healthy climate—and its smooth lemon yellow skin has a beautiful waxen finish which will help to make it very popular in market. In juiciness and texture of flesh it is much like Bartlett, but it far surpasses that most popular pear in flavor. It has none of the muskiness of the Bartlett, is never astringent, but is full of sweetness and acidity delightfully mingled with those indefinable qualities sometimes called "aroma" or "bouquet" which gives the lively flavor to our best pears.

Its season is a little later than the Bartlett, and I think it may take the place of the Bartlett wherever that variety is not sufficiently hardy, or with those who would grow a better pear. It seems to me probable that the Bartlett will not hold its pre-eminent place in the markets of the country, when such superior pears as Belle Lucrative and Howell are placed beside it in quantity. May we not hope that excellence will sometime sell for more than appearance? For all buyers holding such radical views, and who like a sweet pear, the Belle Lucrative is without a peer,—the Seckel being too rarely seen large enough to be counted a rival, while those who prefer a little more acid with the sugar can find it in the Howell without any sacrifice of their love of good appearances. The Belle Lucrative is deficient in color only. The Howell surpasses in beauty all pears of its season commonly grown, and is equal to the best in quality. It seems to me to possess the elements of popularity both with grower and buyer, together with those higher qualities which satisfy a critical judgment, in a greater degree than any other pear.

The Dyehouse Cherry.

BY HENRY T. HARRIS.

IF I had entertained any doubts about the extent of the territory over which the Horticulturist circulated, prior to the writing of the article in its March number on "A New Cherry," those doubts would have been fully settled by this time, for I have received letters and orders for specimen trees from nearly every State and Territory in the Union—even from California and Maine—and I could have disposed of a thousand trees. My own limited supply was exhausted in ten days from the publication of the article, and I purchased a number of trees from the original owner, in order to fill some pressing orders. I am gratified to know that your very excellent magazine has so wide a circulation, and hope and believe that its influence will be felt and acknowledged wherever it circulates. I wish your readers to distinctly understand that I do not yet claim for this (to us) new cherry, any distinctive characteristic, and that I do not claim it to be other than what is familiarly known to many sections of the country as the "Early May," "Early Richmond," or "Ice Cherry." It may or may not be that old variety. I think I was careful enough in my first communication not to claim anything new, beyond a doubt. However, that article must speak for itself. About a year ago I sent that honest and distinguished horticulturist, Andrew S. Fuller, one of the trees, with a view to having it carefully tested by him on his own grounds, but have not heard from him, except to say, at the time, that the tree arrived safely and in good order. If he can form any correct idea of its class and real character from the wood, growth and leaf, I should be pleased to have his views through the Horticulturist. I have made recent inquiry about the origin of the old tree, and from the children of Mr. Dyehouse (he being dead), I can only learn that their father planted some seed many years ago, and that the old tree spoken of is from one of the seed. A number of

gentlemen here, who are men of intelligence and high integrity, will, if requested, testify to a firm belief that this cherry is a distinct variety, and of the character given in my first article. Its leading peculiarity, or one of its leading characteristics, is its bright, clear, scarlet color. Another, its being *opaque*, or nearly so, in appearance. It is fully a month earlier than the common Morello. It has not a single characteristic of that fruit, fully developed, while, as before stated, it has some general appearance to the Morello. I believe it would be hardly in any climate where fruit will grow. If I know myself, I would not deceive or humbug the people, and my only aim is to aid in ascertaining the facts in the case, and if the fruit proves new and desirable, to aid in disseminating it for the good of all, especially those who live in regions where the sweet cherries will not flourish. Is not the object praiseworthy? If so, I ask the use of your columns to further the work, knowing that your thousands of readers all over the land, will sustain us in the attempt. The "Donna Maria," as figured and described in the *Horticultural Annual* of Messrs. Orange Judd & Co., New York, by Mr. F. R. Elliott, of Cleveland, is a very good likeness of this fruit, and but for the fact that the color and time of ripening are quite different, would think it highly probable that they were identical. These differences, however, preclude the possibility of the fact. The "Flemish" or "Early May," of the West, figured in the same place, differs widely also, in size and shape, although ripening about the same time. I can find no cherry that answers its description in anything except size and time of ripening.

STANFORD, KY.

Practical Papers.

No. V.

BY OLAPOD QUILL.

Pull Down that Old Fence.

RIDING through one of the pleasant villages that give to Massachusetts the name of the "Garden State," we were much gratified to witness the result of a pleasant remark made by ourself some four years since, to a gentleman who stood leaning over the identical old board fence we so emphatically bade him pull down. "Well," said our pleasant, intelligent yeoman, "suppose I do pull down the old fence, I know it is a lumberer of the ground, unsightly, and in the way, but what shall I place in its stead, for I must have something here to keep out the neighbors' boys." Our answer was, "make a nice garden of this waste of weeds and grass; clear it all away; but first remove the old board fence; get rid of that, it is worse than a nuisance now, as it is a place of lodgment for every old bit of crockery and broken glass, and all the old tin pans and odd non-essentials, that are so often vexing the good wife about the house. "What shall I do with this broken bottle?" says Bridget, "toss it over the fence?" Yes, over the fence goes the last broken tea cup, and the pile of rubbish and old bones presented quite a formidable heap of debris of five year's standing, or rather lying, in the very pathway of a beautiful piece of ground as one could desire to be the owner of. Our host, by the way (for we stopped and dined with him), was so favorably impressed with our remarks upon "letting a little sunshine" into the waste places of the garden, that he promised to adopt some of our hints upon improvement, and right well has he redeemed his promise. Now a neat and strong cedar trellace, interlaced with wire in small diamonds, occupies the site of the "old board fence." Over this the graceful wisteria throws its long and twining tendrils, and of itself alone repays "all the labor expended upon it," so our old friend tells us, with much satisfaction for our timely hints by the way. Now the small, smooth, green, beautiful lawn occupies the place where once old bones and weeds lay an open offence to the good taste of every lover of the beautiful. Now there is an air of refinement not only seen in the surroundings, but perceptible in the very odors of this little oasis. Several large trees, as the tulip, the maple, and the graceful ash, together with quite a number of graceful hemlocks and the Norway spruce, now make the place not only more homelike, but add to its intrinsic or merchantable value some twenty per cent over the old regime. I might

elaborate upon this little patch, and name many other beauties of plant and flower, that occupy this few rods of "old carrion," but I have said all I deem necessary to give you a hint in the right place, by which you can go and do likewise; and if you will plant flowers and trees, set out shrubs, only a *few*, I do not ask you to make an elaborate garden, you will most kindly appreciate my suggestion, that you have a taste for the beautiful, and you are as much bound to use it for good as he whom God has blessed with a five-fold talent. Improve the waste places, root out the weeds by the roots, and plant the sweet mignonette and allysum, if nothing more, till in good time a fuller development of the elements of the beautiful already possessed by you, will give a grander and far more remunerative satisfaction to him who beholds the results, as well as him who is the possessor of the same.

Flowers for the Garden.

BY J. T. STEVENS.

[Read before the Madison (Wis.) Horticultural Society.]

THE following flowers and bulbs are chosen for their hardiness and easy culture, and adaptation to the usual size of city gardens.

Flowers always show to good advantage when planted in masses in beds cut out of the grass, which, of course, must be kept cut close and smooth. The beds should be slightly raised towards the centre, and planted with one variety or color, or several colors of good contrast.

Neatness should be of the first consideration in a flower garden, for nothing looks worse than an ill-kept lawn, or broken down and straggling plants.

The garden should be ready by October, that it may receive the bulbs and roots which are to be set in autumn.

Perennials are of two kinds, bulbous and herbaceous, and are hardy—such as grow in the open border, and half hardy—such as will not stand out during the winter. The following bulbs are generally early bloomers, and all fine for the garden:

Hardy.—Tulips, Hyacinths, Narcissus, Snow Drop, Crocus, Japan Lilly, Iris, Lilly of the Valley.

Half Hardy (for spring planting).—Tube Rose, Gladiolus, Amaryllis, Tigridia.

The following Perennials, Biennials and Annuals are durable, and most of them can be raised from the seed:

Hardy Perennials.—Columbine, Phlox, Campanula, Garden Heliotrope, Larkspur, Delitytra, Fox Glove, Hollyhock, Everlasting Pea, Lychuis, Peony.

Half Hardy.—Antirrhinum, June Pink, Forget-me-not, English Violet.

Climbers and Creepers.—Clematis, Maderia Vine, Money Wort, Sedum.

Biennials.—Canterbury Bells, Pansy, Sweet William.

Annuals—Hardy.—Aster, Coriopsis, Candy Tuft, China Pink, Migonnette, Petunia, Phlox Drummondii, Gilia, Double Zinnia.

Half Hardy.—Ageratum, Balsam, Dwarf Convolvulus, Didiscus, Nemophila, Portulacca, Salpiglossis, Scabiosa, Stocks.

Climbers and Creepers—Hardy.—Canary Bird Flower, Morning Glory, Cypress Vine.

Half Hardy.—Ice Plant, Sweet Pea, Thunbergia.

There are many others perhaps as desirable. These are well known and especially adapted both for beauty and fragrance, and nearly all are excellent for cut flowers, bouquets, &c.

Nor should we forget the class called Everlasting Flowers, for they are not only showy in the garden, but if gathered before fully expanded, and dried, make handsome ornaments to enliven the dull winter days. The following are the best:

Aeroelinum, Helipterum, Ammobium, Helichrysum, Globe Amaranth.

Also a small quantity of the Ornamental Grasses, Briza, large and small, and Animated Oats being the best. These will be found a pleasant and interesting study, and help pass away many an hour otherwise neglected.

Also, no garden is complete without a bed of Verberas, and one of Geranium, which for beauty and fragrance are unsurpassed.

Girdling Trees to produce Fruitfulness.

MR. J. F. JOHNSON, in the April No. of the Horticulturist (pp. 124-5) recommends "girdling" trees to make them fruitful. I am not certain that I understand his meaning. By "girdling," I suppose is meant cutting a girdle around the tree, and *through both the bark and the alburnum*. This is the definition of the word as given by Webster, and the sense in which I think it would commonly be understood.

Now I cannot speak from any experience on the point, as I have never experimented with a tree or branch as Mr. J. recommends. But *Theorizing* would lead me to say that if this is what is meant by his language, we had better be cautious about "girdling" any trees we should be sorry to lose. I may be in error about it, but should advise any friend of mine to "make haste *slowly*" in any such experiments. But if by "girdling," Mr. J. means simply "*ringing*," or cutting out a narrow ring of bark alone, *without cutting the alburnum*, his plan might prove both safe and efficacious. And yet I should think it somewhat hazardous, from the danger of cutting too deeply. I think the same good results, without any danger of the evil ones, may be secured by using a cord instead of a knife. I once had a large and vigorous pear tree that persisted in throwing all its wonderful vigor into wood. One day in June, I wound a stout cord as tightly as I could around the trunk, and left it there till October. This checked the descent of the sap, just as ringing does, so that the diameter of the tree above the cord was fully half an inch greater than below it. The next season it gave me about two bushels of pears, and has borne finely ever since.

READING, MASS.

W. H. W.

Fruit Growing at the West.

What to Plant.

RECENTLY I took occasion to say something about "where to plant" our orchards in the Northwest. Second in importance to the ultimate success is what to plant. I say "second" in importance is *what*, and not *where*. For, given the last in its true principle, and fruit, even tender sorts, are quite certain of a reasonable degree of success. As proof of this, I only notice a single instance of a gentleman near this city who raises Esopus Spitzenberg, and had very fine specimens of them on exhibition at the winter meeting of this State Horticultural Society in February last,—the admiration of all who saw them,—and he assured us he counted them a very sure crop. But it was *his location*, and not the variety to which he may and must attribute his success. For of all the many tried sorts, probably few have been more thoroughly condemned than this, the Esopus Spitzenberg. Another gentleman present from Dodge county, said, the "R. I. Greening does well with me," but "its not the tree, its the locality." So I might enumerate a few cases where locality has had its beneficial results upon the tender sorts, but enough has been said to substantiate the position, viz: that what to plant is second to where to plant. I shall confine myself to the apple, and in part for the benefit of beginners, and partly for those who grow trees for the Northwest; for while the few can grow almost any thing, the masses have not these favorite localities to select from, and hence are obliged to depend more directly upon the "iron clads," or those which have proved faultless in every location. Happily we have a few even of those, which could not get a dissenting vote at the meeting of fruit growers, last passed, yet we cannot expect that they will all meet with the same degree of success in the hands of all men, locality, aspect and soil. The list of the best five, from which there was not a dissenting voice, are, Red Astrachan, Dutchess of Oldenburg, Fameuse or Snow, Tallman Sweet and Golden Russet.

Here we have a succession of season from earliest to nearly the latest keepers, and all good.

Red Astrachan, is a Russian sort, which would indicate for it just what it is, very hardy, and adapted to the Northwest, where by its productiveness and peculiar beauty it has become a favorite.

Duchess of Oldenburg, another Russian sort, has probably been more extensively planted the last five years than any other in the catalogue, and has always proven one of the hardiest in the list, and reports from the extreme North and West have never been else but satisfactory. Dr. J. A. Kennicutt called it the *ne plus ultra*.

Fameuse or Snow, from Canada, does extremely well in our dry climate. Fruit remarkably handsome; this added to its pleasant, agreeable flavor, gives it a very commanding appearance, and finds a ready sale in market. Tree very vigorous, and uniformly productive.

Tallman Sweet, is the favorite baking apple of the country, and is the only sweet apple which has proved a success. Others are on the list for trial, but this has always been equal to the vicissitudes of the climate; very productive and good.

Golden Russett, is not as universally admired as some of the others, yet it is hardy and thrifty, forming a very handsome orchard tree. Fruit medium; productive, and long keeper.

To these five we may add ten more, as worthy in many respects, but with which there have been instances of failure:

Sops of Wine, hardy, and usually prolific.

Fall Stripe or Saxten, disseminated under the first name, is now acknowledged to be identical with the last name from New York. Hardy; one of the very best nursery trees, fine and uniform in the orchard, and remarkably productive.

St. Lawrence, meets with complaints of its tardiness in bearing, but with age it is all right, even much further north. Fruit growers from Minnesota send good reports of its success.

Fall Orange, has a much more limited and enthusiastic reputation than most others, still many are its euniums, and is gaining in favor.

Cider Plums, very hardy, upright in growth, productive, resembles Smith's Cider, but yet is quite different. Origin doubtful.

Perry Russett is quite thrifty and hardy; heavy, full foliage, which hides the fruit, so much so as to deceive the orchardist into the belief that it was a shy bearer, but it proves more of a "fill basket" than usually expected.

Willow Twig, is second to but few sorts, and is planted quite extensively.

Red Romanite, hardy, very productive; fruit only valuable when better sorts are scarce; valuable for its hardiness.

Blue Pearmain, has deceived some of our best fruit men who have planted it cautiously, because of the estimation in which it was held at the East. Here it is proving one of our best, though not as good the past wet season as previous.

Seek-no-further (Westfield), "with good cultivation it is a good tree and regular bearer;" seems well adapted to the light sandy soils of some portions of the State.

Other sorts still are on the list for trial, and each succeeding year will probably bring some of them a step higher in their Pomological existence, while others will be doomed to forgetfulness. It must be borne in mind that as a rule we do make much distinction between market and amateur fruit. We first seek the fruit for the fruit's sake. "Anything" is better than "nothing." But happily the supply of good fruit of well tried and proven sorts, is in the ascendancy, and the time is swiftly passing away when we of the Northwest are dependent upon the wild fruits of the country, and even now the supply is greater than the demand.

O. S. WILEY.

MADISON, WIS.



Editorial Notes.

A Beautiful Tree.

THE Double Flowering Peach (*Amygdalus persica plena*), one of the most beautiful of all trees, is still far from common in our gardens and pleasure grounds. In early spring, when the blossoms of cherries, pears, apples and peaches are becoming abundant, one of these crimson flowering varieties of the peach throws out its immense clusters of flowers, scattered over the entire branches of the tree, and make it resemble a vast bouquet. When the tree is fortunately located near a group of other white flowering kinds, the brilliant contrast is superb. The tree is a little straggling, and needs careful pruning and management, to make it symmetrical; but even if not well trained, its splendid clusters of flowers are worth having under any circumstances. A charming bouquet can be made, by selecting a few branches of this variety, and combining them with some twigs of a white flowering kind, and placing them in a vase, in an easy natural position. As an ornament for the table or mantle-piece, it is exceedingly showy. We would recommend all lovers of *good gardening*, to make a place for at least one specimen of this tree in their garden or on their lawn.

The Westchester Black Cap Raspberry.

A NUMBER of our exchanges have seen fit to criticise and condemn this variety as a humbug, without knowing anything of its real value, or having seen it, or had even a desire to find out the candid truth. When we see a person forming a judgment *beforehand*, of a fruit, we feel that his opinion cannot be reliable;—and our readers will justify us in saying such writers cannot be considered “good authorities.”

The facts concerning the Westchester Black Cap are these: We have seen the plant and ate the fruit, and compared it with the Doolittle.

It is a large, well-flavored variety, distinct from the Doolittle, and a little earlier. It is quite productive where grown, and a good variety in every way for family use. It is very far from being a humbug, or worthless.

It is entirely another matter whether the public *want* any more Black Cap Raspberries. We have nothing to say on this point, for the originators of every new fruit must find that out in time. A good fruit will always sell; and though it may be a long time in its introduction to the public, yet it will sell when it becomes known as a *fruit*. The Westchester is excellent; its flavor is much superior to the Doolittle. We cannot say anything further, for we have not had sufficient time to test it thoroughly. Our purpose here is, not to speak specially of its merits, but to suggest to a few of our exchanges, before condemning a thing, they had best “*be sure*” of *their facts*, go and see for themselves, and then “*go ahead*.”

Death of Seth Boyden.

THE recent death of Mr. Boyden, at Newark, N. J., removes another valuable horticulturist from our list of honor. Mr. Boyden was a simple, plain, unpretending man, fond of gardening, and especially enamored with the desire to produce seedling strawberries. During his life he made many valuable experiments in fertilization, and produced some seedlings of remarkable excellence. For instance: The *Agriculturist* was his; so was the *Green Prolific*; *Boyden No. 20*; and his latest and best, the *No. 30*. His seedlings had two peculiar characteristics: 1st, extraordinary productiveness; 2d, a moderate flavor and soft flesh.

We doubt whether there is a more productive garden strawberry in cultivation than the *Green Prolific*, or the *Agriculturist* under favorable circumstances. All his seedlings had a tendency to softness, and hence will not rank as *market berries*. His *No. 30* is a very large fruit, good flavor, dry skin, and great productiveness, but will not carry far to market.

Planting Chestnut Trees.

STORRS, HARRISON & Co., of Painesville, O., plant one hundred and fifty bushels of chestnuts yearly, for the propagation of young trees for timber-planting purposes.

The Catawissa Raspberry.

THE Fruit Committee of the Massachusetts Horticultural Society speak of the Catawissa as one of the most tender and highly flavored on the list, and by proper treatment can be made to yield such a bountiful crop in September, when all other small fruits are gone, that it deserves a place in every garden. For a fall crop the cane should be cut back nearly to the ground in April, and the late crop will be upon the new growth.

The Mulberry Tree.

THE enclosed odd bit of poetry was written by an English author, whose name and date are, unknown. The verses were found following a little sketch of Cruikshank's, dated 1808, showing three country squires in frilled shirts and Hessian boots, one of whom is singing beneath a mulberry tree, while the audience, glass in hand and pipe in mouth, is listening with rapt attention :

"THE MULBERRY TREE.

- "The Sweet Brier grows in the merry green wood
Where the Musk Rose diffuses his perfume so free.
But the blight often seizes both blossom and bud,
While the mildew flies over the Mulberry tree.
- "In the nursery reared, like the young tender Vine,
Mankind of all orders and ev'ry degree.
First crawl on the ground, then spring up like the Pine.
And some branch and bear fruit like the Mulberry tree.
- "To the fair tree of knowledge some twine like a twig,
While some sappy sprouts with its fruits disagree,
For which we from Birch now and then pluck a sprig,
Which is not quite so sweet as the Mulberry tree.
- "The vast tree of life we all eagerly climb,
And impatiently pant at its high top to be ;
Though nine out of ten are lopp'd off in their prime,
And they drop like dead leaves from the Mulberry tree.
- "Some live by the leaf, and some live by the bough,
As the song or the dance their vocation may be ;
And some live and thrive, though we know no more how
Than the dew that flies over the Mulberry tree.
- "But like Weeping Willows we hang down the head,
When poor wither'd Elders we're destin'd to be ;
And we're muddled no more than mere logs when we're dead,
Or the dew that flies over the Mulberry tree.
- "Yet like Lignum-vite we hearts of Oak wear,
Or the Cedar that keeps from the cankerworm free ;
While the Vine-juice we drain to dissolve ev'ry care,
Like the dew that flies over the Mulberry tree."

A New Tulip Tree.

A NEW variety, with yellow-edged leaves (*Liriodendron Tulipiferum Polii Luteo Marginatis*), has appeared in England. M. Van Houtte describes it as a valuable acquisition, the leaves being all margined with yellow in a very even and regular manner.

Beets as Ornamental Plants.

WHY have we overlooked the opportunity for making experiments with Beets for decorative purposes? We think there is an interesting field for observation on this point, and believe it fully as worthy of attention as the *Coleus*.

Our readers are aware of the brilliant colorings of the leaves of *Beets*, and particularly effective, when grown in long rows reaching the entire length of the field. When the rays of the sun strike them at a favorable angle, the beholder observes a brilliant purple coloring to the leaves, which is sometimes unexpectedly ornamental.

English gardeners have found in this new subject an opportunity for experiments, and are improving it very rapidly. A correspondent of the *Journal of Horticulture* says :

"I am inclined to think that where *Coleus* will not bed out, Beet stands first among red-leaved plants. As it is becoming fashionable, we may very soon look for great improvements in color ; I dare say that three years hence we shall be in possession of varieties with leaves even brighter than the young and central ones of *Dracæna purpurea*. On April 24th, 1869, I sowed a packet of Royal Osborne Beet, and placed the box in which it was sown on the top of a dung-heap. It came up freely. When large enough to handle, I pricked the plants off into pots, placing about six in a 4-inch pot. Early in June I put them in the ribbons and beds ; they grew rapidly, and were the admiration of

all who saw them. In color—crimson purple—in form, and in power of resisting both sun and rain, Royal Osborne Beet is all that can be wished for. Iresine planted close to it had to hide its diminished head. You might see your face in the gloss of the leaves. One bed was planted thus—the centre of *Cineraria maritima*, then a double row of Beet, a double row of Flower of Spring Pelargonium, and an outer ring of Iresine. Everybody who saw it thought it beautiful.

“One great merit Beet has, is its durability. Coleus, Iresine, Orach, Perilla, vanish—disappear; but Beet holds on till you want your ground for bulbs. When I took my plants up, October 18th, they were as bright as ever. I stored them in sand, and I shall plant them out again in the beginning of April, and expect them to make a beautiful edging to beds of Tulips. They are now sending up a number of lovely magenta-colored leaves at the crown, and would, I am sure, be beautiful for silver vases on a dinner-table, with any one who had stove heat in which to force them for the purpose. There is, I know, a prejudice against the Beet, on account of its being edible. A great gardener, not far from this, is very loud in his condemnation of it. He says that if we have to go to the salad bowl for our flower garden, it is time to shut up altogether. I do not agree with him. If a thing is beautiful, its being useful also, is no demerit in my eyes.”

Tilton's Journal of Horticulture.

THE editor of the above journal is referred to our February No., 1870, p. 52, for enumeration of fruits of America, in Downing's last edition. The remarks of a correspondent, p. 93, March No., are not quite correct.

The same editor is referred to recent articles in *Western Farmer*, *Michigan Farmer*, *Prairie Farmer*, and *Western Rural*, where the *Flemish Beauty Pear*, in the *North Western States*, has been even more successful than the Bartlett. In Iowa, Mr. Suel Foster recommends it to the extent of 1-10th of all Pear lists. In the East it is often subject to blight, but is, after all, a very popular pear in the market.

Lennig's White Strawberry

Is the highest flavored variety we have yet tried. The fruit is not large, being only of medium size, light creamy color, slightly tinged with crimson, ends flattened, flavor exquisite, being very aromatic and highly perfumed. Plant is a good grower and fairly productive, very fine for amateur culture, but of no value for market.

Growing Asparagus from Seed.

Sow the seed *very thin*. Allow the first year not less than two inches between the plants, and six inches would be better for the strong-growing kinds. Transplant when one year old, to the market garden. The more room an asparagus plant is allowed, the stronger and more productive will be its crown. Cramping plants by too close planting restrains production and prevents large crops. Three feet is better than two, and some advocate four feet each way.

Profits of Strawberry Culture.

WE gave an instance, last fall, of a fine crop near Boston, where the owner realized over \$2,500 from an acre of ground. This incident has been eclipsed by another near Philadelphia, where a grower marketed 9,000 quarts from an acre, and realized \$3,600 cash. We believe there is no other instance on record, of greater profits from a *whole acre* than this. *Colman's Rural World* gives an instance of a plantation of thirteen acres, put out in the spring of 1864. His sales for three years were as follows:

1865. Fruit sold, 430 bushels, value, net	\$3,100
1866. Plants sold	2,500
“ Fruit sold, 900 bushels, value, net.....	5,500

Total \$11,000

He cultivates a bed only two years, then plows up and renews again—and is careful to *keep out the weeds*.

A White Grape.

WE would remind grape growers for *profit*, that at present there is more money in a good *white variety* for market, than a black or amber one. The quality of the white grape is not so much demanded by the buyers as its *color*. If the color is only *white*, and quality not inferior to the Concord, it will sell in New York steadily at twenty cents per pound, and the demand will increase faster than the supply. What have our Western growers to say about the quality, color and productiveness of the *Martha*?

Prospects for Fruit.

THE blossoming season is upon us as we write, and yet ripe strawberries have already come to us from Virginia. It looks a little strange while *our trees* here are just putting out their leaves and

buds, we can enjoy such extra seasonable dishes as Asparagus, Radishes, Rhubarb, Lettuce, Strawberries, &c. The prospects for a fruit crop in the Eastern and Middle States are excellent. The Strawberry crop will be abundant, say 50 per cent above last year. Peaches in *Delaware*, double last year. The trees are full to overflowing with bloom. Pears a very fine crop, in some localities very full, but the average will be excellent. The Apple crop *promises good*. We have to accept such *promises* from the apple tree, for we do not often find them fulfilled.

Everything points thus far to good crops of everything, and if the season holds good, we hope to see those sections of our country that have failed for the past two years in their fruit crop, able to make amends for past losses. We understand the pear trees of Illinois and Indiana are severely injured by a late frost. Likewise the fruit trees of the South have been checked in the same manner.

Yield of the Concord per acre.

B. L. KINGSBURY stated lately at the Alton Horticultural Society, that his vineyards of the Concord yielded two tons per acre, and after deducting expenses the profits were four cents per pound, or \$160 per acre.

A New Work on Landscape Gardening.

A NEW volume is now being prepared and will soon be issued from one of the largest publishing houses of this city, devoted to landscape and ornamental gardening, designs of cottages, plans for laying out grounds of a few lots to five acres, with illustrations and descriptions of beautiful trees, shrubs, &c., which we would here say, in candor, is far beyond anything yet published in this country. The work will consist of two volumes, six hundred pages and two hundred and fifty exquisite engravings—and has cost many thousand dollars as well as years of time in preparation. We believe the author commenced ten years since to collect materials for it, and most admirably has the work been performed. We are not at liberty yet to disclose either the authors name, or the title of the volume, which will be done when really issued. But as a book of *Rural Art*, it will rank in many respects even beyond Downing's Landscape Gardening, excellent as that is. It is intended to suit those residents in the suburbs of cities, who desire plans or advice in the purchase and improvement of *small grounds* or less than five acres. We know such a work has long been wanted, and we predict, it will become at once immensely popular. We speak this much from advance sheets that have been shown us, and will refer to it again in a subsequent issue.

A Cool Surface for Fruit Trees and Vines.

By all means : and as we have said before it is best done by *mulching*.

If a grower will take two rows of pear trees, and mulch one and not the other, he will find in fruiting time, the mulched row has both larger fruit, handsomer skins, and the leaves and branches are both healthy and vigorous. In the other row, the soil is heated by the rays of the sun, warmth is stronger than the moisture necessary to supply the growing needs of the roots, and the tree is scorched or withered. Nature is our best guide—observe *all* trees in all places, a natural layer of leaves gathers gradually on the ground and protects the root against the hot suns of summer and the heavy frosts of winter.

The successful maturing of fruit comes only from a steady supply of moisture, shade invites moisture, and mulch gives shade. Is this then merely a theory? If your soil is too rich (as for instance very many soils are in the West,) and your tree is disposed to grow too rank or to make a second growth in the fall, *restrain it*, hesitate not to use *grass* even in the cultivation of your orchards, as well as judicious pruning, but when fruiting time comes the *cool surface* under which the roots of your fruit trees ramble, will do more for the success of the crop, than all things else put together; *mulch* friends, *keep mulching*, change every spring and fall and cultivate a little, but never omit the mulch in time of fruiting.

A New Cherry.

DR. S. M. SLADE, of Elgin, Illinois, says, that a new sweet cherry exists near that town, grafted on the Morello stock, and has been fruited for the past ten years. The owner says they are as productive as the Early Richmond, and two weeks earlier.

Pears.

THE Editor of *The Germantown Telegraph* thinks that the Vicar of Winkfield, Louise Bonné de Jersey, and Duchesse de Angoulme, are not advisable for general cultivation. He says: "They may do in some localities, we know, but in many locations they are entirely worthless. If we were to plant out an orchard of one hundred trees, they should be divided about as follows; 10 summer Julianne, 10 Manning's Elizabeth, 20 Bartlett, 10 Bell Lucrative, 10 St. Michael d'Archange, 20 Beurré Anjou, 20 Lawrence."

The orchard of Major Freas must be a peculiar one, for we have never before heard such grumbling against three such good "*orthodox*" varieties. On our farm at Dover, Del., (a little South of Germantown Pa.,) we are putting all our Dwarfs into Duchesse de Angoulme, and Louise Bonné,

while we are sufficiently well satisfied with the Vicar, as a standard, to think of putting out even more largely than ever. Mr. Quinn has had experience on his farm at Newark, N. J., with all the above, and the *Duchesse* is to-day his first choice for Dwarfs, while he firmly believes that there is *more money in the Vicar* as a cooking pear, than any other variety that can be named. In Delaware the Louise Bonné is exceedingly healthy and productive, also in Western N. Y. We would prefer a list as follows for general cultivation, rather than the one the Germantown Telegraph lays down:

Dwarfs, 50 trees: 30 *Duchesse*, 20 Louise Bonné. *Standards*, 100 trees: 25 Bartlett, 20 *Duchesse de Angoulme*, 20 Lawrence, 10 Beurré Bosc, 5 Belle Lucrative, 10 Seckel, 10 Howell. Every one of these trees are healthy vigorous growers, succeed well over a large range of territory and in great varieties of soil, and all except the Belle Lucrative are fine market varieties. This last we must put in every list. Its beautiful spicy aromatic flavor makes it rank almost even with the Seckel. The fruit is large, too, very large, its only fault being a slightly dull color.

Hardy Apples for the North West.

Jno. W. Robson, of Galen, Ill., gives a list of the 12 *best varieties* of apples best suited to the needs of the North West.

SUMMER APPLES.

Tetofsky, Red Astrachan, Duchesse of Oldenburg.

FALL APPLES.

Souland apple, Maiden's Blush, Fameuse.

EARLY WINTER.

Fulton, Jonathan, Wine Sap.

LATE WINTER.

Dominie, Limber Twig, Willow.

THE EWALT APPLE

is a new variety, originating on the farm of Mr. Ewalt, near Bedford Pa., fruit large, one-half of side being of a brilliant crimson color, and the other bright yellow; flesh tender and of a sub acid flavor; fruits every year, is a very prolific bearer, and fruit has good keeping qualities.

Pears for Pennsylvania.

A CORRESPONDENT of the *Practical Farmer*, a practical pear grower near Darby, Pa., after an experience of eight years, recommends this list of pears.

"Julienne, ripe in August; yellow, medium size, 2d quality, very handsome, great bearer.

"Bartlett, ripe in September; yellow, very large, great bearer, quality well known.

"Beurré Giffard, ripe in September; yellow, with red cheek, medium size, early bearer, excellent, beautiful.

"Seckel, rather small, great bearer, excellent, well known.

"Howell, large yellow, very handsome, 2d quality, great bearer, ripe in October.

"Beurré d'Anjou, large, handsome, excellent, good bearer, ripe in November.

"Lawrence, medium size, yellow, handsome, excellent; best late fall and winter pear."

On quince stock the best with me are,

"Duchesse d'Angoulme, well known; ripe from October to December.

"Fondante d'Automne, excellent, great bearer, ripe from September to October.

"Vicar of Winkfield, yellow, fine, great bearer; ripe from November to January.

"Lawrence, one of the best on quince stock

"Unknown variety on year stock: Large yellow, great bearer, excellent; ripening in November; very fine,—obtained from the late JAS. D. FULTON, without name.

"Washington, slow grower, rather small fruit, but one of the most beautiful as well as one of the most delicious of pears."

New Vegetables.

HUNDRED-FOLD Pea, or the Cook's Favorite. This was raised by Messrs. Carter & Co., the eminent seedsmen of London, England. The Gardener's Chronicle, of Aug. 21st, 1869, says of it: "The most promising variety in this lot appeared to be one called Hundred-fold or the Cook's Favorite, which was obtained from Laxton's Prolific and Ne Plus Ultra; height, four feet; a late prolific variety—about fourteen days later than Supreme with remarkably fine pods, which are slightly curved, and of the fine deep color of Ne Plus Ultra, with a very fine bloom. The peas, when boiled, are said to be of a fine dark green color. The seed is of a distinct pale olive green. This is a sort that is likely to become popular both for marketing and garden use."

Laxton's Alpha Pea—"This is a blue, wrinkled Marrow Pea, extra early, with large curved, handsome pods, and the flavor remarkably fine.—It has been grown and tested at Chiswick for two seasons in succession, and has proved in all respects a decided acquisition."

New Egyptian Blood Turnip Beet—"Small, very smooth and handsome shaped dark beet, of excellent quality for the table."

French Yard Long Beans.—“Entirely distinct from the Asparagus or Yard Long Beans, one of the very best pole beans in cultivation.”

Marshall's New Yellow Pole Beans.—“Very delicate and good flavored.”

Blue Podded Runner Beans.—“This valuable variety, introduced last year, produces purple flowers and purple pods, very ornamental, and also one of the best table varieties.”

New Valparaiso Musk Melon.—A new dark green and very large melon of excellent quality.

Mammoth Chili Squash.—“Very large and interesting kind; grows to a weight of over 200 lbs. each.”

Crosby's Early Sweet Corn.—Said to be the best early sugar corn now in cultivation.

King of the Early Potatoes.—Is one of Breese's seedlings, the raiser of the Early Rose and other fine varieties, claimed to be a week earlier than the Early Rose.

Currant Tomato.—The most ornamental of all the sorts. It is a veritable tomato, with long racemes of fruit of a bright red color, and not larger than the Cherry Currant. Very interesting and ornamental.

Most of the above foreign varieties have been introduced into this country by J. M. Thorburn & Co.

The Israella Grape

has grown with us very finely, and proves to be a good early productive black grape; flavor sweet but not vigorous, bunches are large and beautiful, berries compact and have a very fine bloom. We esteem it a good variety for market.

Iona Grape

is a very fine flavored variety, but in nearly all vineyards we have visited, *does not ripen well*. Mr. Idell, our largest grape commission merchant in New York, says, that it is the poorest variety now on the list of standard light colored grapes, because in the majority of instances the fruit has not ripened perfectly, and drops from the bunch *before it is ripe*. Two seasons ago it sold well, last season it did not equal the Concord. It needs a long season to grow in, and north of New York, growers for market had best plant it sparingly.

The Villa Gardener.

THE first number of this new English horticultural periodical is laid on our table by the publishers, Messrs. Simpkins, Marshall & Co. It contains 56 pages, devoted to gardening for cottagers, both out-doors, in the green-house, the parlor and conservatory. Illustrations of garden architecture, descriptions of new and rare plants, novelties in garden implements, etc., embellished with 36 engravings. It is published at the very low price of *six-pence* (gold) per month, or equivalent to our \$1.50 (gold) per annum. It is well patronized by horticultural advertisers, and has a pleasant successful look about it. It is a striking commentary upon the zeal of our American horticulturists, that it would be impossible to support such a journal here either at that price or any other.

The Strawberry Book.

BY J. M. MERRICK, JR.

THE principal value of Mr. Merrick's book is its list of varieties of strawberries, numbering about 850. In this respect it is the most valuable compilation and reference book thus far produced in this country. We learn from it that the President Wilder Strawberry is “very closely allied in its characteristics to the La Constante, and is fond of good feeding.” From this confession of judgment we can draw the conclusion that there are the same chances of failure against it in other parts of the country that there are against the La Constante. As this last has never been successful to any extent beyond the latitude of Boston, we fear for the success of the new strawberry.

Ornamental Iron Work.

WE are pleased to refer our readers to the announcement of The Composite Iron Works Co., of this city, a consolidation within a short time of the two houses of Messrs. Chase & Co., and Hutchinson & Co. The designs of ornamental iron work for lawns, gardens and villa grounds, are very tasteful, and many of them exceedingly exquisite. The new illustrated catalogue contains many pleasing illustrations, and from personal acquaintance with the character of the house, we can cordially recommend them to the attention of our readers, and advise all to send for specimens of their new designs.

d'Illustration Horticole.

WE have received the first number of the seventeenth volume of this French illustrated horticultural periodical. It is superbly illustrated with four colored plates, in the finest style of the art, illustrative of the *Aristolochia Duchartrei*, *Cirsium Lindenii*, *Omedium Phalaenopsis*, and *Ficus Dealbata*, together with 24 pages of text. Published at *Ghent, Belgium*.

What Grapes to Plant for Market.

IN clay soil try the Delaware, Rebecca, Eumelan and Israella. Always plant the *Concord* for the first year or two, and afterward the more delicate varieties. For a white grape, the new kinds,

Martha and Croton are very desirable. The last is a new seedling of Dr. Underhill's, of remarkable size and luxuriance of growth. It has great promise of excellence.

Rhubarb

CANNOT be grown unless the ground is very rich. We sometimes think it costs too much, and the cost of the manure does not give profit enough in the yield of the stalks. It is useless to attempt its cultivation on land already poor, and then attempt to manure *up* to the highest point. The soil must already be in good condition. We observe a good article in the *Western Rural* on the subject, and quote entire:

"Great improvements have been effected in the size and quality of rhubarb during the last thirty years. The first remarkable one was made by Mr. Myatt, of Deptford, England, and wherever rhubarb is cultivated for culinary purposes, 'Myatt's Victoria' is known and highly esteemed, being of immense size, good flavor, and great productiveness. It has some imperfections, such as a thick skin, a superabundance of acid, and it is somewhat later than other varieties.

"Mr. Charles Downing, of Newburg, originated a variety called 'Downing's Colossal,' which is an improvement on the Victoria, being fully equal to that variety in size, less acid, and possessing a superior flavor. Mr. Myatt succeeded in producing a variety which surpasses both the Victoria and the Colossal. This he named the 'Linnaeus,' which is now very much cultivated by market gardeners, and all persons who require a heavy crop combined with an excellent quality of vegetable. The skin of the Linnaeus is so thin that it is unnecessary to remove it in cooking, and this in itself is an important advantage.

"Great damage is sometimes done to the roots of rhubarb by the careless manner in which the stalks are pulled for market or domestic use. In taking off a stalk roughly, a considerable part of the crown is sometimes fractured, or removed altogether. A careful person should always be employed to gather rhubarb, as by a little dexterity in moving the leaf from side to side, and pulling gradually, it will come away without injuring the crown. It is a very injurious practice to continue pulling off the leaves as fast as they appear, for by so doing the roots are prevented from extending and laying up a store of ingredients for the future season. A sufficient number of plants should be provided to admit of letting some of them have rest while others are being used. If this is not done, strong, healthy plants cannot be grown.

"In young orchards which have been properly deepened and manured for the reception of fruit trees, rhubarb may be grown for several years without any damage to the trees. The large leaves keep the ground cool, and prevent the growth of grass and troublesome weeds, and shade the lower part of the trunks and the roots of the trees from the rays of the sun. The annual mulch of manure which is applied to the rhubarb in the fall, is of considerable protection to the roots of the trees during winter, and they get a share of its enriching ingredients when vegetation commences in spring. The buds or crowns of the rhubarb are protected in winter by the fallen foliage of the fruit trees, which is much better adapted for covering them than barn-yard dung or compost, as heavy manure of any kind placed immediately over the buds is apt to scald them."

The Judas Tree.

THE Judas tree is not half so extensively planted as it deserves to be. There are two varieties, viz: the Canada and common Judas tree, *Cercis Siliquastrum*; they were both growing in one of the shrubberies near the mansion at Perdiswell Hall, Worcester, eleven years since; but the common one is by far the most beautiful of the two, and is called by the Spaniards the Tree of Love. From this variety Sir Offley Wakeman used to have the flowers picked for flavoring his salads, although I believe they are both equally good for the purpose. This tree differs in the height it attains in different parts. In some they will form fine trees, as stated by your correspondent, whilst in others they will not attain more than from twelve to fourteen feet, sending forth young branches irregularly from the very bottom. The stem of the tree is of a dark grayish color, and the branches, which are few and irregular, have a purplish cast. The leaves are smooth, of a pleasing green on the upper surface, hoary underneath, and grow alternately on long foot-stalks. The flowers are of a fine purple or puce color; they come out early in the spring, in clusters, from the old wood, growing upon short foot-stalks. They exhibit their flowers in clusters in different colors early in the spring, before the leaves are grown to such a size as to hide them, and are also noteworthy from the difference of the upper and lower surface of the leaves—the one being of a fine green, the other of a hoary cast; so that on the same tree, even in this respect, there is shown variety, as may be seen when the varying direction of the winds causes the upper and lower surfaces to be alternately displayed. The wood is stated to be of great value, for it polishes exceedingly well, and is admirably veined with black and green. I believe there are two or three varieties of this species (the common one), for I once remember seeing a white variety and a flesh-colored one.—*Edward Bennett, in Gardeners' Chronicle.*

English Opinion of our Pomological Society.

THE report of the twelfth session, 1869, of this enterprising Society, held in September last at

Philadelphia, under the presidency of the Hon. Marshall P. Wilder, of Massachusetts, is now before us, and we are pleased to learn from it the deep and increasing interest taken in the raising and cultivation of all kinds of fruits. Everything would appear to be done on a gigantic scale in America, hundreds of new varieties of fruits, native and foreign, being yearly submitted for the opinion of the committee of this Society, and we feel bound to say that they appear all to be dealt with in a very careful and candid manner, and none but those well proven to be meritorious are admitted to the catalogue of fruits, which is indeed a model one, considering the great expanse of territory for which the different varieties are recommended.

In the raising of new hybrid grapes our cousins are doing much, and making some decided advances. The native American Grape being of a much hardier and more robust constitution, is not nearly so liable to suffer from mildew as the European varieties, which, however, have the finest fruit. The object is to have the good fruit of the one with the constitution of the other; and this, which seems about to be realized, will be one of the greatest acquisitions.—*Gardener's Chronicle*.

The Lombardy Poplar as a Screen to Orchards.

A CANADA horticulturist has been experimenting with various trees as wind-breaks to his orchards, and has found the Lombardy Poplar peculiarly useful. The Editor of the *Canada Farmer* adds:

"He planted cuttings of the Lombardy Poplar some six years ago, only fifteen inches apart in the row, These trees are now twenty feet high, and form a complete hedge. The mistake which the planter made was in trusting to the cuttings, as some failed and all did not grow alike, consequently there were uneven places that are eyesores. Again, he planted the wind-break only fifteen feet from the trees in the orchard, when he should have placed them at least twenty-five feet distant. He recommends that the trees should be started from cuttings in nursery rows, and when two years old transplanted to the place where they are to remain permanently, cutting back those that prove the most vigorous growers. In from five to six years these trees grow so thick that 'they will turn anything, from a pig four months old to the wildest bull.' The Lombardy Poplar has peculiar advantages for this kind of work, being such a quick, upright grower, that its stems are a strong support, by being placed so close together that they soon form a fence as well as a wind-break; and the person who uses this tree gets the shelter his orchard needs more than from any other. We have seen them used for the purposes in two or three places in this State, intermingled with other trees and forming a background to rows of Norway spruce and white cedars, which made the wind-break both ornamental and useful. The cuttings of the Lombardy Poplar take root very easily in any damp or moist soil, and may be set at any time after the frost is out of the ground. It is not a tree that is a favorite with all persons, and it has some disadvantages, among which, the room which its roots occupy, and its habit of suckering are not the least."

Deep Culture for Cherry Trees.

DR. HULL, in the course of his experience has found that in his climate cherry trees on shallow soil are sure to fail and die, while those in *deeply trenched land* live and produce satisfactory results:

"At the end of the ninth year, out of our original plantation, there only remained, sound, two Napoleon Bigarreaus. One of these stood directly over a large stump, which had been sunk about two feet below the surface by digging under it. The other stood near and about midway between two other stumps, which were also sunk as we have described. The depth of the excavations made in sinking these stumps could not have been much less than six feet. These trees, now twenty-four years planted, are still perfectly sound, or were the last time we saw them, which was about two years since. For some years past each of these trees has been capable of bearing an annual crop of about eight bushels of cherries. Taking a hint from the apparent good effects produced by the deep preparation of the soil on the two trees mentioned, when we prepared ground for a subsequent plantation we stirred the soil to the depth of near four feet.

"All the trees of this last planting, made thirteen years ago, are now entirely sound; while, so far as known, the remainder of the eight thousand from which they were selected, are long since dead, or the bark on the trunks has been so ruptured as to render them worthless. We should, perhaps, except a few trees which were so planted as to receive protection from buildings.

"The reader is, doubtless, ready to ask why should trees standing in ground deeply trenched, retain their vigor, while those in ground not so prepared are lost in the way we have stated.

"This will be best understood when we say that here the cherry tree perfects its terminal buds on its latest growing branches in May, or by the first days in June. From this time until growth is prevented by frost, which latter period usually occurs about November 1st, there is a period of five months in which the leaves must retain their vitality, or be cast off. Should the leaves remain active during this long interval of summer heats and drouths, so common in our climate, then the trees enter upon the period of their winter rest in a condition not to be injured by any degree of cold likely to occur. When, as is often the case, prolonged and excessive heat and drouths prevail in the early summer months, maturing the leaves and causing them to fall from a part or all of the branches,

then, should the ground become saturated with rains, the trees could not long remain inactive. The materials stored for the nourishment of the leaf and fruit buds the following spring are put in motion, and new growth in the defoliated parts of the tree takes place. But if such a tree had stood in ground deeply trenched, as did the Napoleon Begarreau which has been mentioned, the heat and drouth might not have caused defoliation, nor could a second growth have occurred."

Transplanting at Night.

JOHN H. KLIPPART, Secretary of the Ohio State Board of Agriculture, writes to *Hearth and Home* in favor of transplanting plants at night. He says the plants he transplants at night live and grow as a rule, seldom wilting or withering, while almost all of those transplanted in sunlight wither, and many of them die. As an illustration, he says he transplanted 1,000 strawberry plants at night; their growth was apparently uninterrupted.

Notes from Our Contributors.

What my Neighbors say about Peaches.

PREMISING that this is actual talk and not imagination, Mr. W—— had grown peaches many years on his present farm, making them something of a speciality. His peach orchard is on a ridge overlooking the lake, with timber land in the rear, forming a wind-break toward the south-west, from which quarter our most severe winds blow. The soil was a deep drift formation of seemingly a sand formation, but there was not grit enough in it to polish tools; at the same time light and easily worked. He grew his own trees, and in the fall placed the pits in beds dug out about three inches deep—first a layer of pits, and then of coarse gravelly earth, until the bed was full, and covering lightly with earth. In the spring, those that started early (the pits were not cracked) were selected, and only those for the nursery row, the remainder being thrown away as useless. When in the nursery, the young plants were kept thoroughly cultivated and clean; special attention being paid to induce a vigorous thrifty growth.

At the budding season (and he preferred to bud as late as the bark would run, rather than earlier) the poorest were thrown out. The second season the stem was cut back to within four or five inches of the bud, and when the bud-shoot started, the other shoots that would start were broken off one by one, until the bud-shoot was strong enough to stand the whole force of the sap. Sometimes it was necessary to stake this shoot to keep it from being broken by the wind. Clean and thorough culture was kept up during this season. In the spring (and no other time was proper for setting a peach orchard) the trees were transplanted, the ground being thoroughly prepared over its entire surface. In transplanting, the branches were cut from the stem to a height of about three feet, and the stem cut but slightly, as he considered it injurious to cut the stem of trees, as many advocate. In the orchard, the trees were cultivated with all the care bestowed upon a crop of corn, the horse-implements doing what they could, and hoeing around the trees at least twice during the season.

He had made very many experiments, some of them of value, and others a damage; at one time investing to some extent in gas lime, and finding that although sure to drive away grubs from the roots of the tree, was equally sure to kill the tree itself. Coal tar he found a valuable agent if rightly applied. At first he used large quantities around the collar of the tree, drawing up earth against it; this formed a band like iron, having the effect of almost girdling the trees. He now applies it with a swab, in small patches on different sides of the tree, and finds that it will prevent the moth from laying her eggs, and also drive away the grub when once at work.

Lime and ashes, applied at the collar of the tree, would have a like effect, only not so lasting, requiring to be renewed sometimes twice during the season. This application, however, was of benefit, as adding to the fertility of the soil.

One of the greatest difficulties in growing peaches was from their dropping their fruit when about the size of small hickory nuts. He had found that the best remedy for this was to remove the earth from the collar of the tree, forming a basin, and pouring thereon from one to two gallons of boiling water. Warm water will not answer the purpose; it must be boiling when applied. The effect is to immediately revive the tree, darken the green of the foliage, prevent the leaves from curling, and fasten the peaches to the tree. Lime would have, in a measure, the same effect. He did his pruning in August, cutting back the ends of the limbs so as to bring the fruit nearer the body of the tree, allowing three or four peaches to a branch or shoot; also would avoid crotches in pruning, thinking the tree very liable to split without them, and more so with them.

A few varieties would be his choice for market, rather than many; and first he would plant from one-half to two-thirds of Early Crawford. His crop, the present season, was between 2,000 and 3,000 bushels of market fruit.

Dr. K—— agreed with Mr. W—— as to the advantage of growing very vigorous trees for one's

own planting, and of cultivating thoroughly in the orchard. A light dry soil was the best; but that the soil should be dry was *indispensable*. The peach tree he had found to be extremely sensitive to absorption. Many years ago, when residing in the city, a favorite tree suddenly failed, and investigating to find a cause, he found that a neighbor had placed a leaky barrel containing brine on the opposite side of a fence near; this brine had saturated the earth and been absorbed by the tree to such an extent that the twigs at the top of the tree had a strong salty taste. This power of absorption, he thought, was the reason why so many failed in the use of coal tar. It should be applied in the early spring, and may be used then almost with impunity; while, if applied later, in May or June, it is liable to be absorbed and poison the tree.

The yellows and the curl he considered as distinct diseases, although he had never seen what he supposed was the yellows. The origin of these diseases had been by many attributed to the sting of an insect. Dr. Harris thought it the Aphis; but he thought different—the Aphis being a result rather than a cause.

When young, living in Wallingford, Connecticut, peaches were plenty—fine large rareripes—so plenty that even the hogs were fed on them until surfeited. This continued until 1812, the year that pear blight appeared, when the peaches failed also. Thinking that like causes produce like effects, and there being no material change in the climate or surroundings, he was led to look for some other cause, and had to come to the conclusion that the curl and yellows were of a fungoid character, the fungus being taken in by the leaves, and they curling and not performing their duties sufficiently, caused the fruit to drop. The hot water or lime was also absorbed, and if applied before the curl, was a preventive; and, if afterwards, an antidote to the poisonous seeds of the fungi. He had great faith in the application of hot water.

In reply to the statement of Mr. L——, he said that the sporules or seeds of fungus were carried in the moisture of the air, and his tree that the leaves curled, where not protected by the eaves of the house, would indicate that the sporules, descending with the dew, had affected that part exposed, but had not reached that portion sheltered.

Captain S—— was not successful in growing peaches, and after several years failure from frost and other causes, had discontinued experiment. He, however, believed in the use of coal tar, lime and boiling water, having known of many instances of their successful application year after year.

Mr. M—— had a theory different from others. He thought that the cold north-east storms we have sometimes in May, had much to do with the curl. At this particular time the leaves are unfolding, and are of a peculiarly delicate nature. The wood of the tree is also softer than that of many other kinds. The influence of these cold storms was to injure these delicate leaves to an extent that they did not recover before the drouth of June caused them to curl and drop from the tree. The tree so affected will drop its fruit, but will finally recover and live; if, however, as he has seen, they are attacked several years in succession, they die.

He has seen the yellows, but has never suffered much from it. The symptoms are, that the foliage becomes sickly, the growth weak, many spindling shoots rather than healthy stocky ones, the fruit ripens prematurely from two to six weeks before its time, and finally the tree dies. He thinks the most fatal thing to be the borer, and that very many trees that people think die of the yellows, are simply bored to death. He has noticed the Aphis on the diseased leaves of peach trees, but never on the well ones.

In setting out an orchard, he would be more particular about the way the trees had been cared for than the season of the year, as he had known many instances where orchards were set in the fall with good success, and in the spring with like success; and himself had planted in June, when in full leaf, with hardly a failure. But the best plan he thought to be to dig up the trees in the fall, and heel in, covering tops and all, as you would a heap of potatoes; in the spring, uncover and set out, cutting back severely. He believed in cutting back as the tree grew older, and would trim according to the variety; some kinds splitting much worse than others. He had protected from the eggs of the moth by raising a small mound of clay around each tree. Lime and ashes, applied at the collar of the tree, were also a good application, and he had known of diseased orchards that had been restored by their use. Coal tar he thought safer if applied to the collar of the tree, and covered with earth, than if left exposed to the action of the sun.

All agreed as to the profit of setting only thrifty trees in a dry soil, and cultivating them well.

HERBERT E. BROOKS.

Raspberry and Currant Worm.

I SEE in the March number of the *HORTICULTURIST* an enquiry by W. H. W., page 70, in regard to the Raspberry as a preventive to the ravages of the Currant Worm. I have cultivated the Raspberry and Currant for the last twenty years, and it so happened that I have had them mixed, more or less, but have lost all my Currants by the worms, until the last three years. I have discovered a sure preventive, and I will give it to you, and if you feel disposed you can publish it for the benefit of your numerous readers. Three years ago this spring I had six hundred roots of a very choice seedling black Currant (and by the way it is a very choice acquisition), which I desired to set, and

also a quantity of the common red and large grape Currants. I set them in alternate hills with the black Currant seedlings—not with any view of a preventive for the worms, but fancy; but the result has been that I have not had a worm upon my red currants, set alternate with the black, for the last three years; whilst on other portions of my garden they have been utterly destroyed by the ravages of the little pests, the Currant Worm. The peculiar odor of the leaf of the black Currant seems to be disagreeable to the entire insect tribe; but its fruit is one of the most healthy and useful of the small fruits to man, and were its medicinal and culinary qualities and uses better understood no family would be without an ample supply.

FREDONIA, N. Y.

W. E. DODGE.

Fruit Culture in Minnesota.

EDITOR HORTICULTURIST: Perhaps a few items from Minnesota would be acceptable in your valuable journal, as we too are growing fruit to some extent, with a good prospect ahead, though at the start it was anything but encouraging. We knew not what to plant, nor how to care for it, for we had to unlearn all we had learned in the States east or south of here; a different mode of procedure had to be adopted, and different varieties of fruit, as but few of the old would stand here under any system of treatment. And so a great number of varieties were tried, in great variety of soils, the great mass careless and negligent, and all of us ignorant as to how to proceed, as well as what to proceed with; so disaster and dismay reigned everywhere. Seedlings, like the old named varieties, were generally a failure; but by long faithful perseverance a few of each have been found to stand our climate, where the soil is most suitable; and where not suitable for the common apple, the Siberian Crab in great variety, and many of good size and flavor, with a succession the year through, fills up the vacuum where the others don't succeed—for the crab succeeds, if properly cared for, on all soils that will grow wheat or corn—a few years and Minnesota will have her supply of home fruit, so far at least as apples, plums, cherries, grapes, and all the other smaller fruits, but as to pears, not fully decided, yet I have strong hopes of them—am still trying with some prospect of success. But the peach, I fear, will never be a reliable crop here, though in time we may find a variety that will stand good; for, like the apple, there is a great difference in the hardness of different varieties, some almost perfectly hardy, having stood four winters without killing the least, but as yet none to bear fruit; but not done trying yet. The Grape I have found a paying crop, but any variety ripening later than the Isabella won't pay. The Isabella fails to ripen well occasionally, but not so frequent as not to pay in the long run. We are obliged to cover our grape vines here in the winter, but in return we get a good crop every season, and retain the health and vigor of the vine unimpaired. As to Raspberries, none do well here but the black caps, unless covered in winter; but perhaps no berry pays a better profit on the labor than the black cap, and few more profitable, and are coming fast into general use. The Currant, Gooseberry and Strawberry are just at home here, and grown in great quantities. For a new, cold country, we are doing well, all things considered, and no one need be deterred from coming here on account of fruit—they can soon have a full supply if they have the discretion to take advice, then select and cultivate accordingly; but too many know it all, and will grow just what they grew in the East, and just as they grew it in the East, or not grow at all, and the result a failure and the country cursed for it.

EXCELSIOR, MINN.

PETER M. GIDEON.

Growing Fuchsias.

ABOUT the first week in January I take the plants, no matter what age they be, and cut them back severely. I always grow Fuchsias on a single stem from the cutting, that is, one main shoot, from which I grow branches, and if I want a pyramid, I singly shorten all the branches and some of the top also. If I want umbrella shaped, I cut off the lower branches close to the main stem at whatever height I want to form the top—say two to four feet—and cut the top branches to within a few inches of the same, cutting the top clean off. After they are trimmed, I shake off all the ground remaining about the roots that will come off without much force. Trim some of the straggling roots (with a knife), and then put in from 8 to 14 inch pots (the larger one I prefer) in soil of two parts of well rotted turf, one part hot-bed manure, one part cow manure, and a small portion of sand, if the turf is clayey (always making good drainage in bottom of pot, and never sift the soil or any part of it, but cut it up with a spade). All this compost must be at least one year old and frequently turned under cover. After they are potted, I water thoroughly with water the temperature of the greenhouse, which is 50 deg. at night, to 70-75 in day time. After that, water when dry, and syringe daily with clean water at the same temperature as soon as they are in leaf until they come into bloom, after which twice a week will be sufficient.

I very seldom use the knife after the first pruning, unless they are very unruly, in which case I take out a young shoot altogether, or else take out the top of one that grows out of shape. No plant should have more than one stake, and that to be as near the centre of the pot as the plant will permit; it should be put in when the plant is potted, and the shoots tied to it as fast as they require it. When I put my Fuchsias out in the open ground (which is here about the 20th of June), I

plunge the pot two-thirds in the ground in a partly shaded place, where they get but very little sun, say from 11 o'clock till 3 in the afternoon, and water with liquid manure water at least once in ten days. I prefer guano (Peruvian), which I prepare in this way: I take about one bushel of the guano in a barrel (35 gallons), fill with water, stir well three or four times daily for three days, let it settle for three more; then take one pint of this liquid to put with two gallons of water, and water the plants thoroughly. With this treatment I can grow Fuchsias to perfection. To grow Fuchsias from cuttings, I take the young wood in February, when three to four inches long; put them in a box, three inches deep, filled with clean sand, water when dry, and they will be well rooted in twenty days. I then pot them in three-inch pots; let them grow until the pot is well filled with roots, but not root bound, which will be in about three weeks; then I give it another (which is the last for the season) shift in the pots they are to flower in—that is, from eight to twelve inch pots.

I always encourage the leader, or main stem, to grow straight up, tie it to a stake, and ten to one I get a good strong well shaped plant from 1 to 6 feet in height (according to varieties) by the first of July, and covered with large sized flowers from top to bottom. The after treatment is precisely the same as the older plants. In the Fall, before the thermometer indicates 36 deg., I take them in the house, where they will bloom up to December. I withhold the water from them, then lie them on the sides of the pots under the stage, and let them rest until time for starting them again.

NORWICH, CONN.

JOSEPH F. SMITH, *Florist.*

The Botany of Oregon.—No. 2.

WE have two species of oak here. One of them (*Quercus Garryana*) grows to large size, and often assumes very fantastic shapes. Groves of them resemble orchards of old apple trees.

Scrub oak (*Quercus Kellogie*) is a very pretty miniature tree, but it is troublesome to the agriculturist who would till the soil where it abounds.

Of all our deciduous trees, the white maple (*Acer macrophyllum*) is the most beautiful. Indeed, it is said to be the finest maple in North America. In May, while its leaves are yet small, it is covered with long racemes of yellow flowers, making it very attractive. The foliage turns yellow in the fall. The wood is beautifully veined, and capable of receiving a very high polish. Sugar has been made from its sap.

Vine maple (*Acer circinatum*) is of a trailing, prostrate habit. I have sometimes seen a bunch of it, consisting of half a dozen stems from five to ten inches in diameter, raising obliquely in all directions six or eight feet, and then spreading towards the ground on all sides. When it assumes this form it is very beautiful. I fear it will not do very well as an ornamental tree, as it seems to flourish best in the dense forest, although I have seen it doing very well in some spots of open ground. In April it is covered with small red flowers, which are very pretty. Its leaves turn a very brilliant red in the autumn.

Poplar balsamifera grows in wet places. It is very fragrant and ornamental. It grows very fast. A thrifty specimen in our grounds has frequently attracted attention on account of its tropical looking foliage. It does not like warm, dry weather, and probably your hot summer suns would ruin the foliage, unless planted in a damp place, and in the shade.

The American Aspen (*Poplar tremuloides*) also grows in wet places; as it is common in the east, it requires no description.

The Oregon ash (*Fraxinus Oregona*) is likewise a lover of wet soil. It is beautiful, especially when in bloom. It is larger than the eastern white ash.

We have two or three species of willow which attain the height of large trees. The Oregon alder also becomes a large tree. The common wild cherry attains a height of thirty feet. Its fruit is red, and similar in looks to the red wild cherry of New York, but is not near so palatable as that variety. It is used extensively as a stock upon which to graft the tame cherry.

The choke cherry is common in some parts of the State. It is remarkably beautiful when in bloom. I do not know whether it is *Cerasus Virginiana* or not.

The Oregon dogwood (*Cornus nuttallii*) is larger in all its parts than the dogwood in the east. Its flowers which come out in April, sometimes measure six inches in diameter. Another member of the same family (*Cornus paniculata*) does not grow so large.

The Oregon crab apple (*Pyrus rivularis*) sometimes grows twenty feet high, and is very pretty when in bloom.

The Oregon elder (*Sambucus Oregona*) becomes a large tree. It is similar to the elder of New York, except in size.

Mrs. S.

P. S.—It is now the twenty-third of February. Some of our native willows are in full bloom. In our garden are blooming six varieties of crocus, wall flowers, &c. Hyacinths and narcissus will soon be out. Daisies (*bellis*) have been in bloom all winter.



Vol. 25.

JULY, 1870.

No. 289.

Notes for Cottage Gardeners.

BY THE EDITOR.

Japan Lilies as House Plants.

THE beautiful Japan Lilies, introduced within a few years past, have proved so well adapted to our climate, so easily grown, and are now so reasonable in price, that we would call special attention to their use in window gardens and pots. We had a beautiful *Lilium Auratum* last year in flower in our window, which developed two splendid flowers, eight inches across, and diffused a most exquisite perfume throughout the room. It is, in truth, the most magnificent of all foreign flowers yet introduced into this country for popular use.

The beautiful varieties of the *Lilium Lancifolium Album*, *Rubrum*, *Roseum*, and *Longiflorum* are still cheaper, and can be grown anywhere. They thrive under the most careless treatment, and throw out tall stalks of long, splendidly-colored blossoms, from crimson to pure white.

A pot of each of the above five varieties of lily will form a window garden alone when in bloom. They grow with the greatest vigor, and rarely fail to reward the interested lover of flowers with one or more magnificent spikes of bloom.

Insects in the Garden.

Insects, both in the garden, greenhouse and orchard, are yearly becoming more and more troublesome and destructive. In some localities their excess of life deprives the cultivator of all profit in his occupation, and turns his beautiful trees or shrubs into a sickly mass of foliage. How shall we get rid of them. Here is a method we have used with more or less success :

Carbolic acid preparations, in the form of soap, or as a plant protector, or as a powder, have an admirable effect in the destruction of insects. Carbolic acid is a natural distillation of coal tar, and in its crude state is a poison alike to man or plant, but properly diluted and compounded it can be used in a great variety of forms, either as disinfectant, or as cleansing soap, or as insect destroyer. In the last particular we have witnessed some experiments which lead us to believe it will prove of great value to all horticulturists. No insect can stand either its fumes or its application. Like oil, it is certain death. We have tried it on grape vines or rare bushes infected with worms, and found it excellent. A pound of the article dissolved in fifteen or twenty gallons of water, forms a large quantity, which can be forced by a syringe over the entire plant or tree, and one or two applications drive away all worms, flies or insects. Instances have been related, from trustworthy

sources, of the use of the same article on greenhouse plants, and has proved a complete remedy. And in like manner it has been used as a wash for peach trees, and proved efficacious in destroying the borer. While, for all worms, slugs, flies or insects that infest the leaves or bark of tender shrubs or trees, it is an admirable specific. It must also be remembered that the *acid*, if used too strong, is also destructive to the plants themselves. One pound, dissolved in ten gallons of water, is strong enough for vigorous, strong growing plants, while one pound in fifteen to twenty is sufficient for all having a more delicate habit. Sprinkle well over the plants, and wash trees frequently, in order to give it full effect. We have seen ants and worms crawl away from the very smell of it, in haste, and flies, or winged insects, leave in terror. It seems to be the only agent, thus far, of which such insects are afraid, and I would advise a general trial, in order that the results of individual experiments may be elicited.

Experiments by chemists show that it is destructive to all vermin, all low forms of animal life, and prevents or destroys fungus life and fungoid growth. May we not hope that this will prove the long wished for antidote to insect devastation in our horticultural labors? I believe it has the germ of good that will prove of lasting benefit to the horticultural community.

Conover's Colossal Asparagus—The Original Plantation.

We paid a visit lately to the original grounds of the Conover's Colossal Asparagus, at Jamaica, L. I. At present but four acres are planted and in bearing condition. The ground is light and poor; the plants, now in their fourth year, were planted in rows five and a half feet apart, and four feet distant in the rows. The owner was cutting freely large, noble stalks of tender succulent stems, measuring a full inch in diameter, and from two to three inches in circumference. There was no unusual preparation of the ground, no liberal manure used, no extra cultivation. In comparison with the common field asparagus, and also the Oyster Bay variety, grown close at hand, there could be observed a wonderful difference. Both in size and productiveness the Colossal really deserves its name, and was fully double the size of any other specimen we had ever seen. While other beds had been deeply manured annually for five years, until the ground was literally filled with richness, the bed of Colossal asparagus, only a little distance off, and one year younger, was cutting shoots both double in size and double in quantity. Its merits, we believe, have not been exaggerated. A few bunches, handed us by the obliging proprietor, Mr. A. Van Sielen, were carried home and the *quality* submitted to the test. *That*, too, proved triumphant, juicy, succulent, and sweet to the very base, without any waste; it proved one of the most delicious feasts we have ever enjoyed.

An important fact came under our observation, which deserves special notice by all asparagus growers. Fully two-thirds of Mr. Van Sielen's crop was lost, by the attack of the asparagus fly. This fly, just as the shoot pushes its way above ground and begins to grow green, alights upon it, punctures it, and nips it here and there, seeming to poison it, for it at once curls over and grows sideways or downward. Its value is entirely lost for market purposes, and the profits suffer in consequence. In the asparagus region of Long Island the fly has become a perfect pest, casting disappointment into every gardener's heart, and cutting off his best and most valuable plants. The flies swarm in myriads, and go from farm to farm and nip fully two-thirds of all the asparagus shoots, and though new shoots constantly appear, the flies, more watchful than the grower, take possession first and rule the field. Mr. Van Sielen told the writer that if this pest continues much longer, asparagus growing must either be given up entirely, or else there must be a change in the *method of production*. His proposition is this: instead of permitting the shoots to grow above the surface of the level of the ground and become spoiled by the flies just as it is turning green and becoming fit for market, he ridges his land close to the plants, cuts these ridges into hills and mounds fully twelve to eighteen inches high, covering the plants or shoots completely. Here they are allowed to grow undisturbed, and just as the top appears above the surface of the hill, and before it is attacked by the flies (for they do not bite until turning green), the chisel is run down and the shoot cut off; thus practically introducing the method of *blanched or white asparagus*. In the market this white asparagus brings a high price, being more delicate and tender, nevertheless there is a popular prejudice against it as being unhealthy. We believe the opinion unfounded in fact, as the opportunity we had

for examination and personal test satisfied us it is equally healthy and nutritious. We have given the detail of our observation, as we would be unwilling to have any enter the field of *asparagus growing, for profit*, without knowing some of the difficulties attending the occupation.

This new variety is of unquestionable profit. The bunches were selling for \$15 per doz. or \$1.25 each; but if produced in large quantity in the future, I fully believe they would command at least \$5 per dozen steadily. A mistaken impression has hitherto prevailed with regard to close planting of asparagus. Mr. Henderson recommends 20,000 plants per acre, and other writers from two feet by two, and three feet by three, as low as 5,000 plants per acre. If any one could see the vigorous growth of roots of the new variety, they would at once perceive *cramping plants* together is alike deleterious to their health and productiveness. Mr. Van Sieten's bed is five and a half feet by four. I do not consider it too wide. The plants have an abundance of room, the hills grow strong, throw up stalks fine, large and vigorous, and in course of time these hills will be permanent and productive, to an extent that would astonish those accustomed to close culture in rows.

The profits of asparagus culture have been greatly exaggerated. Few need expect over \$200 per acre as a constant income. The Colossal asparagus can be cut a little in its third year from seed; in its fourth quite freely, and in its fifth year a full crop. Two thousand bunches per acre would be a very handsome estimate, and one thousand is a much safer guide. But all growers must expect attacks of the fly. A sure remedy against it would be worth a fortune. New plantations might escape for a while, but the flies would come at last.

Laying Down a Lawn.

REFERRING to Prof. Eastman's unfortunate failure in his efforts to produce a fine lawn by the usually successful method of sowing grass seeds, I beg to remark that, having been somewhat extensively engaged in this business for many years, I have found no difficulty whatever in the matter.

Of course it is essential that the soil should be thoroughly prepared, whether it is to be covered with sod or sown with seed; the preparation is alike in either case. To cover several acres with sod is a very expensive operation, and in very many cases quite impracticable; obnoxious weeds, such as garlic, etc., are frequently introduced with the sod, which, after all, does not make so perfect and satisfactory a lawn as a proper admixture of selected seeds.

I find the following mixture to produce the most perfect permanent lawn, viz:

One bushel Red Top (*Agrostis vulgaris*).
Two bushels June grass (*Poa pratense*).
One quart Timothy (*Phleum pratense*).
Two pounds White clover (*Trifolium repens*).

These quantities to be mixed and applied to each acre of land.

A lawn sown the last week of March of the present year, has already been twice mown, and is now a well set, thick sod.

WILLIAM SAUNDERS.

A White Grape.

EDITOR HORTICULTURIST: You ask in the present number what we have to say about the Martha? Simply this, that it is, in our opinion, the most valuable white grape we have yet tried, and we have been getting every new one that has been sent out. We could show you Croton, Lorain, Golden Champion, all in full blast. So you see we go in for the white ones.

Martha is not as large in bush and berry as Concord, but nearly so. As white as any grape; quality superior to Concord; hardy and productive as its parent (the Concord). If it has a fault, it is its exceeding tender, thin skin, which may be a drawback to distant carriage. I notice the bunches this season, larger than ever before. The Croton, from all accounts, may be superior in quality, size, etc., but we must wait to see if it will prove hardy and free from mildew. If it is quite exempt from the latter, and hardy, it is the first *Vitis Vinifera*, except Wehawken, that we have tried. Any one who thinks it a

hybrid will find themselves mistaken. If it escapes mildew, I am the better pleased that it is a full-blooded foreigner; for then we have a large white grape of great excellence, from all we have heard of it. We are not ashamed of having originated the Martha.

BLUFFTON, MO.

S. MILLER.

Strawberries—Culture—Varieties.

BY HENRY T. HARRIS.

"TOO many cooks spoil the broth"—"too many irons in the fire, some will burn." These are true old maxims; and one equally true is, that too many varieties of strawberries in cultivation by one person, some, or all, will be neglected. Hence, to secure the best success, ascertain three or four kinds the best adapted to your grounds and climate, then give them the best culture possible. First, then, an early, medium, and late variety should be chosen to insure a long crop of this matchless fruit; and for this latitude no better can be had than Downer for early, Wilson for medium, and Green Prolific for late. With these three kinds, we believe any one here can have all that could be desired from May 15th to June 15th. The Green Prolific is the very handsomest, largest (all large), and most desirable berry grown; and I would not be without it under any sort of state of case. Of course it does not equal the Wilson in firmness; but for beauty, flavor, and productiveness, it has no nearer competitor on my grounds; and had good old Seth Boyden never done any other praiseworthy thing, his propagation of this superb berry would entitle him to all honor, all glory, from the horticultural public. Why will people cultivate strawberries in matted beds? Simply because that is the "wrongest" way possible, we suppose.

If one had started out to learn the meanest way to cultivate them, he certainly would have settled down on this matted bed business. Shame on it! If we had our way, a fellow should never eat or sell strawberries who would not cultivate them as they should be—in stools; and we know that one who tries this mode once will never adopt any other.

When you try it you will learn that half the labor will give you double the yield of larger, finer fruit, and then the picking is done with less than half the work. Grown thus, a bed of Wilson or Green Prolific of 500 plants (say fifty feet square), will yield, if mulched winter, spring, and summer, forty or fifty gallons of splendid fruit. Cut off the runners—cut them off—don't let a single one take root—keep the weeds down and the soil stirred at the proper time, and the mulch put on, and then behold the magnificent reward that awaits you when the "Lord of the Harvest" turns the season round!

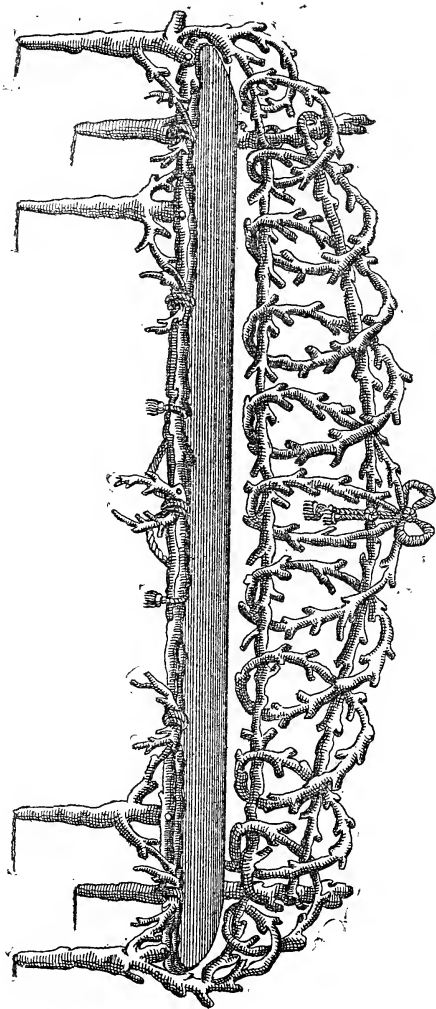
But what can we say to induce you to raise your own plants in the proper way? I shall tell you how, and then you can do or not do, as you may prefer. Of course I am now writing to those who desire to cultivate for home use. First, then, procure 500 or 1,000 two inch pots, that will cost about a cent each. Fill them with good soil and plunge them in your bed any time in June or July, and lay a runner on each—lay on a clod to hold it fast. By September a fine plant will fill each pot. These may be left in the beds until spring, and then set out, or the runner may be cut any time in September and put out in a well prepared bed and immediately mulched. I prefer the latter plan, as the following spring a fair crop will be raised. Plants raised in this way are worth far more than any other. The pots can be used for a number of years.

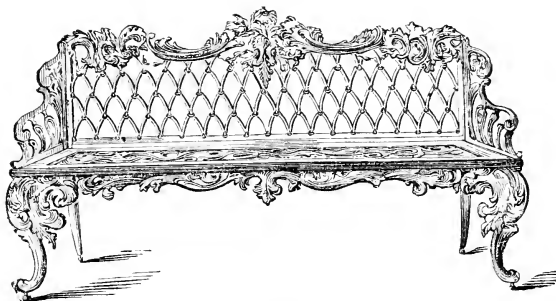
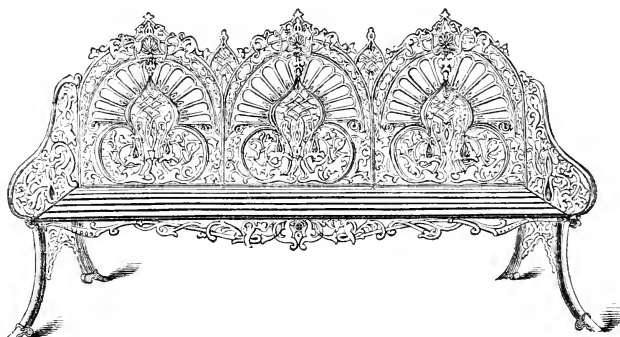
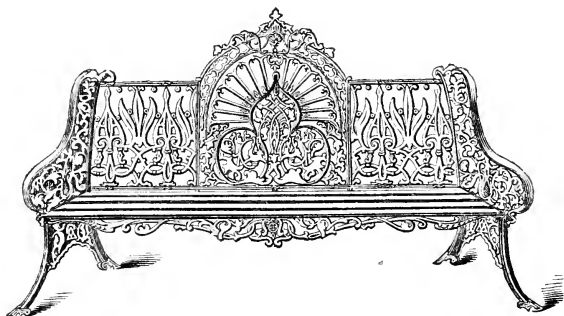
STANFORD, KY.

Designs for Rustic Settees.

WE introduce, this month, several fine designs of settees for park and lawn use. Fig. 1 is an excellent illustration of a style of rustic work very popular in Belgium and Germany. It is made entirely of wood, twisted in a skillful and picturesque manner. Figures 2, 3, 4, represent several excellent designs of a highly ornate character, constructed of iron, and intended for lawn, piazza, or balcony uses, rather than for the public park. They are taken from the originals, constructed by the Composite Iron Works Co. of this city. Iron garden furniture is so necessary now, as conveniences in rural embellishments, that the manufacturers of articles of this nature are constantly on the alert devising new and exquisite designs to please the lovers of rural taste. We will therefore present, from time to time, illustrations of such as are especially noteworthy and tasteful.

Design for Rustic Settee.



*Fig. 1.**Fig. 2.**Fig. 3.*

Designs for Lawn or Balcony Settees.

A New Book on Peach Culture.

THE past five or ten years have witnessed an unusual development of the traffic in peaches, and an enormous production, sufficient to astonish those accustomed to moderate figures. During the last peach season the fruit trains from Delaware often exceeded one hundred cars daily, each car holding 500 baskets of $\frac{5}{8}$ of a peck, while the total production of the entire Delaware Peninsula reached over 3,000,000 baskets. At such a time, when the interest in peaches is most intense, a book on Peach Culture is very opportune and serviceable. The present volume is edited by James Alexander Fulton, of Dover, Delaware, a large owner of peach orchards, and located in the very centre of the best peach producing region of the State. His opportunities for observation have been unusually favorable, while his experience insures to the book the best possible element of *practical worth*. It contains 190 pages of clearly printed text, and discusses the subject from the selection of the site for a nursery, down through the management of seed, budding, nursery cultivation, sales, planting in orchards, orchard treatment, marketing, baskets and packages, commission merchants, shippers, production, profits, insects and diseases. There is added also a full list of varieties, a chapter on peach culture under glass, and a few fancy ornamental kinds are described. We extract a few items of interest.

Height of Head.

"There is some diversity of opinion in regard to the height of the head of a tree; or, rather, at what height the tree should be allowed to commence to form. We think *three* feet the proper height. Allowing the limbs to stand at this point, they will naturally strike upward at an acute angle with the stem, and thus allow room enough to cultivate around them with a mule or low horse.

"The arguments advanced by those who advocate low heads are two: *First*—that the fruit is nearer the ground, more easily picked, and not so likely to break down the branches. *Second*—that the low heads withstand the storm better, and are not so easily blown down. But the answer to all this is, that when the heads are low, the fruit does not ripen early or well on the low branches, and is generally small in size and inferior in quality. In time the lower branches, for the want of sufficient air and light, die, and have to be removed, thus leaving the tree with less bearing wood, or in worse shape than if it had been trimmed up to the proper height at first.

How Commission Men Defraud Growers.

"Some of the consignees are upright, honest men, who do a fair and legitimate business, on business principles; but many of them are swindlers and sharpers, whose sole object is to make money for the time, who have no reputation to lose, and who do not aim to gain one. They are unscrupulous in their statements, importunate in their solicitations for consignments, and wholly unreliable in making returns. Many others have stands of their own, where they sell at retail, upon receiving a consignment. There may be many fine baskets of fruit worth \$1.50 each, and sold as such, but the whole consignment is returned to the grower at 75c., and the commission merchant pockets the difference, represented as follows:

SALES SHOULD BE,		AS RETURNED.	
50 baskets fine at \$1 50.....	\$75 00	200 baskets at 75 cents.....	\$150 00
100 " good at 1 00.....	100 00		
75 " fair at 75.....	56 25	Difference	\$93 75
25 " poor at 50.....	12 50		
	<u>\$243 75</u>		

"This difference the dishonest consignee pockets, and absolutely *cheats* his confiding customer out of this amount in a single transaction. We have reliable information that some parties have actually made enough, in a single season from their swindling operations, to retire from business altogether.

Profits

for an orchard of 10 acres, 1,000 trees, four years old.

First cost of planting.....	\$150 00
Interest, four years.....	36 00
	<u>\$186 00</u>

First crop of peaches, 1,000 baskets, at 40 cents net.....	\$400 00
Second year there may be only 200 baskets, but owing to a scanty crop the price is doubled and the planter gets 80 cents a basket on the trees.....	160 00
Third year, full crop, 3,000 baskets, at 40 cents.....	1,200 00
Fourth year a total failure.....	
Four years of bearing gives a net income of.....	\$1,574 00
Or an annual rent of.....	333 50
Or per acre.....	33 35

Hence it follows that land which will yield \$40 per acre per annum should not be planted in peaches.

Varieties.

By vote, the old Mixon Free has received the first place of honor, and the Morris White the second.

Were we going to plant an orchard, and restricted to *six varieties*, we would select three white and three yellow sorts.

WHITE.

Hale's Early,
Old Mixon Free,
Stump the World.

YELLOW.

Crawford's Early,
Reeves' Favorite,
Crawford's Late.

If we enlarged it to twelve, they should be these :

WHITE.

Hale's Early,
Early York,
Large Early York,
Moore's Favorite,
Old Mixon Free,
Red Rare-ripe,
Stump the World,
Ward's Late.

YELLOW.

Crawford's Early,
Yellow Rare-ripe,
Reeves' Favorite,
Crawford's Late.

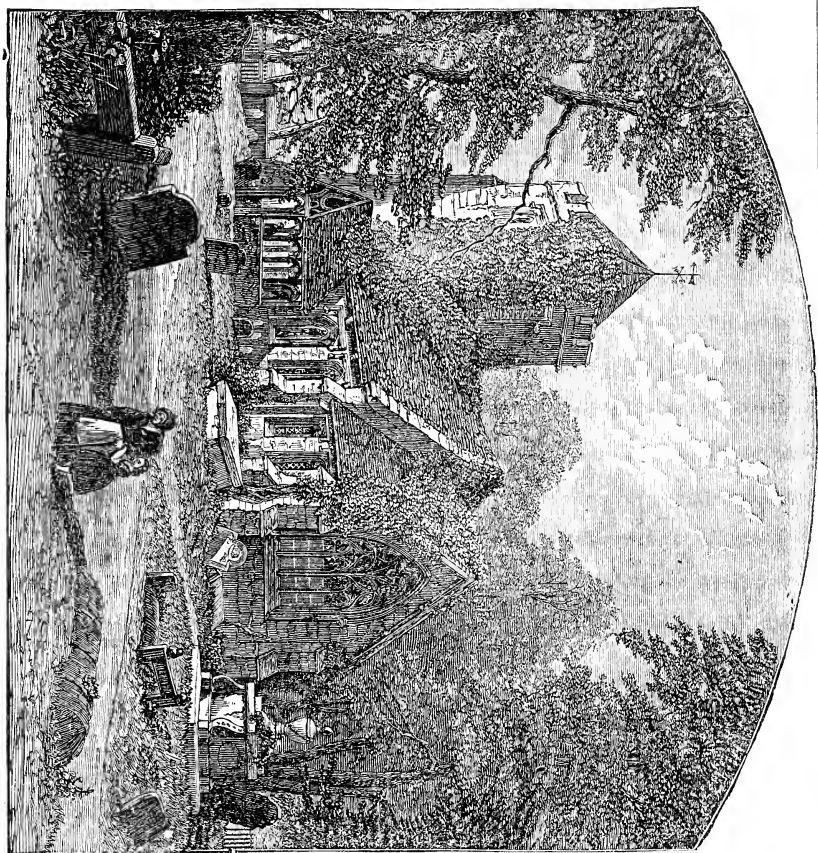
The description of the relative value of the different varieties occupies a large part of the volume, and is quite entertaining. We observe he is disposed to retain the Hale's Early.

"It is capable of standing harder frosts than any known variety. This and its early ripening give it great value both for garden and orchard, for domestic use, and for exportation. That it is subject to rot, more or less on the tree, we readily believe. This we think is mainly owing to *soil*. We have never known an orchard, planted on *high, dry, sandy* land, to be seriously injured by rot. The rotting has usually occurred on the low lands, badly drained, or on clayey soil. The result of our observation goes to prove that in Delaware, at least, Hale's Early may be successfully and profitably cultivated in all her light sandy loams, but not on her clay or low lands."

This new volume is quite entertaining, and especially serviceable to all horticulturists.

An English Rural Church.

OUR illustration represents one of the frequent rural churches of English scenery, with its ivy covered walls and massive tower, beautiful in their age and quaintness. We lose none of our enjoyment and appreciation for the pleasures of the garden or lawn while we have a sketch of some pleasant rural scene like this thrown in as a relief to our horticultural labors. The English ivy seems inseparably connected with all church architecture and association in the old world. It grows everywhere, and in an incredibly short space of time mounts the bare walls and covers the side, from window to roof, with its graceful but sombre festoons of foliage. Old abbeys and cathedrals advanced in age, or just falling into ruins, seem to grow more and more beautiful as the artful hand of Nature, with its "*ivy green*," steps in and skillfully hides their bareness or deformities. It may be often seen hiding and beautifying the trunks of old trees, or luxuriating in rural cemeteries, growing everywhere with a luxuriance and beauty surpassing all description.



The Wild Blackberry and Raspberry of the Northern States.

TO those unacquainted with the bounteous growth of these fruits on the outlying, and in many instances, waste lands scattered through the several States north of the Potomac and Ohio rivers, and only reading of their domestic cultivation in the columns of our agricultural and horticultural journals, it would seem as though they were only produced in the gardens and home lots of the cultivators. But the fact is far otherwise. The great bulk of the blackberries, and raspberries, to some extent, which are exposed for sale, both in our city markets as well as in those of the smaller towns and villages, are of wild native growth.

Fifty years ago neither of these fruits were known in garden cultivation in the United States; and it is even less than thirty years since any particular attention has been paid to propagating them in gardens at all for market purposes, and a less number of years since they have been *civilized* into *varieties* by painstaking cultivators. Now no home garden is considered complete without more or less varieties of each of the blackberry and raspberry being cultivated for family use, while hundreds, even thousands of acres are profitably grown throughout the country for market purposes alone. Soils are examined to ascertain whether they are of suitable composition or fertility; localities are carefully sought as being the best fitted for their production; manures are experimented and selections made from them, as best applied for their production and flavor; treatises and books are written by experienced cultivators on the best methods of originating new varieties; propagating, planting, tending, gathering, and taking them to market. Their cultivation and production, in fact, is reduced to both a science and a trade.

It is well that these things are so. They afford the people a rare luxury in the enjoyment of rare fruits, and at cheap rates, which without this cultivation we could only partially obtain. They add to our health, our pleasure, our enjoyment, aside from the attendant benefit of encouraging a vast amount of light labor to infirm men, and women, and children, who in their proper seasons, are engaged in gathering them. So much for the *domestic* fruits of the kinds in question.

But, has any one taken into consideration the incredible amount of choice wild blackberries and raspberries that grow throughout the country in almost barren fields; along neglected waysides; in newly disforested lands; along the sides of dilapidated stone walls; or throughout old mossy pasture fields filled with rocks either in place, or huge boulders, when, for productive uses, the soil is hardly worth the annual taxes paid on it? I fancy not. Nor, as far as I have yet discovered, has any one taken into consideration the *profitable* use to which a great many of these waste lands may be turned, when properly cared for and put into such production.

Such lands mostly lie in secluded places, away from thickly traveled ways or navigable streams. They are frequently difficult of access, high, hilly, or mountainous, and yet within short distances of large cities, towns and villages. Their soils are barren to the growth of either grain or grass to any extent—in short, an almost absolute waste. Yet in their frosty, heavy, moist surfaces the choicest blackberries and raspberries that ever touched the human palate grow in the most luxuriant abundance. We know localities on these very soils where the best blackberry grows six or eight feet high, bearing the largest and sweetest of fruit, and in the greatest abundance; and of the red raspberry in equal luxuriance of growth and production, according to their natures; and none but the secluded rural population thinly scattered among them know of their existence or profit by their gathering.

Since our modern railways have penetrated many of our mountain fastnesses, these fruits have been discovered to much greater extent than before, and their berry harvests eagerly sought for market purposes. The lands on which they grow are ragged and wild. Their owners, many of them living at a distance, supposing them almost worthless, rent them out for a trifle more than the taxes assessed upon them, and the humble people living in their vicinities feel themselves at liberty to gather their fruits and make the best they can of them. In many places the boys, women, and girls of the smaller villages—during the berrying season—make a regular business of daily going out, for miles away, and picking these fruits, taking them to the nearest railway stations, and selling them to the dealers, who congregate there to take them to market. The green mountain ranges of New England, with the numerous spurs which run out from them; from southern Connecticut to

Lake Memphramagog in Vermont; the highlands of the Hudson river; the hills and dells along the eastern section of the Erie railway; the thousand humps and gorges of the anthracite coal fields of Pennsylvania; even lands partially adapted to agriculture near these localities, all yield more or less of these choice fruits, which are annually increasing of their abundance to our populous market places. All that is needed is a better care and protection of these lands to turn them, to their owners, into profitable investments for the growth of these fruits.

In passing over the Boston and Albany railway, not long since, in going westward through Massachusetts, a few well-dressed young lads and girls entered the cars at the pleasant town of Westfield, which lies beautifully sheltered in its own sunny valley just under the declining spurs of the green mountain ranges. In conversation with them soon after they entered the cars, I found they lived in one of the rough mountain towns on the way to Albany. There was a little farming done there, as they told me, but the most profitable pursuit of the younger population was that of "berrying" during the summer months—blackberries, raspberries and huckleberries being the fruits of their labors. "They grew all over the fields, on everybody's land; no leave was asked to pick them, nor were they ever forbidden." Many nimble pickers would each gather one, two, or even three bushels in a day, and they were sold to the dealers at the railway stations for ten, twelve or fifteen cents a quart, as the demand might happen. And that is but a sample of hundreds of other places of equally eligible location. I met a young man near there, recently married, and about settling in a high, rocky, sterile place in the neighborhood. I asked him why he did not go to the west where land was cheap, and he could grow grain, grass and stock in the greatest abundance. "Why, sir," said he, "I can do better here. I can, with my little means, make more *clean money* by picking blackberries, raspberries, and huckleberries on these mountains than I can by farming on the best lands in Illinois."

This was all new to me, but on thinking the matter over, it may be so. In my own New England boyhood I remember these fruits in such localities as I have described, growing in the greatest abundance, food only for the birds, and what an innocent, delightful pleasure we children enjoyed in gathering them only for our own and the household's luxury. There was no market for those berries then, no railways to take them to the villages, towns, or distant cities in a few hours from the gathering, and at paying prices for the labor, as now.

In these *natural* localities for such fruits they need no cultivation. A fire now and then scorching over the land is the best profitable manure for them. All they need is protection from sheep, goats, or cattle. Fifties or hundreds of bushels of these fruits will grow to the acre, and if the owners of such land would only give them proper attention, they could be grown in greater quantities than they have ever yet produced. Let it become a business in these localities; systematize it, encourage it. Even those sterile rocky mountains and their gorges, where only worthless ferns and laurels now grow, may teem with these delicious fruits in untold abundance.

The huckleberry (whortleberry, properly), which cannot be brought into either garden or field *cultivation*, may be made profitable in these rocky wastes, well paying for the labor of gathering and marketing, besides yielding our towns people a most healthful luxury.

L. F. A.

New Western Fruits.

FOR the last three years G. P. Pepper, of Pewaukee, Wisconsin, has exhibited at the State Fair seedlings of his own growth, competing for the premium offered by the State Horticultural Society, of \$50 for the best seedling adapted to the northwest; quality and hardiness being the requisites for winning the prize. At the exhibition of 1868 the award was made to Mr. Pepper, and at a subsequent meeting of the society it was named

The Pewaukee,

in reference to its place of nativity, and recommended for trial throughout the State. The fruit is medium to large, round obovate, waved; cavity, small; basin, shallow and slightly plaited; calyx, rather large; stem, variable in length, with a fleshy substance on one side, sometimes very large, from an half to one inch in length; skin, dull red on a bright yellow

ground, with whitish dots all over; flesh, yellowish white, with a rich sub-acid flavor—January to June.

Tree, upright center, branching at almost right angles; wood, very hard; shoots, dark, smooth, with very white specks.

Mr. Peffer has many more seedling apple trees which are nearly equal to the Pewaukee, and which are withstanding the changeableness of the climate. But he is not engaged alone upon the apple in his experiments. Plums receive considerable attention, and the result is already before the public in two valuable seedlings. The Imperial Washington is from the seed of a Lombard apparently crossed by Imperial or Washington Gage, as it has the character of both to a great extent. Color, red, dark brown, with light yellowish specks; skin, thin and rather tender; flesh, greenish yellow, juicy and rich, quite firm and nearly free from the stem; fruit, large and nearly round, oblate, flattened at both ends, a slight suture stalk, about three-quarters of an inch long, rather stout, inserted in a small but sometimes no cavity, with occasionally a small ring ridge around it; season, middle to last of September. Tree hardy, vigorous and productive, nearly equal in every respect to the Lombard.

The Blue Twins

is a small, dark blue plum with a whitish bloom. Tree, fifteen years old; raised from the seed; stands on a high ridge exposed to southwest, west and northwest winds; bears large crops of fruit every other year; is very hardy but grows slow. Fruit hangs in twos; flesh yellowish green, adheres to the stem on one side, and when fully ripe is of a sprightly sub-acid agreeable flavor; ripens from last of September to middle of October.

Much credit is due to Mr. Peffer for the energy and attention he has bestowed upon the cultivation of new fruits. If we had more of such men western pomology would "wag" on more prosperously.

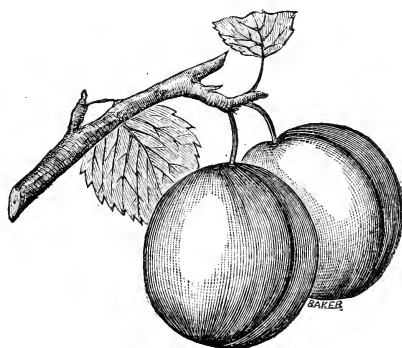
O. S. WILLEY.

Evergreens Irregularly in the Orchard.

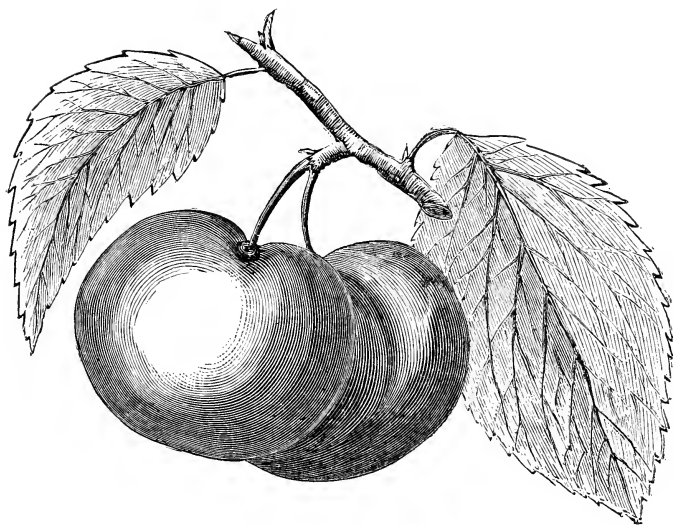
IT is many years since I wrote advising to all orchardists whose lands were in exposed bleak situations, and especially to the planter of orchards upon the prairies, that the most perfect protection, and the greatest security toward a permanent, healthy orchard, would be to plant here and there, irregularly and discriminately, among the apple, pear or other fruit trees, more or less of Norway Spruce, White Pine, Scotch Pine, and other evergreens. I have almost yearly repeated, line upon line thereupon, but not until in 1867, I think, was any special note made, or attention called to the point by the editors of horticultural journals. A few lines I then wrote in the Editor's Table of the *HORTICULTURIST* went the rounds, and from that to the present I have been glad to see here and there a voice, or rather a pen, break out in favor of the plan—a plan that I have no doubt, if it could once be carried out, would result ten-fold more beneficially to the orchard than the stiff yet popular one of a belt or screen. It would really occupy no more of land than the belt or screen around, and as each tree has an influence over only a certain distance, the ameliorating influence of the evergreen would be evenly and regularly distributed all through the orchard, instead of a mere wind break, protecting only a breadth of say one hundred feet. I have repeatedly witnessed the beneficial influence of a contiguous evergreen in the bloom and fruiting of pears, apples and peaches, and I now write from having again witnessed the effect of their protective, soothing character in relation to a plot of dwarf pears.

It is useless to dilate or make words on this subject, for not a man who knows an evergreen has a doubt of their influence, beneficially, in toning down cold winds; the only point is to break our people from the idea that their orchards should be in methodical regular lines, and composed only of a certain class of trees. Once we can get them to see that Nature in her own works protects her tenderest plants, by placing contiguous some hardy grower as a screen; once we can get them to know that so far all their culture of fruit has been upon too artificial a system, following out for extensive orchards the lines of rule laid down by gardeners of town lots; once we can get them to believe that in profitable fruit growing, in order to be successful, it is as requisite to care for, watch, associate, feed and prune their trees, as it is to rear children and make them worthy citizens, we shall have more general and uniform profitable results, and less annual complaints of climate, frost, etc.

F. R. ELLIOTT.



Blue Tweens Plum.



Imperial Washington Plum.

Timber Culture--The White Ash.

BY W. W. TREDWAY, IN WESTERN FARMER.

AMONG our indigenous trees, the white ash is one of the most valuable; and considering its tenacity of life, the rapidity of its growth, its value as fuel, and its general usefulness in the construction of farming tools and implements, and, indeed, for all purposes where lightness, strength and elasticity are required, in connection with the fact that for it, no good substitute can be found for these purposes among our native trees, it appears reasonable that its cultivation may be made profitable, while the successful cultivator, besides making a safe and profitable investment of his money, would confer a great benefit upon the community. My object in penning this article for publication, is to draw attention to some facts within my own knowledge, and, if possible, to elicit other facts bearing upon this subject, from other persons who may have had a larger experience, and perhaps drawn more just conclusions.

In the spring of 1859, the writer planted several young forest trees, among which was a white ash about the thickness of an ordinary hoe handle. The roots had been cut to within six inches of the body, consequently it made but a poor growth the first season. It is now growing in front of my house, measuring twenty-five feet in height, and the first six feet of the trunk have an average diameter of more than ten inches, and has taken on about eight inches of wood in ten years. Excepting the poplar family, probably no tree has a more rapid or vigorous growth than the ash.

While the symmetrical form, dense, deep green foliage, rapid growth, and entire exemption from vermin, render the ash eminently desirable as a shade tree, its value for fuel contrasts favorably with most of our native forest trees. Taking hickory as the standard of excellence at 100, it is found that thrifty ash stands at 77, pin oak 71, beech 65, soft maple 54, white pine 42, and poplar 40. In addition to its usefulness in the manufacture of farming implements and in the construction of fine carriage work, it is quite extensively used in the manufacture of furniture. Good ash lumber commands sixty dollars per 1,000 feet at most points throughout the United States, with an increasing demand and a diminished supply. It will never go "out of fashion."

The ash of our Wisconsin forests is generally not of the best quality, being rather brash and porous; the result of a stunted, unthrifty growth. The oak predominates—is evidently the primitive inhabitant, and has overshadowed and thus dwarfed its younger and less powerful neighbor, who maintains an existence at a disadvantage, and, in fact, "lives at a poor, dying rate;" yet, when placed in favorable circumstances, the ash grows as rapidly and makes as good timber here as in any other country.

Assuming that, under favorable circumstances, the ash will attain a diameter of twenty inches or two feet, at thirty years old, will it pay to cultivate it? Planted eight feet asunder, about 650 trees will require an acre of ground, while a ten acre lot would hold fully six thousand five hundred. Is there any extraordinary credulity involved in the supposition that in the year of grace 1900, six thousand thrifty ash trees grown from seed of A. D. 1869 or '70, and standing on ten acres of ground any where in Southern Wisconsin, should be worth in cash sixty thousand dollars?

For the benefit of the reader I will give my experience in planting forest tree seeds. Although not flattering to the skill of the writer, the result may possibly prove instructive to the reader.

I once collected, by plucking from the trees, a quantity of ash and basswood seeds, and planted early in September. This was followed by two weeks of hot, dry weather, the seed having been slightly covered with earth. None of these seeds germinated, having rotted in the ground.

On one of the ash trees standing in cultivated ground, and from which much of the seed was gathered, there remained a good many, which fell after the first heavy frost. The next spring the ground about that tree was covered with young ash plants. The conclusion is obvious that my planting was done too early and too deeply. Dame Nature plants on the surface, and peremptorily vetoes any attempt to thwart her arrangements; nor will she sanction the germination of seeds in the autumn, which by her laws should be started in May. Forest tree seeds should in all cases be gathered and planted at the time they natu-

rally drop from the parent tree. Plant in rows two feet asunder, and six inches apart in the row, and cover slightly with straw to prevent their being blown away. No further covering is necessary, while even that may be dispensed with. The ash rejoices in a deep, rich clay loam, and it is scarcely necessary to suggest that no very good white ash timber has probably ever been found growing on very poor land.

Evergreens for Western Planters.

BY JAS. MATTHEWS, KNOXVILLE, IOWA.

THE following is a list of the principal kinds I have tried, and my observations as to their suitableness for Iowa, at least this portion of it:

Austrian Pine (Pinus Austriaca).—Perfectly hardy; rather difficult to transplant successfully, except when small—say from two to three feet high. This being a very distinct variety, one here and there in a pinery or arboretum, is quite durable.

Aleppo Pine (Pinus Halapensis).—Tender, of no account here.

Corsican Pine (Pinus Larico).—One of the handsomest pines I have seen. Had several trees, and all killed out in one or two years.

Mountain Pine (Pinus Pumillo, or Montana).—Perfectly hardy. It is a creeping shrub, with horizontal trailing branches, forming a dense mass of foliage, not generally being more than three feet high. I have specimens planted out about eight years, the tops of which have formed a diameter of about ten feet, and are quite attractive.

Scotch Pine (Pinus Sylvestris).—Perfectly hardy; rather coarse, and becomes more so as it approximates to a tree, and like the Austrian, is only transplanted readily when rather small, on account of scarcity of fibrous roots.

White Pine (Pinus Strobus).—This variety is entirely hardy; easily transplanted, if not too large, and one of our finest ornamental trees.

White Spruce (Abies Alba).—A slow grower, perfectly hardy, and forms a compact and handsome tree. Native of the northern portion of the United States and Canada.

Norway Spruce (Abies Excelsa).—This fine and hardy variety is too common and well known to need any description, being in almost every collection. In our rich soil and peculiar climate it is, as far as I have observed, not quite equal in its close symmetrical growth and its bright green foliage, to specimens in the East, or on thin clay soils.

Black Spruce (Abies Nigra).—Hardy and quite handsome, especially for the first ten years of its growth. After this it sometimes presents rather an open appearance for a popular tree. In a large collection, however, considering its extreme hardness, and the ease with which it can be transplanted, it cannot well be dispensed with.

Hemlock Spruce (Abies Canadensis).—This is one of our hardiest and handsomest evergreens, and especially with an occasional pruning. By a proper use of the shears, it forms one of the handsomest pyramidal trees that I have any knowledge of. In fact no evergreen will submit to all kinds of training more gracefully than the hemlock. It is rather slow but compact grower. In respect to growth it will compare with the Balsam Fir, as about two to three. I have about twenty of these of different ages, from six to twelve years planted out, and from ten to seventeen feet in height, and I would not part with the largest of them for any tree on my premises, except one—that exception is the Blue Spruce of France (*Abies Coerulea*).

Balsam Fir (Abies Balsamea).—This well known and popular sort needs no encomium. Suffice to say, it is perfectly hardy, and easily transplanted, and a good grower.

Nordman's Fir (Abies Nordmania).—I have not yet tested this kind satisfactorily. It is recommended in the Eastern States as being quite hardy.

European or Common Silver Fir (Abies Pectinata).—This is a hardy variety, and a very handsome tree; is not so fine a grower as the Balsam Fir, but has fibrous roots; seems to transplant well, and is a very handsome and desirable tree.

Deodar Cedar (Cedrus Deodara).—A very beautiful tree, but will not stand our climate. I had several specimens which barely survived the second winter.

Cedar of Lebanon (Cedrus Libani).—This, where the climate is suitable, is one of the

most magnificent conifers known; but, unfortunately, it is too tender for Iowa. At least it will not do with me.

American Larch (Larix Americana).—This, although not an evergreen, is assigned a place among the coniferas. Although not quite so handsome as the European variety, is an acquisition in any good collection. Entirely hardy, and is easily transplanted, and grows quite rapidly.

European Larch (Larix Europea).—This larch is too well known to need any minute description. It is a very rapid grower and a handsome tree, besides being one of the most durable for posts and other farming purposes. Quite as hardy as the American variety.

Common Juniper (Juniperus Communis).—Perfectly hardy, and a beautiful upright evergreen, from six to ten feet high, fibrous rooted, and bears transplanting well.

Swedish Juniper (Juniperus Succica).—This is also quite hardy, a slow and compact grower, and very durable.

Red Cedar (Juniperus Virginiana).—A hardy and well known tree, with reddish wood, of great durability. By proper pruning it may be made to assume almost any desirable shape.

American Arbor Vitæ (Thuja Occidentalis).—This is the kind most common with us. Well known and hardy.

Siberian Arbor Vitæ (Thuja Siberica).—This is a slow and compact grower, with handsome foliage. The most durable and hardy kind.

Chinese Arbor Vitæ (Biota Orientalis).—Quite handsome, but with me too tender for our winters.

Golden Arbor Vitæ (Thuja Aurea).—One of the most beautiful of all the Arbor Vites, but, unfortunately, only half hardy. Out of some twenty plants I had, about half a dozen have survived four or five winters.

Lawson's Cypress (Cupressus Lawsoniana).—I have this variety of Cypress in a course of experiment. It is reported to be hardy, but needs further trial in the West. Should it prove as hardy as some claim for it, it will be a great acquisition.

Japan Cedar (Cryptomeria Japonica).—Another beautiful tree, which is too tender for the country north of St. Louis. I had a specimen that lived through one winter, but was killed outright the next.

English Yew (Taxus Baccata).—A fine, compact and upright evergreen shrub, of a dark glossy green, but will not survive one of our hard winters. There is also the *Taxus Rybernica*, or Irish Yew, which I find, upon trial, to be tender also.—Contributed to Iowa Homestead.

Geraniums.

BY SHIRLEY HIBBERD.

STOKE NEWINGTON, LONDON, N., May 3, 1870.

EDITOR HORTICULTURIST: May day has come and gone, and we shall remember it as one of the many cold May days this generation has enjoyed, or at all events endured. The teamsters garnished their whips with ribbons and their horses' heads with rosettes, as usual; the great person and parcel carrying companies sent out their omnibusses and carts newly painted; the chimney sweeps came forth with shovels and brooms; clowns, sprites and May queens carrying ladders to ladle up the largesse, and the heavens showered down sleet and rain, except at rare intervals, when the wind blew extra hard and people out of doors felt quite certain that it was dripping nuggets off their noses. As for people indoors, they crouched close to great coal fires and talked about the weather, and agreed pretty generally that a shivering May day is no novelty in Great Britain. There is a cheerful side to the story, for the country is exquisitely beautiful now; all the trees are in leaf except the oak, the mulberry and the locust. The horse chestnuts are as dense in leafage as they will be in June, but of a different color—a most confidential, hand-squeezing sort of tender green. Every separate tree looks as if it would presently sidle up to another and kiss it. And the fast uprising of the flower spikes helps out this idea; the trees are about to become bridal bouquets, and by the 10th they will be in full bloom. It would abundantly repay your traveling countrymen to make arrangements to see our Bushey Park during the whole of the month of May. We hear much about your forest trees and believe all we

hear. I hope you will believe me when I say that the horse chestnuts of Great Britain are not to be surpassed in their season by anything that can fairly compete with them in all the world. The tree is absolutely worthless in a commercial sense; when planted by the roadside it is a nuisance, for the boys pelt it with sticks and stones through all the daylight hours in the latter part of the summer, in order to obtain its fruit, and yet in the suburbs of all our towns it is the favorite tree, the tree of trees, the one that is first planted when grass lands are converted into gardens.

Geraniums.

There is something due from me this time on the subject of geraniums; or, to speak more correctly, Zonale pelargoniums. The subject is so vast that I know not where to begin, but I can make a comprehensive preface by remarking that I have had the good fortune both to see and take part in every one of the stages of improvement which the geranium has undergone in becoming a proper florist's flower. In my early days Tom Thumb was the leader and the type of highest perfection as a bedding plant. With it were associated Reidii, Punch, Kingsbury Pet, Rigby's Queen, Danby and Lady Plymouth, as the best typical varieties, and they all revolved around Tom Thumb like satellites around a planet. Donald Beaton, an able and most eccentric man then made a dash amongst them with an eye to color only, giving his attention chiefly to the nosegay or narrow-petalled race, and the result was a host of splendid bedding varieties, of which Stella, Cybister and Lord Palmerston may be named as having attained to highest popularity in this series. Beaton believed in the possibility of raising a yellow variety, and got so far towards it as to obtain Indian yellow, a curious orange-colored flower; and he also believed he might some day secure a blue, and his finest effort was in Amy Hogg, a lovely, soft, mouse color. When these two are placed side by side, the contrast is not only delightful, but instructive, for they mark the two extremes of divergence from typical color.

In 1857, I had the good fortune to obtain a double flowering kind, which I thought not good enough to bear a name, and so, having made note of the fact in the *Floral World*, I allowed it to pass into oblivion. But "Hibberd's Pet," a great advance on Reidii, I put into Messrs. Carter's hands, and that for a few years enjoyed high rank as a bedding geranium; the tri-colors and the doubles came before the floral public almost simultaneously. The French were the first raisers of double varieties, but the English are entitled to a monopoly of the fame that may belong to the origination of the tri-color leaved varieties. First amongst the breeders of this race we must put the name of Peter Grieve, the raiser of Mrs. Pollock and many another of the most famous of this famous race. While the tri-colors and doubles were still in their very first developments, the old, single flowered, zone leaved race were undergoing some marked improvements, and the first distinct and noble representative of these improvements was a variety named Dr. Lindley, one of a splendid batch raised by Mr. Bull, the most prominent characteristics of which were their large circular flowers and their great diversity and richness of coloring. The Stoke Newington collection have, to speak of them collectively, combined the two best qualities of the narrow and broad-petalled races, for they produce large circular flowers with immense breadth of petal on plants that are dwarf and compact in habit, and produce their flowers as freely as Tom Thumb, or Stella, or any of the old flimsy textured bedding race. As it is not desirable to say more of my own varieties than the story requires, I shall dismiss them by expressing my belief that Richard Headly, Thos. Moore, and Orange Nosegay, of our lot, are the three best in their classes hitherto produced, and we are inclined to back our Golden Banner against all other yellow leaved varieties for a leafage that cannot be surpassed.

Instead of making a long history or a tedious enumeration of varieties, I prefer just now to make a few remarks on the methods by which the several distinct strains have been secured. For the most part the first step has been made in every case by nature, and art has immediately followed it up. Breeding is, in every instance, a matter of selection, and when once we get what we call a new break, that is, a deviation in some new direction from a type, we have but to persevere, and we may reasonably hope to obtain a new race. The large circular flowers were obtained in the first instance on coarse growing plants, and I believe the best work I have done has been to combine the large flowers with the dwarf plants. If the results of thousands of experiments could be summed up in a word, it would be to this effect—that the male or pollen parent determines all the most distinctive characters of

the seedlings. The old rule, written down in all the books, that the mother plant should give the form and the father plant the color, has been abundantly confirmed as a sound rule, founded on the facts of nature in all the steps and stages by which the several distinct races of *Zonale* geraniums have been produced. But we must never expect to make rapid progress, and we must always take a hint from nature if she is disposed to give us one. Thus we had in Countess of Warwick and Attraction, hints of the splendid zone colors that would appear in Mrs. Pollock and United Italy, and that have attained to intenser glory in *Sophia Dumaresque* and *Achievement*. If you were to visit the sanctum of a tri-color breeder, you would find lots of common *Zonales*, selected solely for their large, round, fat leaves, with very bold black zones upon them. Experienced breeders prefer the most vigorous *Zonales* they can find. Mr. Grieve has many a time said to me, "I care not how coarse the plant is that I put a high colored variegated upon." These robust *Zonales* are selected to produce seeds for tri-colors, the tri-color element being conveyed into them by the pollen of tri-colors with which the flowers of the dark *Zonales* are fertilized. Many curious phenomena accompany the raising of these curious and beautiful plants. None can foretell, no matter how expert, what a seedling will become in a year or so from the seed leaf. But we can very soon see how far our operations have been successful as to the mere producing of variegated plants, for the variegation always appears in the seed leaves or cotyledons, if it is in the seed; that is to say, every seedling that rises with variegated seed leaves will in time be a variegated plant, though for six, twelve, or a hundred months it may be only a common looking *Zonale*. Sometimes the seedlings rise with cotyledons wholly white, with not even a streak of green upon them, in which case they soon perish. But deep yellow seed leaves are a sign that the plant will be a golden self or a bronze *Zonale*. The best tri-colors, whether of the silver or golden class, are usually ushered into the world with cotyledons streaked with green, white and yellow.

The raising of double varieties is a troublesome task, because of the difficulty of obtaining seed. But as to the mere raising of doubles, whether good or bad, it is not so difficult a task as many imagine. I hope I shall not be kicked by any of my geranium growing friends for letting loose a few secrets on the subject. The double flowers I had in 1857, told me all that might be done and would be done, but in spite of all that I never yet raised a double variety that I considered worth naming. It would have been better, too, if other raisers had been as exacting as myself; we should have been spared the cultivation of a lot of brutally coarse plants, many of which, as usual, are too nearly alike, and the whole race of doubles would have been in better blood. It is a great injury to floral art when bad blood is sent abroad under high credentials; just remember, as no doubt you will, what mischief was done to the fuchsia thirty years ago by the mistake of breeding from *Fulgens*. Just in the same way mischief is going on now by the practice of breeding from a lot of geraniums that are like cabbages, and that are bred from, because they have bad double flowers. But how are doubles bred? Both ways, by making doubles seed bearers, and also by taking pollen from them. But the best will be got from doubles as mothers, and singles as fathers, and I can tell you without having seen *Lemoine's sanctum*, that his best pollen plant for doubles has been *Surpass Beauté du Suresne*, which is, I will bet my head to a tin tack, the father of all his rose pink doubles, of which, by the way, he has presented us with rather too many. The very first year in which the doubles "came out" I starved a plant of *Chanflour* because of its execrable coarseness, and actually got fine seeds. Those seeds produced five plants too. Yes; and every plant was a coarse beast like the parent, and produced double flowers like it, and went, each in turn, to the same heap of rubbish, which said heap of rubbish had been duly consecrated to the service of the rejected, under the designation of the "Stamp-hole." A wiry man of mine so called it because he used to see me go there and stamp out of existence flowers of all kinds that had earned extinction by disappointing me. Doubles, as remarked above, may be bred both ways, for it is quite as common for them to produce a bit of vital pollen, as it is to bear seeds when fertilized from singles. But the rule I should give would be, according to the old florists—double mother, single father; the mother for form and habit, the father for color and carriage. Starvation improves the doubles in two ways—it reduces their coarseness and promotes their flowering; it also renders them more capable of giving and receiving pollen, and therefore is capital practice for the breeder.



Editorial Notes.

Pruning Blackberries.

Do not forget *now is the time*, while your new canes are growing, to *nip off* the top shoot at about $3\frac{1}{2}$ or 4 feet high, and then all the side branches at 12 or 18 inches. The blackberry is such a rampant, straggling grower that unless restrained its fruit will be less in quantity and size, and not become well ripened. *Short plants* are also easier to work among, and, if tied to a stake or trellis, there will be no difficulty in cultivation.

We have no doubt close pruning will also add to the earliness of ripening, as well as increase the productiveness.

Excursions to the Pacific.

We anticipate a rich fund of horticultural information this fall from many of our returning excursionists to California.

An excursion party of large number, left Boston the second week in June, containing, among others, Pres. Wilder, P. Barry, Chas. Downing, W. S. Strong, E. S. Rand, jr., Alfred Bridgeman, and many others with their families; while an Editorial Excursion of the Agricultural Editors of the N. Y. Press is soon to follow, during July. There is a rich field in California for our horticultural correspondents to explore, and we hope some will not fail to make good use of their time and take liberal notes for the benefit of the readers of The Horticulturist.

Curculio Traps.

The joy manifested at the sudden discovery, at St. Joseph, Michigan, that curculios could be caught by traps and little pieces of wood left under the tree over night, under which the insects would gather for shelter and from which they could be easily destroyed, seems to have met with a sudden check.

This was found to be true, while the weather continued cool, causing the curculio to descend from the trees at dark for shelter. As the mercury rose, however, the pests did not come down, and the consequence was that the jarring system of Dr. Hull, temporarily suspended, had to be resumed, or the loss of the fruit crop was inevitable. On the 22d of May, the weather was quite warm and its effect was manifest in the decrease of curculios under the traps when examined in the morning. One party, in three mornings, destroyed 609 curculios by the *jarring* process while the traps furnished but two. The traps are good when the nights are cool, but of little account during warm ones.

Portulaccas.

We hope our lady readers have not forgotten to put out a bed of Portulaccas. They need little culture, only to sow the seed thickly in a warm place, while the brilliant bloom and dark green glossy foliage will make them, in July, the delight of the flower garden.

Tobacco Soap.

This is an excellent article for destroying insects on roses, flowers and garden plants; dissolved in a strong solution with water and applied twice a week, it will keep them free from bugs, and often drive them away altogether after the first application.

Plant Mulberry Trees.

WHEREVER you have cherry trees or other fruit liable to be plucked by the birds, before you can secure any fruit for your own benefit, we suggest the plan of planting some for the birds also at a little distance from your choice fruit orchard. Mulberries are great favorites with the birds, and

wherever they are, in fruiting, they will leave the cherries and gather on the mulberry trees. We are glad to have a correspondent of The Farmers' Club touch upon this subject as well as he does.

"I would say to all farmers plant a few white mulberry trees for the birds, as well as for the chickens and the children. The trees are hardy, grow fast, and bear abundantly. I will give you my experience. During the *morus multicaulis* speculation, I planted a lot of them. They soon became worthless. I saved some white mulberries near the carriage-house and granary. About the same time I planted a cherry orchard, and a variety of plum trees. They all flourished finely, and soon had fruit in great abundance. The mulberries were ripe about the same time with the cherries, and continued ripening until late in the autumn. The birds were delighted with the white, sweet fruit, and left the cherries untouched. Chickens and children loved them. My beautiful grove of forest trees surrounding my house was vocal with the feathered songsters. I would not allow any gun to be discharged near the house or grove. The birds became very tame—sometimes sit on the banisters of my piazza and sing cheerily and merrily within a few feet of me. Their tameness was pleasant to see—none to make them afraid. In process of time my mulberry trees interfered with my buildings, and I was forced, reluctantly, to cut them away. Soon my cherries became knotty, wormy, imperfect, and but few on the trees. The cherry trees and many of the plums evinced signs of decay; large black balls or knots on the limbs of old and young trees. They are nearly all dead now, and very few birds to be found in the neighborhood. No cherries, no berries. This I believe to be the result of cutting away those splendid mulberries. I never saw an apple tree borer in my 45-year-old apple orchard until just before I sold my farm, four years ago, and after the mulberries were destroyed."

Girdling Fruit Trees to Make them Bear.

We permitted the first article of Mr. Johnson on this subject, in The Horticulturist, to pass without any comment, in order to draw out observations from our observing contributors. It has been productive of general discussion and interest.

Just as we were preparing a few notes on the same point, we observed the "*theory and practice*" of girdling so well explained and condemned by a correspondent of the Boston Journal of Chemistry, that we allow him to speak in our place.

We only add, as our own opinion, *girdling fruit trees is always an injury*. Wherever the cultivator would check his trees and cause them to return to fruitfulness, *root pruning* below and limb pruning above are far more healthy and effectual.

"There is no doubt that the girdling of fruit trees is a cause of abundant fruitage, but it by no means follows from this fact that a general principle can be deduced, that trees would be improved, or the crop increased for a series of years, by such treatment. It is well known that gardeners frequently girdle a branch, by removing a narrow ring of bark around it, when they wish to increase the size and beauty of the fruit; but it is done at the expense of its vitality, and, unless the operation is skillfully performed, will invariably destroy it before the season of bearing the next year.

The crude sap, taken up from the soil by the roots of the tree, ascends principally through the vascular tissue of the albumen or sap-wood to the leaves of the branches, and there both this and the carbon of the carbonic acid, absorbed from the air by the leaves, are organized into a proper substance for the growth of the wood and fruit. It then descends on the outside, principally through the sieve tissue of the cambium layer, forming a new layer of wood and bark; while a part also goes to the nourishment of the fruit. If there is no obstruction of the elaborated sap in its downward course, it is equally distributed to the branches, fruit, stem, and roots; but, if the bark and cambium layer are removed by girdling, it is stopped in its descent, and consequently received into the branches and fruit in excess, and they are thus increased at the expense of the part below. In this way we account for the increase of the fruit by girdling.

Professor John Lindley, when speaking of the subject in his late treatise on horticulture, quotes Mr. T. A. Knight approvingly, as follows: "When the course of the descending current is intercepted, that naturally stagnates, and accumulates above the decorticated space, whence it is repulsed and carried upward, to be expended in an increased production of blossoms and fruit." This theory is adopted by the best physiologists of the present time, and can be demonstrated with almost mathematical certainty. Therefore, this unnatural development of fruit, instead of indicating an improvement of the trees, must be looked upon as a premonitory symptom of disordered physical action, and of premature death.

If the bark and cambium layer have been removed by girdling, as seems to be the case with the trees, the downward circulatory connection on the outside between the upper and the lower part is destroyed, and the upper part at least must die. If, however, the cambium layer has not been destroyed, and has been so covered by wax and bandages as to prevent evaporation and drying of the surface of the decorticated part, there is a chance for some of them to live. It is true that some few cases are recorded of trees which have lived several years after the bark and cambium layer have been removed, but they are of very doubtful authority.

M. Ernest Faivre, a French physiologist, gives a statement of his recent investigations on this subject, published in the *Gardener's Chronicle*, about two months ago, in which he says: "In mul-

berry trees, as in all trees deprived of latex, annual incisions generally produce the following manifestations: 1. Formation of a swelling, or tissue restorer, at the upper lip of the wound. 2. Diametrical growth of the parts above the zone of bark taken off. 3. Hardening of the wood in that region. 4. Stationary condition of the parts below, if they are deprived of leaves and buds; or, if not, vigorous shoots from below the lower lip of the wound. 5. More easy, more early, and more abundant flowering and fruitification. 6. Destruction after a variable time, of all the parts above the annulation."

From the foregoing observations it appears that girdling trees in any form is ruinous, and almost always fatal; therefore, I heartily concur in the advice given in the *Journal* that orchardists should not experiment on their trees too freely before they see what the final result will be with those already girdled."

Summer Pruning.

Now is the time friends before the 15th or 20th of this month, to prune and pinch back those limbs of superabundant luxuriance. Go through the orchard, nip off with your finger nails the top of any straggling sprouts, or clip them off altogether with the pruning knife. Many of our most experienced horticulturists, find the month of July quite as effective for pruning as in early and late winter. The theory for this is thus explained by the *New England Farmer*:

By the time that midsummer comes, most of the sap that flowed up in the spring, has gone to the branches and aided in expanding buds and blossoms, and in sending out new leaves and extending the twigs. When the tree has done this, the superabundant sap returns down the tree through the bark and increases its diameter.

The tree has now a season of rest. The sap vessels are comparatively empty, so that if its branches are cut, the wound will rarely bleed. The returning sap, we suppose, soon forms a green, healthy ring about the cut, in the bark, and the remainder of the cut dries and shrinks before the sap is again in motion. This season of rest, then, of three or more weeks, is the best time to prune.

All fruit trees growing as common standards, should be allowed to assume their natural form, the pruner going no further than to take out all weak and crowded branches.

Some persons go into the centre of a tree and cut away quite large limbs, when the desired object could be much better gained by thinning out their extremities. It is always better not to cut a large branch, unless it is actually endangering the tree considerably. Taking off large limbs tends to throwing out suckers the following summer. All these should be rubbed off when they first appear.

When pruning,—Mr. Downing says,—is not required to renovate the vigor of an enfeebled tree, or to regulate its shape, it may be considered worse than useless. Bearing in mind that growth is always corresponding to the action of the leaves and branches, if these are in due proportion, and in perfect health, the knife will always be found rather detrimental than beneficial.

But the injury arising from pruning apple trees, is infinitely greater from doing work at the *wrong time of the year*, than from injudicious cutting. Our object is now, mainly, to present some authorities on this point.

Prof. Lindley says: "If well directed, pruning is one of the most useful, and, if ill-directed, it is one of the most mischievous operations that can take place upon a plant. The season for pruning is usually midwinter, or at *midsummer*. It is, however, the practice to perform what is called the winter pruning *early in the autumn*."

Mr. Downing. "We should especially avoid pruning at that period in spring when the buds are swelling, and the sap is in full flow, as the loss of sap by bleeding is very injurious to most trees, and in some, brings on a serious and incurable canker in the limbs. * * * Our experience has led us to believe that, practically, a *fortnight before midsummer* is by far the best season, on the whole, for pruning in the Northern and Middle States. Wounds made at this season heal over freely and rapidly."

"The best time for a general pruning is at the close of the first growth of summer, 15th of June to 15th of July."—*Am. Agriculturist*.

"In the spring, the tree in all its parts, is filled with sap, and the wood at the wound cannot season. Hence it readily decays. Any person who should cut timber at this season, and expect it would season with the bark on, would be considered out of his senses."—*M. B. Sears in Maine Farmer*.

"June is the time to prune fruit trees. Limbs taken off at this season, will begin immediately to send out a ring of new wood, just where it is needed, and will thereby protect itself in the soonest possible period from external harm." So states E. D. Wight, in the *Genesee Farmer*.

Exposure for Pears.

A CORRESPONDENT of the *Carolina Farmer* says that he would not be careful to select for a peach orchard a northern, southern, eastern, or western exposure in particular, but would prefer to plant, if possible, on opposite ground at the same time. For example: one of his neighbors owned a high hill which sloped north and south. He had a peach orchard on both sides of the hill. He has seen the orchard on the north side burdened with fruit, while on the south side the frost had completely destroyed the crop—and *vice versa*. The same may be seen on eastern or western exposures.

Soil for Pears.

A CORRESPONDENT of the *New England Farmer* says that if pears are planted on sandy or gravelly soil, they will cost more for manure than they are worth, and many kinds will fail to grow—that is, if the land is dry. On such land he has had some success with Flemish Beauty, Bartlett, Louise Bonne de Jersey, and Beurre Giffard, but he does not think his success would satisfy a market gardener.

Thinning Fruit.

At this season of the year, when many fruit trees are loaded with more fruit than they can possibly ripen well, we call attention to the following hints from M. P. Wilder, which appeared some time since in the *Journal of Horticulture*. They are the most useful hints we have ever seen on the subject:

It is true that the labor is great, but so is the profit; and oftentimes it happens that the labor of thinning the crop makes all the difference between absolute unsaleableness and a high price in the market. Not unfrequently a pear tree will set so much fruit that it will not bring any part of it to a size which will render it saleable in a crowded market, when if one-half, or even a large part of the fruit had been removed, the remaining specimens would not only have filled nearly or quite as great a bulk, but would have sold quickly at the top prices of the market. One of our farmers, near Boston, always thins his fruit; another, adjoining his orchard, neglects it. The location and treatment of these two orchards in other respects are much the same; but the former realizes from his crop of Baldwin apples about four dollars and a half per barrel, while the latter, standing by his side in the market, receives less than three dollars and a half for his.

The case is still stronger with the pear, which, growing on smaller trees, is more easily thinned, and the prices obtained for the fruit afford a better remuneration for the labor of thinning. While those properly thinned and cared for will command four dollars per bushel, those of the common will not bring more than two dollars; and this rule applies not only for fruits, but to all vegetable productions. Every one has observed that the overbearing of a fruit tree one year, is likely to result in barrenness the next. Hence the necessity of thinning our fruits so as to avoid exhaustion of the fruit tree, and to keep up a regular succession of good fruit. Even the Baldwin apple, which from its great productiveness bears only on alternate years, we think might, by thinning, be made to bear annual crops.

When fruits are crowded, they are not only deprived of light, air and warmth, but actually of room, so that the adjacent sides of two fruits are compressed, and they fail of their full development. Not merely the form but the color is improved by thinning; for without light fruit can never attain perfect color. When fruits are crowded in clusters they are particularly liable to be attacked by insects and disease; and therefore the necessity, if we wish perfect specimens, for removing a part, so that no two fruits shall touch each other.

The *Germantown Telegraph* also adds a few comments:

Thin out pears where they overbear, removing every knotty and wormy specimen. There are some varieties that grow in clusters, and do not generally overbear—from these the wormy or worthless ones only should be removed; but where the trees are not too large to manage, and are not cluster-growing, no two specimens should be allowed to touch, as they are almost certain to become wormy, and both are lost. Many persons not well acquainted with fruit-raising, hesitate to thin out their trees on the ground that the crop will be diminished. This may be possibly but not positively true if the fruit is intended to be fed to the pigs. But even should it be otherwise true sometimes, who would not prefer to have one bushel of large, beautiful, luscious pears, to five bushels with probably not a half a peck among the whole fit to put upon your table or send to market?

Pruning the Raspberry.

FROM a prize essay on small fruit culture, by W. Saunders, London, Canada, we clip the following paragraph:

Pruning.—Canes which have once borne fruit, bear no more. Hence, these should be removed as soon as the fruiting season is over, cut off close to the ground, so that the young canes may have more room and air. At the same time due regard must be paid to the thinning out of the new canes, removing all that promise to be weakly or slender. Since we depend on the strength of the current year's growth of wood for our next year's crop, any process which will conserve the vigor and concentrate the energies of the young plant is deserving of regard. Summer pruning and pinching we deem a valuable means to this end. The young plant, when it has attained about the height of three feet, should be pinched off at the tip; this will cause the side branches to develop, which in turn should be subject to similar treatment when from six to eight inches long. This pinching should be repeated if necessary, but should not be continued too late in the fall, since it would cause a late growth of tender wood which would suffer during winter. It might be practiced safely enough till about the beginning of September, and any subsequent growth not wanted might be removed by a light spring pruning. This method we regard as much less wasteful than that of allowing the summer's growth to proceed unchecked throughout the season, and then prune back in the spring to a

proper height. By this latter method the plant is allowed to waste its strength in the unnecessary production of wood which must be removed, and the growth is often long and slender; while in the former case all its energies are concentrated in the development of a stocky, well-ripened cane, far better fitted to bear its destined weight of fruit the ensuing season. This treatment is equally applicable to the Black Caps, unless where it is desirable to raise new plants; then the natural extension of the cane, or portions of it, must be allowed.

The Flower Garden.

THE new, handy little volume entitled "*A Simple Flower Garden*," published by Loring, of Boston, contains some excellent hints, very appropriate to the season:

Weeding—Is the horticultural terror that deters many people from having a garden. Weeds always will come up, and the richer the soil the more readily they do so. Yet, if properly managed, they present no serious obstacle to success. The true method of treating them is to destroy them when very young, not over one-half inch high. They never need be pulled up by hand, except from those few spots where the hoe cannot reach them. The hoe used is known as a long handled shuffle hoe, and is pushed about over the surface, cutting off and destroying the young weeds. If they are thus taken in hand early, before they acquire a firm hold in the ground, the trouble of removing is very slight. Choose a bright, sunny morning, when the wind and sun will wilt the tiny plants thrown out by the hoe. As soon as they appear again, repeat the dose.

The iron rake will here come in play to remove the marks of the hoe and any lingering weed not killed by the sun. No weeds must be suffered to remain on the ground over night, because, if not utterly dead, the cool air and dew may revive them, and they will start again into new life and trouble. The surface of the garden is much improved by this hoeing and raking, and, if possible, it should be done after every rain, or at least once a week. One hour will be sufficient to enable one to go over both borders.

Insects.—These appear in June, and, if allowed to have full freedom, will do great harm. The best friends a grower can have are the birds. If treated kindly, and made to feel at home in the garden, they will do more to remove troublesome insects than any other one thing, except toads. Toads should be treated with respect and kindness. If there are none in the garden, hire a boy to procure a dozen, and give them free range over the grass and borders. They destroy great quantities of vermin, and must, therefore have all the consideration due to floricultural benefactors.

The lady-bird, a small and well-known insect, also seems to keep down destructive creatures of its own kind. Plaster or wood ashes, sprinkled over the leaves of young plants, if applied early in the morning, will keep away several kinds of destructive bugs. The following mixture, if showered with a syringe over rose bushes or other plants infested by the rose slug, will be found useful. It can be procured from any chemist, and when once prepared will last a long time. Sol. Sulphuret of lime; quicklime, one pound; sulphur (flowers), two pounds; water, ten pounds. Boil for an hour; cool and decant the clear solution. Mix a half pint in four gallons of water, and use freely.

Thinning Seedlings.—This is something that must be attended to, if good plants are desired. On the spot where the seeds were sown a mat of green plants will appear, and probably growing too thickly together for health and comfort. Having determined, from the height and habit of the plant, how many can stand there, pull up and destroy the rest, beginning at the weakest, so that those left for growth shall be the finest and strongest.

Pinching.—Our common garden plants grow and increase in size, by what is called "the extension of the growing point." That is, they push out the tip ends of their shoots and elongate them in that one direction. When a plant is in vigorous growth, it will not only extend its shoots in one direction, but in several. From the sides of a shoot other points start out. These in turn repeat themselves, and in this way the plant becomes filled with growing ends or shoots. As the flowers are always borne upon the ends of the shoots, it is plain that the more the shoots, the more flowers.

If by any means the number of shoots is still farther increased, the gain in flowers will correspond. This is easily done by pinching between the thumb and finger the soft and tender tip of the shoot. The plant, disappointed in that direction, at once puts forth two or more shoots just below the injured one, and growth goes on in two new directions, instead of one. The advantage to the grower is plain. So long, however, as the pinching is carried on, no flowers will appear. Therefore, when it is desired that the plant should put forth buds, the pinching must cease. A plant pinched in June will flower in July. If pinched through July, the flower will come in August, and in greatly increased quantities.

Pinching House Plants.—This is carried on all summer. Those carnations, bouvardias, salvia, and other plants to be used in the house during the coming winter are not allowed to bloom at all, but are pinched as often as the shoots become a few inches long. This will occur about twice a month through the entire season. The effect of this is to produce thick, compact plants, filled with hundreds of short shoots, every one of which will bear a bud, and return to the careful grower an overflowing harvest of blooming flowers.

The Josephine de Malines Pear.

WE notice that this pear is favorably spoken of by several growers, as one of the best winter pears, and from the fact that it was introduced and indorsed by the Hon. Marshall P. Wilder, of Massachusetts, there can be no doubt of its excellence. We think it was in the month of February, more than two years ago, that Col. Wilder sent us specimens of a number of varieties of pears in a good state of preservation, and among the number was the Josephine, which from its size and general appearance attracted our special attention; and when it was tested we found it to be the best of the collection, so far as quality and condition were concerned.— Since that time there have been so many good things said of it, in addition to its endorsement by Col. Wilder, which of itself would have been authority enough, that we should suppose that it would be found upon every plantation and in every garden.—*Germantown Telegraph.*

A Handsome Willow.

AMONG the willow family none is more beautiful than the Laurel leaved, *Salix laurifolia*. It is a strong grower, with large, deep, rich, glossy green leaves, that attract the eye even at a considerable distance. It should be clipped each year in spring, and made to grow in a bush or round low tree form, when, if on the lawn, or in a small front ground, its appearance is among the most ornamental small trees.—*Journal of Agriculture.*

Summer Pruning Dwarf Pears.

WITH most of dwarf pear trees the present is the time for summer pinching our pruning as it may be termed. The shoots of this year's growth are now from eight to twelve inches long, and now the labor of shaping a tree is less than half of that of winter pruning. With the thumb and finger pinch out the end of the shoot and one partially grown leaf; at the same time study to have the leaf or bud just below where you pinch, and what after pinching will be the last or terminal bud or shoot, on the side towards which you wish the next leading shoot or branch to grow. Our rule is to almost uniformly have this bud on the outside, and thus make our trees wide-spread and bushy, examples of which are in our grounds, open freely to the inspection of all who wish to learn our way. The short, slender, or inside spur shoots should not be touched; pinch only the leading strong shoots, or what are to be the leading branches.—*Journal of Agriculture.*

Dust the Rose Bushes.

WE have often conquered the green slug or rose-leaf eater, by dusting the bush freely with plaster of Paris early in the morning before sunrise, when the insect is freely at work and when the foliage is wet with dew to mingle and hold and spread the plaster. It is possible fine wood ashes or powdered lime would answer just as well. Regular practitioners use flour of sulphur.—*Journal of Agriculture.*

Verbenas.

IF you want your Verbenas to grow freely and bloom abundantly, pinch off all the first show of blossoms and so continue to do until the plant has become strong and vigorous.—*Journal of Agriculture.*

Carbolic Soap for Insects.

I AM experimenting with Buchan's Carbolic Soap, as a preventive for injurious insects, and I am so well pleased with the results so far that I wish to stimulate other horticulturists to try some experiments with the article.

For cut worms, I made the soap suds pretty strong—two gallons of water to half a pound of soap, and with it saturated a bushel of sawdust; then placed a little around the stem of each cabbage and tomato plant—using a handful to eight or ten plants—adding a little more after two or three days when the odor seemed gone. This was completely successful in ground where the worms were quite plenty, and where plants not protected were speedily cut off by them. It is the cheapest and most easily applied remedy that I have yet seen.

For striped bugs on melons and cucumber vines, I find the same method of using the soap quite effective, if the sawdust is sprinkled on the plants every day—which is very little trouble—but I am now trying wetting the plants directly with weak suds, made of ten gallons of water to half a pound of the soap, and I think this will prove the best.

For Aphis or Plant Lice on cherry trees and the like, a sprinkling or two with the suds, by means of a sponge, or bending the shoots so as to dip them into a pail or basin, is speedy death to the bugs. Care must be used not to have the suds too strong when applied to tender plants or young shoots of trees; experiments are needed for this point.—*M. B. Batehan in Ohio Farmer.*

Dahlias.

THE Dahlia is only second to the rose as a universal favorite for rural gardens. The great diversity and beauty of its blooms, and their extraordinary profusion in the autumn months, when many

other fine flowers are gone, make it worthy of all cost and good culture. When first discovered in Mexico, in the year 1789, growing three thousand feet above the level of the ocean, it was only a single red flower, but as it bloomed in the autumn it soon became a favorite. By good culture, and saving the best seeds and sowing them, full double blooms were produced. There have been hundreds of thousands of choice varieties so produced; so that they are now just what our most sanguine wish could crave. Certainly there is no plant so profuse and beautiful of bloom as the dahlia—almost of every color and fine variegations, and which come just at a time when they are most desired. Some varieties are five and six feet tall.

A new class has been originated of late years called the Bouquets; they grow only two feet tall, with hundreds of double roses of all colors and variegations of colors, except *blue*. The very choice varieties annually shown at our Pennsylvania Horticultural Exhibition every autumn, far surpass in beauty the power of language to describe.

June is the best month to plant dahlias; plants in flower-pots, raised from cuttings, bloom more more profusely than old roots do. They can be purchased for five dollars per dozen, and some seven dollars; others three dollars per dozen. They grow upon almost every kind of soil, both in bright sunshine and in partial shade, and yield their constant profusion of blooms for three years in succession. When their tops are injured by the frost, their roots are dug up and kept in boxes with dry soil or sand over them, and placed in a cellar.—*Practical Farmer*.

Culture of the Strawberry.

ONE of the most vexatious things that meets the amateur cultivator at the outset is the vast amount of opinions, often widely at variance, recommended for the culture of this fruit. A few years ago the great point consisted in planting a certain amount of both staminate and pistillate varieties in the same patch; they would then pollenize and each produce a perfect crop. In those days the hermaphrodites were considered of small account, and, according to some authorities, would not produce half a crop as compared with pistillates; but the Wilson, with its annual crop of two to four hundred bushels per acre, put a quietus on this doctrine.

Then again as to mulching—how many theories have we had? Tan-bark was for a time the one thing needful, then straw was the great pabulum; indeed it was nothing but strawberries in another form, some asserting that the berry derived its name from the astonishing effects of an accidental mulching at some time during the early stage of its culture. Sawdust and new-mown hay also had their advocates. With regard to the amount and kind of *terra-culture* necessary, there is still much diversity of practice as well as opinion; and after a trial of several I am satisfied that for a small patch the following is perhaps best. First prepare the land perfectly, that is have it fine, sufficiently rich, (there need be no fear of having it too rich,) and clear off all weeds and their seeds as much as possible; this should be done as early in spring as possible. Some growers claim that the fall is the best time for setting; it may be in some localities, but such is not my experience, as when set in the fall they are very liable to winter-kill. Stretch a line and set with a dibble, spreading out the roots as much as possible; set them a foot apart in the row and rows two feet apart. I am fully convinced that the best and easiest way to produce cheap berries is by adopting the row system instead of hills, although you can perhaps raise larger berries in hills; still the Wilson will bear large crops even where the plants are so close that not a particle of ground can be seen. If the ground has been properly prepared it will require but one or two hoeings to keep clean until the runners begin to spread rapidly (toward the last of June), after which no more labor is required during the season, except an occasional going over and pulling what weeds make their appearance. If set early they will bear sufficiently the first season to pay all expenses. Some advocate covering during the winter; I never covered mine and they are never injured by the frost. If covered, something, as a few pieces of rails, should be laid among them to raise the covering (which may be of straw, cornstalks or any coarse herbage), an inch or two to prevent smothering. In the spring spade up a foot wide and leave two feet; this makes a place to walk in to pick the berries and furnishes air and light to the plants; the next year spade up another foot, thus renewing the bed every three years. After each spading rake the bed all over with the steel-toothed garden rake, removing all dead vines, &c., and if any weeds appear during the season they should be pulled or cut off just at the top of the strawberry vines. Where grown on this system the ground is so shaded by the vines that they will stand dry weather much better than in hills. One great advantage is saving of labor; another that the fruit is always clean even after the hardest showers, and how much easier than to be continually cutting runners, hoeing and hand-weeding among the hills.

Of all varieties the Wilson is perhaps the best for all localities and soils, yielding well in any locality; a little too tart, perhaps, but, like the Lawton blackberry, this is removed if allowed to thoroughly ripen.—*O. Burras in Germantown Telegraph*.

The Cranberry as an Ornamental House Plant.

THE common cranberry of our swamps is a very attractive plant when cultivated in pots. The plants are evergreen, and will grow in any ordinary living room without extra care, and the fruit will

remain on the plants until the flowers appear for the next crop. We would advise our lady readers who are at this time looking about for choice window-plants to try a few pots of cranberries; and, unless we are greatly mistaken, they will thank us for this suggestion. There are scores of small but beautiful native plants that are well worthy of a place in our conservatories; but the idea that only rare things are valuable for such a purpose is far too prevalent among the people.—*Hearth and Home*.

SHORT grass from the lawn, says a correspondent of the *English Journal of Horticulture*, is the best material with which to cover small seeds. Spread it on about half an inch in depth and then water. This acts as a light mulch, and as the grass soon shrivels the plants come up through it without difficulty. The birds never molest them, and their growth is assured.

Whale-oil Soap.

THE best remedy, in our judgment, for slug pests on currants and roses, is the application of a solution of whale-oil soap (as we have often before suggested), in the proportion of one pound to five gallons of water, sprinkled over the leaves from a watering-pot with a fine hose. It is certain death to all it touches.—*Germantown Telegraph*.

Quince Growing.

AN Ohio quince grower has been very successful for two years past with this fruit. His treatment of the tree is very simple. He spades the ground of his orchard every spring, and scatters a peck of coal-ashes around each tree. He finds salt the best manure for the quince, and applies about one quart to the ground under each tree after the soil has been spaded, and another quart when the quinces are about half grown. Last year he sold three hundred bushels of quinces from his orchard of three-fourths of an acre.

Lime on Green Sward.

A WRITER in the *Journal of the Royal Agricultural Society*, describing the permanence of the action of lime, says that he knows a piece of ground containing 160 acres, which formerly grew nothing but heath. A good dressing of lime was applied on the surface of the sward which has nearly doubled its value. This was done several years ago and totally eradicated the heath. The lime to this day appears in full action, as its effects usually testify, from the richness and sweetness of the herbage, the texture of which has been entirely changed by the application of lime.

To Destroy Red Spiders on Fuchsias.

A PHILADELPHIA correspondent of the *American Agriculturist* says: "Fill a barrel nearly full of water and slake in it about a quarter of a peck of lime, and let it stand until perfectly clear. Hold the plants effected in the water (bottom up) for about five or ten minutes, then wash them with pure water."

Pear Culture—Root Pruning.

IN an essay on pear culture read before the Alton Horticultural Society, by H. J. Hyde, occurs the following: "As to root pruning to control blight, I am a believer in its efficacy not from theory alone, but from practice the last four years. I think pear trees are as tenacious of life as most fruit trees. I see it every year on my place. It may be others have noticed it, that trees attacked with blight, that are not killed the same season, will put forth the following year with even more vigor sometimes than if the tops were not reduced by the blight; by a proper system of root pruning we can control the blight; and why? Simply if our trees are thrifty they grow all summer, and when attacked the sap is active and the disease spreads like fire; but if root pruned they form their terminal bud early, the tree is repairing root growth, the sap is not active, and cannot and does not extend enough to do any serious damage. It seems to me that, from time to time, there have been arguments enough made and assertions from different parties, to at least warrant a thorough trial of this system; but there are those whom we might argue with for years, who would not be convinced; still, if they would try the remedy, they would either help to establish the fact or give themselves a good argument against it, and could claim with some sense that the mere theory of root pruning is a humbug. What is wanted are the facts; you who have pear trees try this, and know yourself, whether or not it is a failure."

New Rose—Louis Van Houtte.

"D." of Deal, in *The Cottage Gardener*, says that this bids fair to be the rose of the season. M. Lacharme is the raiser. M. Guillot exhibited a rose at the Lyons Horticultural Exhibition, to which the first prize was awarded, but on learning that M. Lacharme had raised a rose of exactly the same color, he compared it with his own, and finding it to be superior to his, he suppressed his own seedling, and sent out in its stead that of M. Lacharme; and this is the rose Louis Van Houtte.

Care of Newly Planted Trees.

At no time in the life of the tree does it need more care than the first season after it is transferred to the orchard. Removed from a sheltered position to one too often exposed on every side, taken from the rich soil and hot-house culture of the nursery and placed in the common soil of the orchard, it needs at least common care to aid it in accommodating itself to its changed circumstances. Unless this is given, some will die and others will be injured in their vitality, and live along a few years and then die. Much of the deformed and imperfect growth of black heart, and diseased wood, undoubtedly has its origin in injury accruing from neglect or mismanagement in their early growth; but the losses and failures coming from these are cited as conclusive proof that the soil or climate is not adapted to raising fruit, or that this particular variety is not sufficiently hardy, instead of being attributed to their true cause.

The trees should be well mulched, or the soil stirred frequently around the body of the tree and kept light and porous throughout the season. Mulching is much preferable, as it keeps the soil at a uniform temperature and moisture. For this purpose old hay, coarse manure or leaves, with a little earth on top to keep them from blowing away, may be used. The hot days of July, August and September, are usually the most trying on young trees, as the hot dry winds and the direct rays of the sun are continually drawing out the moisture from the bark, leaves and twigs of the tree; and in times of drought, or where the trees are unmulched and the same agencies have exhausted the humidity of the soil, the tree fails to receive sufficient moisture from the roots to supply this draught upon it, and also maintain a perfect and hardy growth; consequently the tree dries up, or at least makes but a feeble growth of unripe, tender wood.

In very dry seasons, to get sufficient moisture, in addition to the mulch, it may be necessary to water by hand. If the bark has become dry and withered, some benefit will be derived from washing, or sprinkling the tree each evening with water or weak soapsuds.

Trees suffer more in this usually dry climate from lack of moisture where the ground is seeded down, and this is the reason why we recommend cultivation of the orchard, especially when young. By mulching under the trees and tilling between the rows, a much more vigorous and hardy growth will be secured, which we think will add materially to the fruitfulness and longevity of our orchards.

—*Western Farmer.*

Picking and Marketing Fruit.

NOTHING adds so much to the profits of fruit culture as a good system of picking and marketing. Often a single shipment of strawberries will vary from \$40 to \$100 in price, according to the neatness of the appearance of the fruit, its quality, and its condition.

Josiah Hoopes, in the *Delaware Republican*, in a series of articles on fruit culture, gives many judicious hints on this important subject. He gives directions how to raise seedling fruit trees, and how to propagate vines and plants by cuttings—points of more interest to the nurseryman than the farmer. In regard to the gathering of ripe fruits of different kinds, he says that no fruit should be taken from the tree or plant during a damp time, and especially when the dew is plentiful in early morning. Never be so hurried as to find cause for the excuse, I had no time to hand-pick my fruit, and, consequently, was forced to shake them off; for such is very poor policy. Fruit so gathered will almost inevitably decay from the effects of bruises. Each specimen should be taken from the tree one by one, handled as if they had been so many eggs. The slightest bruise or even abrasion of the skin is the sure forerunner of a dark spot, which will eventually change into some form of rot. The spores of seed of *fungi* are always ready to assist in the work of dissolution, and the slightest scratch gives them a foothold for their destructive work. Scarcely any variety of the largest fruits color and ripen so well if left to perfect themselves on the tree, and especially is this true in respect to pears. Summer varieties, as they approach maturity, loosen their hold somewhat on the limb, and by gently raising the fruit they will easily detach themselves at the proper period. This is an excellent test, and may always be relied on. To color up fruit nicely, all that is necessary will be to spread a blanket on the floor of a cool room, and then thinly and evenly place the fruit on the floor. A second blanket must be spread over them, and in a short time the effect of this treatment will be apparent in the most golden-colored Bartlett's and rich, ruddy-looking Seckels imaginable. Pears perfected in this manner rarely have the mealiness of their naturally-ripened companions; nor do they prematurely decay at the core as when left on the tree. Peaches are too frequently gathered before attaining full size, and when this is the case we need not expect good flavor. They must obtain this requisite before gathering; although it is not necessary to delay picking until very mellow. As a general rule, all small fruits are gathered too early; and, as high color is not a sign of maturity, many experienced fruit-growers are frequently misled. Never pick strawberries because they are red, nor blackberries solely on account of their dark appearance. Each should remain on the plant for some time thereafter. The Albany seedling strawberry changes to a deep crimson hue and gains continually in size after its first coloring process. It is then soft and excellent eating. And so with blackberries in like manner, many complaining of their extreme tartness when the fault was in gathering imperfect fruit. The Lawton or New Rochelle variety, in particular, is delicious eating, if allowed to remain on the plant until soft, when the slightest touch will sever its hold. Strawberries

picked with the calyx (or hull) adhering will always carry better and be less liable to decay than if carelessly pulled off without this appendage. And so with cherries also, as the cavities made by parting with their stems are liable to engender speedy decay. Neither do they present so fine appearance on the table or in fruit-baskets of our market gardeners as when temptingly displayed each with its stem attached. The foregoing remarks in relation to the proper time for gathering fruits are equally applicable to the grape. These generally color long before they are mature; and thus many a novice in fruit culture frequently forms an unjust opinion of his varieties simply from testing unripe specimens. Grapes should always be severed from the vine with strong scissors or trimming-shears, and never twisted or broken off.

A New Evergreen.

THE erect green Samson Cypress, is a new variety, which is very much prized in England. The *Gardener's Chronicle* says the original was sent from California. "The parent plant is about nine feet high, and three feet through its widest part. The growth is strictly erect, and so close and dense as to form a solid mass of branchlets, which are flattened, and set in a direction radiating with a remarkable regularity from the centre axis of the plant, the wood being perfectly clothed, and the branchlets green to the very centre. This tree has never been protected in the slightest degree. In the symmetrical outline of the tree itself, in the regularly radiating vertical ramifications, in the slender, graceful character of the everywhere erect spray, there is about this plant an air of refinement rarely met with, and which, combined with its bright and enduring verdure, stamps it as a gem of this first order amongst hardy evergreens."

The Oak in Landscape Gardening.

A CORRESPONDENT of an English agricultural periodical says that the different varieties of the oak may be used with very good effect in landscape gardening, their different shapes and the various tints made by their fading foliage in the Fall forming beautiful contrasts. An aged oak in the grounds of a modern villa at once asserts that it is of greater antiquity than the surrounding objects. In Britain the aged oak is quite in character in the grounds of a castle, a palace, or a baronial hall. In the midst of an oak forest, Milton would have placed such buildings—

"Towers and battlements he sees
Embosomed high in tufted trees."

Cottages are as ancient as castles, historically speaking; and they also harmonize with aged trees. Milton in describing a scene of rural peace and comfort, says:

"Hard by a cottage chimney smoke
From between two aged oaks."

The oak tree is a favorite with landscape gardeners. Some forest trees, ere they can become profitable as timber, require to be trained and pruned, or drawn up by nurses so as to possess straight and clean stems, which, in the eye of the carpenter, are the chief marks of excellence in trees. The oak, on the contrary, is most valuable when its stem is crooked, and its principal branches are twisted in such a manner as to form proper bends for ship building. Thus the same oak that seems beautiful in the eye of a landscape painter, will be a desirable tree, if sound and healthy, in the estimation of the ship-carpenter. Proprietors may plead their desire for quick growth and straight stems, when they refuse to thin out their groves of larches and firs, but those who crowd oaks together, and refuse them room to spread out their equally noble and useful branches, are without the least shadow of an excuse.—*Western Rural*.

Destroying Worms in Lawns.

MANY of the grass plats in city gardens, as well as the lawns at our suburban residences, are injured by various species of earth worms, which it would be well to destroy. It is said, by a good English authority, that the following is an effectual remedy for these pests: Take a barrel of water, and into this put about ten pounds of slaked lime, and after stirring it for a few moments allow it to settle; then pour off the clear liquid and apply it to the grass with a watering-pot, or other similar implement. It would be well to roll the lawn the day previous to applying the lime-water, as this operation will fill all the holes that the worms have deserted, and they will make new ones the following night. The best time to perform this operation is in rainy weather, as the worms are then near the surface.—*Western Rural*.

Willows.

ON bleak prairies and other exposed aspects, where shelter and shade are much needed, willows will be found very suitable for furnishing these important advantages. The genus *Salix*, or willow, comprises a great number of varieties, many of which are valuable for their timber; some of them make very ornamental trees, and some furnish osiers for baskets and ornamental willow work.

For ornamental trees in parks or pleasure grounds, the varieties which produce the best effect and

make the greatest contrast in the habits of their growth, color of bark, etc., are the weeping willow (*Salix Babylonica*) and its variety, *S. Annularis*; the golden osier (*S. Vitellina*); the violet colored (*S. Violacea*); the almond willow and the early willow (*S. praeox*). There are a few varieties which are of a dwarf habit, growing more like bushes than trees, and having beautiful green shining leaves, somewhat resembling the leaves of the European laurel; these are the pentandrous willow (*S. pentandria*), Meyer's willow (*S. Meyeriana*), and the laurel-leaved willow (*S. Laurina*). Cuttings of these can be obtained at nearly every Botanic garden; and since facilities have been afforded for the transmission of cuttings, etc., by mail, they are within the reach of every one.—*Western Rural*.

The Currant Worm.

We hear of their depredations this spring as strongly as ever. Carbolic acid has been found excellent for their destruction. Hellebore is always an unfailing remedy. Judge French, in the Massachusetts Ploughman, gives a few simple directions how to use it.

Buy at the apothecary's some white hellebore (*veratrum album*), which costs about fifty cents a pound. It is in very fine powder, of a brownish hue, and is called white to distinguish it from another variety which is black. Put it into a little bag made of fine muslin that will hold say a gill, and tie the bag to the end of a stick say a foot long and as large round as a ramrod. Open the bushes a little, and sift the hellebore on to the worms and leaves on which they are feeding, and straightway they are dead. Some who have tried it say that the effect is magical—that the worms instantly fall when the least particle touches them, or when they touch a particle of it upon the leaves.

Our worms did not conduct in this extravagant manner. Perhaps the hellebore was not of the best quality; but, as Mercurio said of his wound, "'tis not so deep as a well, nor so wide as a church-door; but 'tis enough, 'twill serve," so our hellebore, though not instantly fatal, was enough. The worms were well powdered on the day after they appeared, and for a week afterward not one could be found alive, although they were at first in large numbers on nearly all the bushes in a row a hundred feet long.

Various other articles have been tried—tobacco water, carbolic soap, and whale-oil soap, and lime in various forms; but I do not learn that anything is so effectual, cheap, and convenient as the hellebore. Some of my neighbors are amusing themselves by picking off the worms by hand, and like that way best. For families who cannot find anything on the farm to do in planting time this may be a delightful recreation; though there are some people whose nervous system is so peculiar that neither food nor sleep would be refreshing after gathering by hand a bushel or two of these disgusting animals.

Objection is made to hellebore that it is poisonous to the fruit. I am informed, however, that it is not a deadly poison to man, and that the small quantity one would be likely to get, even by the careless use of fruit sprinkled with it, would be harmless.

It is used in snuff for its sternutatory or *sneeze* properties, and perhaps it kills the worms by causing them to sneeze their heads off. I have tried it on caterpillars and canker worms, and they walk off lively covered with it; but to the currant worm it is sure death.

I hear so much nonsense daily about the difficulty of getting rid of the currant worm that I desire to add my personal testimony to that of Dr. Fitch and others as to the efficacy of this specific. I think I can kill more of these worms in one hour with a pound of hellebore than fifty people can pick off in a day; and as to its poisonous qualities, I had much rather chew it than tobacco.

Mr. L. D. Williams, of Meadville, Pa., also gives some notes of observation on this subject, which we also commend to attention:

By carefully examining my bushes, and studying the habits of this voracious pest, I have learned how to dispose of it with very little trouble. The eggs are laid on a few leaves, mostly at the lower part of the bush. My bushes have been as badly infested with them as any bushes could be, for several years past, and I have fought them with ashes, hellebore, and every other remedy that has been recommended, even to Best's Tree Invigorator, which last is the least effective of all, and have succeeded in saving most of my bushes by great vigilance, and no little labor.

This season they had attacked my gooseberries and half eaten them up before I discovered them. I then examined my currants, and found the eggs were deposited on the lower side of a few leaves on every bush, and some had hatched, and were beginning to perforate the leaves with small holes. As my currants are trained in single bushes along the walks of my garden, I could easily examine them, and by turning up the lower leaves I could readily detect those that had eggs on them, and picked them off. I seldom found more than ten or a dozen leaves on a bush infested with them, but if allowed to hatch and grow, there were enough to have devoured all the leaves in a short time. It took but a little while to go over all the bushes in this way. As some would elude my search, I looked day after day, in passing through my garden, to see if there were any leaves perforated, and when I found one, picked it off. In this way I have kept them off, and no bushes could look fresher or more thrifty than mine do, while most persons in this part of the country are having the leaves of theirs entirely devoured, and their currants rendered worthless for the season.

The worm when first hatched is very minute, and does not crawl to the edge of the leaf to feed, as it does when it becomes larger, but eats holes through the leaf. Generally, when one leaf is devoured in this way, the worm has grown to such size as to be able to crawl to other leaves, at first going in families—sometimes a score or more attacking a single leaf—but as they increase in size, they separate, and finally scatter over the whole bush. If the leaf is picked off when it is first perforated, it may be thrown on the ground, and they will die, for they can never reach the bush again by crawling. I find by further observation that they may be entirely neglected until they are hatched, and the leaves are punctured by them. Examine your bushes from the time the currants are well formed, and watch for the perforated leaves. You are not likely to find more than a dozen on the bush. Pick off every such leaf, and your bushes are safe. It is but a moment's work for each bush. I can generally see a leaf which is thus attacked by simply passing along, or going around the bush. I know of no insect pest more easily disposed of. Of course it is too late to adopt this method, for the first crop of worms the present season, if your bushes have been neglected to this time, for most of the worms have grown to large size, and have dispersed over the whole bushes. But if by any means they have been kept off, and a new crop appears, take them in time, watch your bushes, pick off the perforated leaves, and they will give you very little trouble. At least, this is my experience.

I will add that I drove them from my gooseberries, after they had eaten half the leaves off, and were all over the bushes, by the following method. I dissolved coal tar in turpentine, added slaked lime (proportions not very material), and poured in a good supply of water. This made a preparation having a strong smell of carbolic acid. I made a syringe in the form of a common squirt gun, and keeping the mixture well stirred up, threw it plentifully over the bushes until the leaves were white with the lime after they became dry. The worms all disappeared, and though this was two weeks ago, they have not reappeared, the leaves are coming on again, the fruit is sound, and the bushes are fast recovering. I find this an excellent preparation for keeping off many insects. *But it will not drive away the curculio*, and I have been obliged to resort to the old and only effectual remedy known—rapping the tree and killing the insect. It is effectual in protection of cucumbers and other vines from the striped bugs.

Pruning Tomatoes.

EVERYBODY seems to have his own plan for cultivating tomatoes; and just now everybody seems to be putting his plan into the papers. One proposes to pinch down the vine into a kind of dwarf bush—another, proposes to train them on brush; another, to mulch the ground with straw, and let the vine fall down as they choose; another, advises as much manure as you can get—another, as little as you dare. The truth is, tomatoes will grow almost any way, and yield a fair return; but my experience is, that pruning the vines has as great an effect, as it has upon a Catawba grapevine. I tried this plan last summer with wonderful effects. My vines were, last year, (and are this year, and will always be,) right over a secret ditch, in a low moist place—in fact, water ran from the underdrain all the summer, dry as it was. Holes were dug about 3x3 feet apart and 18 inches deep, and filled with stable manure, and Baugh's phosphate well mixed—that is with all the manure I could get. The vines were worked several times, and then mulched with straw and "laid by." At each hill a stake five feet long, was driven firmly into the ground, and a hole was bored through every stake about the middle, and at the top, with a three-quarter auger bit. The vines were pruned to a single stalk and tied with strips of factory cloth an inch wide to the stalks, and bands going through the holes above mentioned to prevent slipping, (a galvanized nail would be better and easier, a common nail would rot the band in a few days). The vines thus stood about four feet high, were tied in the middle and at the top, and were then allowed to take care of themselves, except that they were pruned heavily throughout the whole season. The result was, magnificent clusters of the largest tomatoes I ever saw, and in spite of the drought, the severest ever known in this region, they bore steadily till frost. To make the experiment complete, some vines were left unpruned—they produced plenty of vine and some small fruit; but after the drought set in, they almost ceased to bear at all. To make the experiment farther complete, I put some vines on high land, and though treated the same way, the vines burnt and died early in the summer. These experiments convinced me completely; or, more exactly, my having an abundance of tomatoes all the summer, when nobody else had any scarcely, convinced me that heavy manuring, constant pruning, tying up at least four feet high, and planting on a low, moist place, but thoroughly underdrained, will insure the finest tomatoes and the most of them; while unpruned vines, in the same place, did almost nothing, and vines on high land did absolutely nothing.—*Carolina Farmer*.

How to Make a Lawn.

THERE are three modes of forming lawns. The first—to mellow the surface and sow grass seed thickly, which coming up with the weeds, the seeds of which are in the soil, much labor is required afterwards to get all these out by hand. The second is to plow and re-plow, harrow and re-harrow, for a season, in order to work out all the foul seeds, allowing time between each operation for the seeds to germinate, and remembering that many seeds will not grow if buried over an inch deep;

hence the necessity of repeating the stirring many times, in order to bring all parts up to the surface. Then sow fine grass-seed, such as red-top, June grass, white clover, etc., mixed, and at the rate of at least one bushel per acre, rolling it in. This to be done as early as possible in spring, and then, when it is a few inches high, mowing it closely as often as once a week the season through. This will give a handsome green carpet-like velvet. The third mode, usually the most expensive, but the most speedy and certain if well performed, is to *turf* the surface. First make the soil deep and mellow, and even at the surface; then pare from an old pasture the turf, cut very smooth, with perfectly parallel and straight sides, and of a perfectly uniform thickness of about two and a half inches; spread this turf over the mellow surface, as smooth as a floor, and roll evenly. If manure is applied to make the soil rich, it must be finely pulverized and thoroughly and very evenly worked in.—*Small Fruit Recorder.*

Notes from Our Contributors.

About Girdling Trees.

GIRDLE your apple trees according to Webster's definition of girdle, and they may bear fruit well for *three years*, but, my word for it, the end will then come. I have seen the bark carefully removed from the trunks without injury to the tree. A White Beech will live three years after girdling, while a Chestnut will die about as quick as if it had been cut down.

OBSERVER.

WILLIAMSBURG, MASS.

The Currant Worm.

FOR the information of your correspondent W. H. W., in March number, page 70, I would say that I do not believe that the raspberry, by growing in the immediate vicinity, has any power to prevent the ravages of the currant worm. I have currants and raspberries growing near to each other in the garden, and cannot see that they are any more exempt than those more remote. A neighbor has a plantation of currants and raspberries so near to each other that the raspberries have sent up shoots in the midst of the currant bushes, and the worms have been as severe on them as any in his garden.

GEORGE CRUCKSHANKS.

WHITINSVILLE, MASS.

THE experience of your Fredonia correspondent, given in June number, would seem to indicate that the odor of the black currant would drive away the currant worm. It has been my practice, in planting red and white currants in nursery, to separate the varieties not only with a stake, but with a black currant cutting, and have seen the red currant stripped, when the branches extended into black currant bushes of good size, by the worm of the gooseberry saw-fly, which is the worst enemy to the currant. Can't say positively that I have seen the worm eat the leaves of the black currant, but have seen black currant bushes stripped by the worm of the currant moth, which is a measure worm. We must bear in mind that currants, though not as sweet as liberty, can only be secured by the same means—"eternal vigilance."

GEORGE T. FISH.

ROCHESTER, N. Y.

Mammoth Cluster Raspberry.

I WOULD like Mr. A. M. Purdy to state the difference there is between the Mammoth Cluster and the Collinsville Miami, as it is called, and sometimes called McCormick. I have both growing together, and cannot see any difference in the plants; they are just coming in flower, and the fruit-buds show about equal in both. I shall note the time of each in flowering, also the time of fruit and ripening. There are others also who would like to know the difference, so they may be able to tell whether they have genuine plants. Mine came from their nursery, in Indiana, and so supposed to be true to name.

G. DREW.

BUNKER HILL, ILL.

Ivy.

ALLOW me to come with a query which I have for months hoped some one else would bring to you. Is there not an oversight in Anne G. Hale's January article, "Parlor Vines," where she speaks of *Hedera Canariensis* as the Irish or German Ivy? Will you be so kind as to inform me whether the Irish Ivy (*Hedera Canariensis*) is ever known as German Ivy? The vine commonly called German Ivy is certainly *Senecio Scandens*, a plant having nothing in common with the true ivies, except the form and general appearance of the leaf. This *Senecio* possesses all the good qualities attributed in "Parlor Vines" to "Irish or German Ivy." The foliage is beautiful, and the growth is very rapid, sometimes—even in mid-winter—exceeding four (4) inches of increase in twenty-four hours. The flower is rather insignificant, but the fact that a cutting taken in August will, if given sufficient light and water in a warm room, bloom profusely in January, is a strong recommendation to the notice of some persons. By pinching off its shoots the plant may be made to answer well for a hanging basket or pot, the leaves becoming larger, under such circumstances, than when the vine is permitted to grow long.

J. Y. MCK.

A Trap for the Rosebug.

EVERY one who has become at all acquainted with the habits of the rosebug, must have noticed that they have a very decided preference for some varieties of grape over others. This fact may well be improved to preserve our choice varieties from their ravages. The Clinton is one of their special favorites. If one of these is planted in the neighborhood of others, the latter will be comparatively neglected by the rosebugs, who will concentrate nearly all their attentions upon the Clinton.

I have, in my garden, a seedling of the Golden Clinton, that I consider one of my most valuable vines, though it has never borne a grape, and never will. Its value consists in its special attractiveness to the rosebugs. They swarm on this, while others are almost abandoned by them. I have just picked nearly a handful from the seedling, while on a good sized Iona, right beside it, I could find but a single one. It is worth while to have one Clinton in the garden, or an occasional one in the vineyard, as a trap for these destructive pests.

W. H. W.

I SEE the Nicanor Strawberry is said, by some, to blossom and ripen before any other. In my grounds the *Florence*, growing alongside the Nicanor, blossomed about a week before it, and precedes it quite as much in the time of ripening. It is not so *marvelously* productive, but it is of considerably larger size, and, in my judgment, of better flavor. Indeed, I think the *Florence* one of the best varieties (all things considered) that I have yet found.

W. H. W.

READING, MASS.

Girdling Fruit Trees.

IN your issue for this month, John F. Johnson says: "I think it is not generally known that *girdling* fruit trees will cause fruitfulness." I think so, too—never will be. The unguarded and unqualified manner in which this statement is made, is liable to lead young and inexperienced fruit growers into errors of practice that will surely bring them to "grief" if they enter practically into the experiment, and he ought not "teach men so."

Whatever the Benton Harbor experiment might have been, I know that to thoroughly girdle a tree—that is, to remove a strip of bark *clean to the wood*, encircling the trunk of the tree is an exceedingly dangerous practice; if it do not kill the tree outright, it will greatly reduce its fruit bearing capacity, and should not be tried by any but experts in physiological freaks. The writer has seen this innovation upon nature's laws made upon grape vines and apple trees, but with no degree of success that should enter into practice.

The knife of *experiment* is a dangerous weapon in any other than an experienced hand; and statements so void of explanation in regard to the manner in which the work is to be done, will lead to the sacrifice of many a fruit tree if indulged in. I have girdled deciduous trees for the sake of the experiment, and when thoroughly done, when the *inner lining* of the bark was removed, it invariably proved fatal to the tree.

To produce fruitfulness by checking the tendency to false bloom, if the trees are not more than ten or twelve years old, I would take up and reset, which is much more effectual, and much safer than girdling in any form, so far as my experience and observation go.

L. L. P.

EAST JEFFREY, N. H.

Editorial Notices.

Reduction of Subscription Terms.

DESIRING to see THE HORTICULTURIST taken by many who have not hitherto read it, we will send it the remaining six months of this year for *One Dollar*. Our Club Terms are also reduced, and worthy of special attention. Many can now take it freely who have felt the previous terms were too high. We will supply clubs as follows: Three copies, one year, \$5; five copies, \$7.50 (only \$1.50 a year each). We will be pleased to have our friends interest themselves and form clubs everywhere. These terms now render THE HORTICULTURIST the cheapest journal of its class in the country, and within the means of every one of rural taste.

Pansies.

MR. HENRY A. DREER, of Philadelphia, has made the culture of Pansies a specialty for a number of years, and his Pansy seed has become quite celebrated. We invite attention to his announcement in our columns.

Get up a Club This Fall for the Horticulturist.

HEREAFTER only \$1.50 a year in clubs of five, and a copy free.

Errata.

On page 197, June number, read *Alburnum*, in place of *Albumen*.

On page 100, proper spelling of pear is "*Josephine de Malines*."



Vol. 25.

AUGUST, 1870.

No. 290.

A Chat about Strawberries.

AS is our usual custom, we present herewith notes of the experience of cultivators, this season, with the principal varieties of strawberries, both old and new. Besides giving reports of personal test on our own place at Dover, Delaware, we have also visited the grounds of Henry A. Dreer, near Philadelphia, Pa., and also of Reisig and Hexamer, New Castle, N. Y. The soils of all these places represent a fair average of lands upon which strawberries are usually grown, varying from sandy to loamy and heavy clay, and the climates also being widely different, aid very materially in reaching conclusions satisfactory to cultivators generally.

The season in New Jersey and Delaware has been unusually wet, and the quality of fruit has been very variable, perhaps more acid than usual, while north of New York the weather has been unusually dry, affecting the size of fruit and the productiveness of fruit beds very materially.

Prices of fruit have varied greatly, good fruit averaging eighteen cents per quart, wholesale, but unusual quantities of spoiled fruit have interfered seriously with the grower's profits, and the general effect of the season and the market has been quite as discouraging as last year. Very few exhibitions of strawberries have been announced, and there has been very little interest in new varieties. No new varieties, of marked characteristics, have met our attention, and we must confine our attention to those names which are already well known or only of recent date.

Michigan Seedling, is exceedingly vigorous, with dark green healthy leaves and extremely large stools; very productive; fruit only of medium size; light crimson color; moderately firm; not as much so as the Wilson; flavor pleasant, excellent and good; desirable for family use.

Triumph of America, good grower; produces as freely as the *Triomphe de Gand*; berries large, uniform oval shape, deep crimson color, sub-acid taste; best adapted to heavy soils; on sandy soils superior to *Triomphe de Gand*; flavor however a little more acid.

Peak's Emperor, a very fine, free, handsome grower; stools of remarkable size and productiveness; does well on sandy and heavy lands; resembles the *Agriculturist* so closely we can discover no difference, save that the *Peak's Emperor* is of better flavor and not as nauseous as the other.

Romeyn's Seedling, everywhere the same as the *Triomphe de Gand*; occasionally it differs a little in flavor from the other and berries more regular, having less of coxcomb shape; productiveness and manner of growth identical.

Napoleon 3d., best adapted to heavy soils, moist and rich. If favorably situated, ex-

ceedingly productive; berries large, beautiful scarlet, and flavor exquisite; flesh moderately firm, white, perfumed. An excellent amateur variety; not desirable for market. Does not do as well on sandy soils, although better than many others of equally choice character. Wherever it can be grown its beautiful aromatic flavor entitles it to high esteem from every grower.

Stinger's Seedling, is declining in value this season; plants are unproductive; fruit poor and without flavor.

Agriculturist, in favorable localities enormously productive, but often very unreliable, sometimes failing to produce anything; berries large, dark red; seedy; flesh soft, and taste variable, from sweet to nauseous.

Colfax, a fraud, entirely unworthy the attention of the public; plants of unparalleled vigor, running completely over the ground rivalling the weeds in rapidity of growth; berries small, sour, soft. Dr. Hexamer could not get any of his pickers to take any of the fruit as a gift. Surely, not a "poor man's berry;" very late. We can see no value in it save as a green manure to plow under.

Boyden's No. 30, berries very large; regular; ovoid form; dry skin; keeps well, although interior flesh is soft; flavor pleasant, moderately sweet, but of no decided characteristics; plants exceedingly vigorous, hardy and very productive; a good family variety.

Matilda, plant vigorous; berries large; scarlet; fruit stalks long; skin moderately firm; acid taste; flesh soft; not a market variety.

Chas. Downing, fully equal to all we have ever said of it; berries of good regular size; flesh moderately firm; color, deep red; flavor excellent, with pleasant sub-acid base; quite productive, and succeeds on light or heavy soils; best for family use; not suitable for other than a near market.

Green Prolific, always good; one of our best family varieties; never fails to yield a good crop; bears any sort of treatment; hardy, and very productive on sandy soils; pleasant sub-acid flavor; in wet season very acid; not suitable for market.

Durand's Late Prolific, shown this spring at Prize Exhibit of B. K. Bliss & Son, this city, by E. W. Durand, Irvington, N. J., and received first prize as best seedling; fruit large; quite firm; deep scarlet; large coxcomb shape, but more free than *Triomphe de Gand*; flavor, acid; not as much so as the Wilson; a good variety for a near market.

Black Defiance, another seedling by same exhibitor; color, very dark red; seedy; flesh soft; taste, acid; berries very large.

Clinton, a seedling several years old, from Clinton, N. J.; very full of seeds; dark crimson color; not as good as "*Late Prolific*."

Russell's Prolific, a fine variety for family use. Pistillate, hence many berries misshaped and ends flattened; extremely productive; color, light red; flesh soft; quality, sweet, excellent; on sandy soils particularly good and delicious; plant, a vigorous grower; hardy, and succeeds in nearly every locality as well as the Wilson; a variety combining the excellencies of the Russell's with the size, firmness and perfect flower of the Wilson; would make a superior market variety.

Schenck's Excelsior, a plant in all its characteristics identical with the Downer's Prolific, but smaller; of no value as a market variety; soft and acid.

President Wilder, fruit of good quality; delicate flavor; berries medium to large; moderately firm; young plants disposed to be productive; grows better than either the Hovey or La Constante; a good amateur variety; not firm enough for market.

Nicanor, a healthy and vigorous grower; very early; ripe a week before the Wilson; berries of medium size; none large; good flavor; pleasant taste; very productive; has succeeded better this year than last; a good variety for family use.

Barnes' Mammoth, has succeeded indifferently this season; not as productive as usual; berries large size; good, regular form; exceedingly firm; sub-acid flavor; desirable as a market variety where it will succeed, but not likely to excel the Wilson.

Lennig's White, good grower; not very productive in beds; does best in hills; flavor exquisite; the best flavored variety we are aware of which will prove suitable for family purposes. Most foreign or American varieties of high quality prove unproductive or inferior growers. The Lennig's White has thus far done well.

Golden Queen, same as Trollope's Victoria, has a fine showy berry of large size; light

scarlet color, white toward the tip; flavor very indifferent; shy bearer; proportion of large berries; very small.

Lady of the Lake, moderately firm; very productive; little or no flavor; berries of uniform medium size, none large; good market variety near Boston, on account of its prolific bearing, but of no special value near New York.

Rippowam, resembles the Agriculturist so closely it does not need any special description.

Austin, a healthy grower; sub-acid flavor; berries small, regularly shaped; not productive; flesh white, soft; fruit of a light scarlet color.

Hovey's Seedling, good grower on cool soils and moist positions; succeeds best in New England; has never proved of special value farther west; fruit medium size; dark red; moderately firm; good flavor; suitable only for clay soils.

Downer's Prolific, a very early variety, ripening a week or more before the Wilson; vigorous grower; fruit medium to large; light color, but quite acid; not as much so in warm, dry seasons or on light soils; very productive; not firm enough for market; good family variety; resembles the Wilson in size and style of pickings, but does not last very long; only valuable for family culture.

Jucunda, does better every year as Mr. Knox's system becomes understood; must be grown only in hills, with runners constantly clipped; soil must be heavy loam or clay; light soils must be well mulched; plant, a compact grower, with small top, but in time of fruit over abounding in fine berries of large size and good flavor; size of berries always good and uniform down to the last pickings; fruit deep crimson, growing lighter towards the top; flesh very firm; centre, hollow; one of our best market varieties.

Green Prolific, one of our surest varieties; extremely vigorous, hardy and productive; fruit medium to large; acid taste, sometimes extremely so; well ripened berries are very pleasant; varies greatly in quality; does best in light, warm locations; good for family use, not for market.

Fillmore, a very fine variety in clay or heavy loam soils; should be grown in hills with some other variety of perfect flower, in every third or fourth row; good flavor; very productive; berries medium to large; deep red; very firm; nearly equal to *Jucunda* for profitable market use.

Georgia Mammoth, exceedingly late, one month after the Wilson; forms large stools, but is not productive. Valuable only as a curiosity.

Ida, extremely vigorous and prolific; berries small; acid; of no special value.

Hooker, very peculiar; sweet delicious flavor; poor grower; not productive.

La Constante, plants very difficult to raise and keep alive.

Globe, late; good regular shape; good flavor; firm, solid; plants not strong growers, nor very productive.

Laurella, very prolific; hardy; handsome grower; berries of uniform medium size; moderately firm; sweet; superior in some respects to Downer.

River's Eliza, compact, healthy grower; not productive; flavor exquisite.

Large Early Scarlet, very early; vigorous; very full of runners, and immensely productive; berries small, but good flavor.

Kitley's Goliath, produces a few good berries, late, but of only moderate flavor.

Abraham Lincoln, very indifferent grower; berries small; taste like the *Jucunda*; not superior to the latter in general desirability.

French, early, prolific, good flavor; berries good large size; plants hardy; desirable for a near market.

Lady Finger, a beautiful amateur variety for garden use; quite productive, hardy, fruit long, deep scarlet, exceedingly firm and flesh dry; very popular with the ladies.

Philadelphia, early; good grower; berries good size, flavor sweet.

Brooklyn Scarlet, exceedingly early, excellent flavor; hardy, but quite unproductive and unreliable.

New Jersey Scarlet, good grower, moderately productive, quite acid; berries of average medium size.

Ladies' Pine, berries small, and very few of them, but very high flavor, sometimes exquisite.

Culter, berries very small; of no value.

Belle Bordelaise, of the Alpine family; exceedingly productive; berries small, and of indifferent, musky, disagreeable flavor; beautiful in blossom, but valuable only as a curiosity.

Col. Ellsworth, poor grower, poor flavor, unproductive.

Durand, a failure; will not grow well.

Dr. Nicaise, very feeble grower; unproductive, about one berry to sixteen hills; flesh white, soft, pleasant flavor.

Monitor, if grown in shade does well, but will not succeed in the sun.

Vicomtesse Hericart de Thury, poor grower; small berries, but very good flavor.

Mead's Seedling, dark healthy grower; berries bright coppery color; good size; good vinous flavor.

Boyden's No. 20, sweet; berries large and solid, but unproductive.

Jenny Lind, a good, sweet, early variety for family use.

Great Eastern, acid, late, quite productive; a good variety.

The above list comprise the principal varieties now grown for family or market use. We have notes of fifty more different varieties which hardly need mention. Seasons, soils and climates differ so much in various parts of the country that we have no doubt many varieties we have had an unfavorable experience with here, will prove immensely successful somewhere else; but the above report is the *average experience* of cultivation within fair distance of the city, and on a variety of soils. It will be seen that there are *but few really good market varieties*, while the list for *family use* is quite large. As strawberry culture for market has not proved quite as profitable as was hoped by many cultivators, we must find our true interest, pleasure and instruction in the strawberry hereafter, to be in its use for *family and amateur* purposes. Occasionally a remarkable seedling may appear, but as little profit would now accrue to the originator from its introduction, we must expect, for some time to come, very little effort in the production of new seedlings, save by those who labor solely for the pleasure of it, and in the interest of a pure and elevated horticulture, without regard to profit.

Blackberries.

We have little new to offer this year on the subject of Blackberries.

The Kittatinny is still our favorite family fruit, perfectly hardy, a rampant vigorous grower; bears enormous crops, which last over a long period; has dark glossy black, berries of fine noble size and delicious flavor. Its only faults are its thick core and excessive suckering. It requires severe pruning, which should never be omitted at the right time, and the ground must be well cultivated to cut down the sprouts which persist in making their growth.

The Wilson, in New Jersey, Delaware, Maryland and the South, is our *finest market variety*. Is there perfectly hardy, luxuriant, thrives finely on light soil, yields good crops, and is superior as a market fruit on account of its brilliant color and firmness and large size, which make it the most showy variety on the list; flavor sweet but not lively. During its first year the shoots exhibit a natural trailing habit, creeping close to the ground and overflowing with bloom. After the second year it grows more stout, upright and vigorous, and bears very abundantly. It is the earliest of all our market varieties, save the *Dorchester*, but its most valuable quality is the rapidity with which it ripens up the entire crop, scarcely ten days elapsing between the first and last pickings. Blossoms not entirely perfect; hence many are infertile and fruit is lost. Still an abundance are left which develop perfect fruit. It is well to plant every fourth or fifth row with a perfect flowering variety.

The Dorchester.—Not quite as large as either of the above, but longer in proportion; flavor sweet, fine; very early, and very desirable for market or family use.

Lawton.—When perfectly ripened not surpassed by even the *Kittatinny*, nor excelled by any in productiveness. Maintains its reputation strongly in the market, and if sent in good condition, never fails to bring the highest price. Its principal fault is want of hardness, nearly always killing to the ground every severe winter; is a very rampant grower, needs constant close pruning; does better on poor lands than rich. In soils where it has not

proved productive, and where it has winter-killed, it has often been found best to seed the land down to grass, which restrains the growth very materially, and permits the canes actually formed to mature thoroughly. This practice has nearly always proved a benefit with the Lawton, although not necessary for either of the other varieties.

Shall we grow more Blackberries or not?

In New Jersey and southward, extensive plantations of blackberries have been made within a few years, and the Wilson Early put out very largely. One grower near Moorestown, N. J., has eighty acres alone in the Wilson variety; another has sixty acres, while another has sixty or more in several varieties. Probably within a radius of thirty miles of Philadelphia, there are from 500 to 1000 acres already planted in blackberries. In Delaware every fruit grower has been enlarging his blackberry patch, and in Virginia the people are also planting largely.

As blackberries mature so closely with peaches, and also do not sell so largely in the market as strawberries, we fear the "*fever*" which has forsaken strawberries will now attack blackberry cultivators, and for some time to come the profits of this fruit will be very low. We cannot offer much encouragement to beginners in planting *any* variety. There are already planted enough acres in blackberries to supply all the moderate needs of the three cities of Philadelphia, New York and Boston. Is it wise to advise any more to enter the list?

Practical Hints to Fruit Growers.

Soil for Strawberries.

WE have not found it profitable to cultivate strawberries on *light lands*. The expense is too great and the product too small. We think strawberry culture reaches its highest profit only where *large crops* can be readily obtained, and these come only on heavy loam or clay land, well drained and heavily manured. *Sandy soils* will ripen up many small, very early berries, but the main crop is not large, and does not hold out well. Our method for the treatment of all light lands would be to grow *nothing* the first or second years. Simply seed the ground down to clover, let it grow as thick as possible until the summer of the second year, then plow it all under. If we had a muck bed close at hand we would haul upon the field 200 loads per acre, and let it decay during the winter. The next spring the soil, with light plowing, would be in fine condition, full of natural vegetable matter, and able to bear heavy crops. *Vegetable manure* is indispensable in the cultivation of the strawberry, and, as sandy soils are always deficient of it, we can easily see why it is impossible to make such land highly profitable.

Marketing Strawberries.

Many beginners, after getting a fruit bed well started, and finding just as the fruit begins to ripen that a large capital must be spent in berry crates and baskets, instead of investing in good substantial baskets, crates, &c., made by old, well established manufacturers, they prefer to purchase a cheap class of goods, or else make their own crates and fill in with a host of mixed boxes. If any of these cultivators could follow their fruit to market, watch it as it reaches the commission merchant, and see the contrast it makes with crates of nicer make, and fruit of nicer assortment, they would no longer wonder at the causes which combine to make their fruit so low priced and themselves so discouraged. We have always contended that the most important part of the fruit business lies in *proper marketing*. However well the grower may cultivate his fruit, unless he is equally careful in sending it to market he will surely fail in all his plans. We invariably avoid all manner of cheap baskets for our own use. We buy only well made, handsome crates, and the result is our fruit is always clean, in good order—looks neat. Our crates are strong, and not easily broken to pieces. Our customers handle them carefully, and we gain and maintain a good reputation as careful fruit growers.

Strawberry culture, to be as successful as it should be for a permanent occupation, demands a *large amount of capital*, which should be well invested. Every dollar invested in poor plants, or poor crates, &c., is a hindrance rather than a benefit. It is better to use a small

capital or a small piece of land, even one acre, and accomplish every thing *well*, than to attempt more than can be well managed. Seasons sometimes interfere with successful culture and marketing, but if a grower persists, year after year, through high prices and low prices, good seasons and bad seasons, to *market his fruit, as it should be*, in good, clean, durable baskets and strong, well made crates, he *will never be discouraged at results*.

Profits of Strawberry Culture.

The profits of strawberry culture have been greatly exaggerated. Estimates of \$500 to \$1,000 per acre are rarely realized. Steady prices of thirty to fifty cents per quart do not come to general cultivators. Perhaps the fever in strawberry speculation has done more injury to successful strawberry culture than good. It has induced people in all parts of the country to invest their capital in the business, who have found it too uncertain, too costly; the fruit is too perishable; the large markets are too easily glutted, and the returns are entirely disproportionate to the labor, time and risks undergone. Our experience in strawberry culture for the New York market, justifies us in saying, that no grower should undertake strawberry culture without a capital of \$250 per acre, exclusive of land. Of this sum he will need \$100 for berry baskets, and the balance must be equally divided between manure, plants, and labor of cultivation. After his bed comes into bearing, he must calculate seven cents per quart for marketing. In some localities it will be eight cents, in others but five cents, of which two cents is for picking, two cents for freight, and three cents for commissioners, labor, assorting and lost baskets. All sums received over seven cents are the growers returns on the capital invested. Any one can see that a price of ten to twelve cents per quart is not adequate compensation for so much risk, especially as the produce on light lands averages only from 1,000 to 2,000 quarts per acre. The average production in New Jersey is but 1,200 quarts per acre; in Delaware, is but 1,500 to 2,000. We are near the truth when we say that the average profits of a strawberry plantation in New Jersey, Delaware and Maryland, are not over \$100 per acre. Occasional instances of \$300 per acre occur. Either the grower has had an unusually fine crop, or has enjoyed unusual marketing facilities, or been earlier than usual. But, as a rule, we have no doubt many will support us in the conviction that the profits of fruit culture at first are not sufficiently remunerative, in consideration of the capital invested and risks assumed. The future may be more bright; when our cultivators are able to reduce their fruit plantations, take better care of the remainder, send better fruit, avoid speculations and fevers, are willing to share a good many disappointments and vexations, lose, every season some fruit from bad weather, or bad markets, the occupation of "*fruit growing for profit*" will be on a more healthy basis. Only those who can afford it will continue it. None will undertake it anew without having full knowledge of all the difficulties, and we may at last hope to see fruit culture in the hands of men of experience and careful management. The past two unfortunate seasons, both East and West, are sufficient to show how easily the *small fruit business* may be *overdone*. We know there is always a large demand in the large cities for fruit, and that it will increase yearly, but commission men admit every season develops some new feature that did not exist the year before, and many a fruit that was profitable last year is a drug this; and others sell splendidly now which lagged the year before. Every grower must expect such peculiarities and occasional losses are inevitable.

Designs for Lawn Seats and Tents.

THE illustration upon the opposite page, represents several styles of canopied tents and seats, in use in public or private grounds.

Figure 1, is a style quite prevalent in Belgium and Germany, the canvass being readily moved and shifted around in any direction, to ward off the sun. The same style is sometimes seen here, with the exception of the seat around the centre staff.

Figure 2, represents a patent seat, lately introduced by the Composite Iron Works Co., for use in croquet grounds, and public or private lawns.

These designs will be found very suitable to many of our citizens, who have the desire for obtaining objects of rustic tastefulness, for the embellishment of home grounds.

Notes on Ornamental Shrubs, &c.—Old and New.

Pæonies.

A FLOWER Garden, without one of the well known Pæonies, is devoid of one of the most ornamented of all flowery shrubs. Take a garden border of 100 feet in length, and fill it with the choicest Verbenas or Geraniums, and yet to the majority of visitors nothing in the entire row looks half so sweet and splendid as the alternate clumps of showy luxuriant Pæonies. The list of varieties in cultivation by our nurserymen is very large, numbering 75 or more, but, for ordinary use, we find the following short list sufficient for all purposes:

Humei.—One of the oldest and yet one of the best; dark rose color, very double, large, perfect form, very conspicuous, blooms late, just as others are nearly gone.

Fragrans.—Violet rose color, double, full, large and very fragrant.

Duchesse de Nemours.—Outside petals, deep pink, with violet shade; inner petals, light salmon, and fringed, very beautiful, one of our showiest, most fragrant varieties.

Victoria Tricolor.—Outer petals delicate pink, the centre creamy white, and the petals lined and edged with red. A very fine variety.

Other shrubs too are needed to fill up many a vacant space on the lawn or in the garden borders, and we have taken notes of some new varieties mentioned by other Journals, within a few months. Hearth and Home, speaks as follows of

Weigelia Amabilis Nivea.

This shrub is known in the nurserymen's catalogues as *W. hortensis nivea*, but there is no species known to botanists as *W. hortensis*. It is a very beautiful variety, with pure white flowers, which do not change to rose-color, as do those of the white variety of *W. rosea*, known in the catalogues as *W. rosea alba*. The flowers are borne in elongated heads, and stand well above the foliage, and are not mixed with it, as in the latter variety. It is one of the most desirable shrubs that has been introduced of late years, and is of great value for forcing in winter, as it blooms as freely as *Deutzia gracilis* in artificial heat.

Viburnum plicatum.—This shrub was introduced into this country many years ago, but is comparatively scarce in the nurseries, and is seldom seen in our shrubberies. It is a magnificent plant, of strong, robust growth, of somewhat rigid habit, and a tendency to throw out its branches in a horizontal manner. The leaf-buds are from three to four inches apart on the branches, and the flowers are produced at the axil of each leaf—the heads of bloom being snowy white and nearly or quite as large as those of its congener, the well known Guelder Rose, or Snowball, of our gardens. It is far superior to the latter, although this is one of the finest and most popular of shrubs. A new variety of *V. plicatum*, with the leaves beautifully variegated with white, has been lately introduced from Japan.

Spirea Humboldtii.—Under this name, we have a hardy herbaceous species of Spirea, which somewhat resembles *S. aruncus*, but which we cannot find described in any of the botanical works we have. We suspect it to be a Californian species. The leaves are tripinnate, the leaflets ovate and acuminate, and strongly and irregularly serrated. The flowers are white, small, and disposed in spikes, which aggregated together, from terminal panicles, from ten to fifteen inches long. The foliage is light green, very elegant, and strongly marked in its character, and together with the numerous light, feathery-looking panicles, produces an admirable effect. It grows about three feet high, and is well adapted for planting, by the single specimen on the lawn or in the flower garden, as a picturesque plant. The panicles of flowers are very useful in filling vases of cut-flowers.

Cornus japonica.—A variegated-leaved variety of this species of dogwood proves to be quite hardy. It is far superior to the ordinary variegated-leaved dogwood, *C. mass*; the foliage having a bright, healthy appearance, which the latter has not. The Japanese species is also very spreading in its habit, and will be a great acquisition to our list of hardy variegated or colored leaved shrubs.

Thalictrum japonicum.—This is a lovely hardy herbaceous plant, only recently introduced from Japan. The foliage very much resembles the *Aquilegia*, or Columbine; the flower-stems are from two feet to thirty inches high, bearing large corymbose panicles of white feathery-looking flowers. It is a decided acquisition to our gardens.

Chinese Azaleas.—It is not generally known that the Chinese White Azalea of our greenhouses has proved to be a hardy plant in the neighborhood of New York city. There is a very large plant of it in one of the plots at Greenwood Cemetery, which has stood out for many years, and blooms freely every season. Messrs. Parsons, at Fushing, also have it out of doors, where it also blooms every spring.

Last year we planted out a plant of the double red variety, which, although killed back somewhat, is now breaking out very freely, and promises to make a good thrifty growth. We have found that when really hardy plants have been grown in the greenhouse and then planted out, the growth made in the greenhouse is very liable to be injured by the cold the first winter of its exposure.

A. amena and its varieties, *rosea* and *splendens*, are hardy also, and so is *A. obtusa*. This latter is of a very dense, rather dwarf habit, with rich shining foliage, which keeps bright and green all winter. It blooms profusely, and is a lovely hardy shrub.

We should not be surprised to find that many others of our greenhouse varieties of Azaleas should prove to be hardy.

Aucuba japonica.—This well known plant is hardy in sheltered situations where not exposed to cold, high winds. The leaves become brown on the ends, but the plant regains its beauty as soon as it makes its spring growth.

Photina serrulata.—This shrub, or small tree, belongs to the Hawthorn family, and was formerly known as *Crataegus glabra*. Like the *Aucuba*, it is hardy when sheltered from the cold winds of winter. The foliage is very large, shining and coriaceous, and remains on all winter; the flowers are white, and borne in large heads, like the Hawthorn. It is a native of China and Japan.

Deutzia crenata rubra plena.—This elegant shrub, of recent introduction, should be planted in every collection of shrubs, however small. The flowers are double, white, with the outside petals of a deep rose. We have heard it said that it was not a free bloomer, but, on the contrary, we have always found it to bloom most profusely. It requires to be planted a year or two before it shows its real beauty.

It should be remembered that *Deutzias* and *Philadelphus* (Mock Orange or Syringa), are among the shrubs that should not be pruned, if we wish to have them flower profusely, as they bloom upon the wood of last year's growth, and every shoot of that growth cut back or cut out is so much bloom lost.

The Rural New Yorker has also notes of new *Spiraeas*.

The Spirea Folia Variegata is perhaps the best of all the distinct marked hardy foliage plants. Its great beauty is in its foliage, which is a clean, rich, dark, glossy green with a pale bright yellow marking through the center. No one sees it but wants of it (I have no plants for sale), nor do I ever cut a bunch of flowers, but I am importuned for a few leaves of "that charming colored leaved spirea," and my *Spirea prunifolia* as well as *Thalactryoides* have both been beautiful with masses of white flowers from the very ground, upward about two feet; and to-day I am cutting all the flowering stems of this year right away, or rather I am—as they are just done blooming, and as the bloom of next year comes on the growth of this—cutting them back with a view to have the growth start from near the ground, and thus, year by year, keep them as marginal plants, with white beautiful flowers arrayed against the green of their later blooming associates, just in back of them. I think in so doing I have much more of real true beauty than those who, setting the plant out by itself, let it grow up three to five feet, showing a bare long stem of half its height and then a mass of white arrayed against—nothing.

What a beauty is that graceful-foliaged variety named *Spirea Thunbergia*! its flowers pure white, and its foliage so delicate, that every visitor wants a piece. It must be cut back now. *Spirea levigata* is showy and pretty; with spikes rather than racemes of flowers, blooming, however, on the growths of this season; so it should be pruned early in spring.

Lilacs.

Rothmagensis rubra, is, I think, the same as that I have heretofore known as French red. It is the brightest among them all, but they are all handsome, and a group of them, placing the tallest growing sorts in the rear, makes one of the most beautiful features of a pleasure garden in its season.

Honeysuckles.

New Tartarian Honeysuckle.—It is the earliest of all to bloom, is a profuse bloomer, the buds a bright, clear pink; but when the flower is opened the petals are a clear, deep pink through the centre, with a well defined, clear, peachy whitemargined edge. It's a beauty, and no garden should be without it.

I made a hedge, a few years since, some fifty feet long, with the common red or blush-flowering tree honeysuckle, and having clipped it regularly each year, it is now a beauty, with its mass of flowers and green, from the ground up, some five feet. I often wonder those who can, do not create more

Ornamental Hedges

in their grounds; they serve as dividing lines better than board fences, are less expensive and far more beautiful. I have one hedge made of odds and ends, as I called it,—that is, plants of all sorts,—Tree Honeysuckles, Weigelas, Forsythias, Spireas, etc., all grown from cuttings; and many as they look at it say, "Oh! I wish I had one like that!"—a wish which only needs for its realization a little labor and care in the planting and growing the cuttings, and calmly waiting two or three years to see results. Among my perennial early flowers nothing has perhaps given more daily satisfaction than a mass of

Phlox Procumbens,

with its pink flowers at the centre surrounded with the *Phlox trifoliata alba* with its delicate foliage and mass of clear white blooms, continues nearly a month. Another good thing, and early in its blooming season among hardy perennials, is

Lantium Purpureum Folia Variegata,

whose purple-pink spikes of flowers, about six inches from the ground, with their peculiar variegated flowers, have caused every visitor to note it. I believe there is a white flowering one, and another year I hope to have it.

Sanchesio Nobilis Variegata.

This is one of the rare beauties among ornamental foliaged plants. It is a novelty here as yet, and only one American commercial catalogue, that we have seen, embraces it in its trade lists for sale. In English journals it has the past year received high praise, and by some been pronounced the finest plant of the year's introductions. It is of vigorous growth, the leaves often being more than one foot in length, of a most intense green, with veins or ribs broadly margined with golden yellow.

Pears for the South.

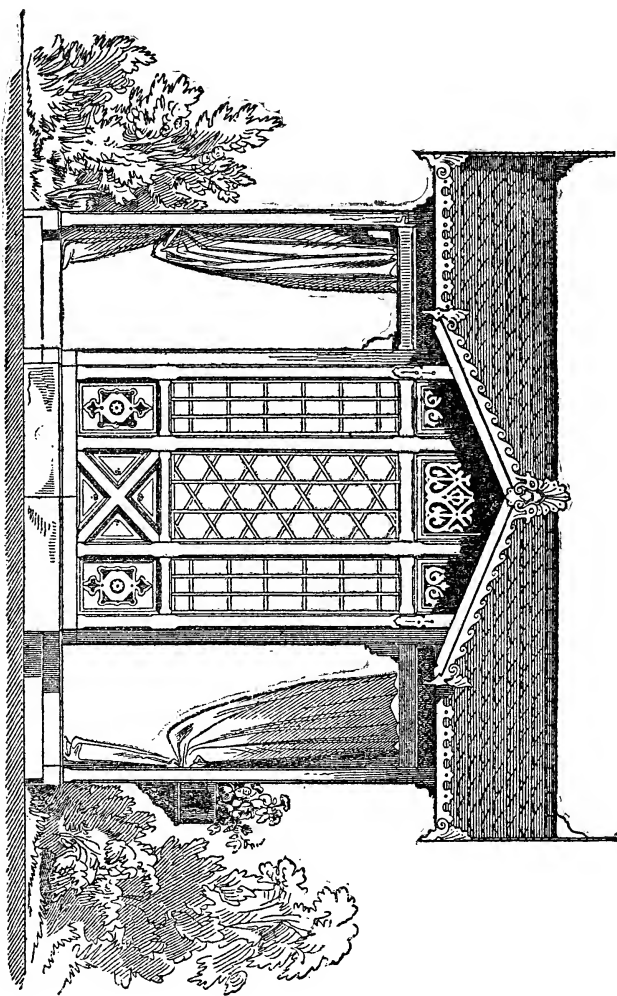
[From the Southern Horticulturist.]

Madeleine.

THIS is the *earliest* good pear that ripens. The *Amire Joanaet*, that comes in a very few days before it, being unworthy of cultivation from its small size and inferior quality.

The tree of the Madeleine is moderately vigorous and remarkably upright in its growth, requiring severe cutting back and pinching in while young, to form a stocky, open headed tree, and we will add, in this connection, that in pruning all these compact, upright growers, great care should be taken to cut back to a bud on the *outside* of the branch, otherwise the evil intended to be remedied will be increased.

As a "Dwarf" we do not like the Madeleine, although the tree grows very well when young, on the quince, but it does not hold out healthy and vigorous as it should do to be permanently profitable on this stock; and, besides, the fruit is smaller and more liable to crack. As a standard (on pear root) it succeeds better than on quince; the tree is a healthier, handsomer and more vigorous grower, and makes a fine large tree. The fruit is also much larger, fairer and better, and is far less liable to be injured by cracking. But the tree is slow in coming into full bearing, and blights and cankers badly in some seasons,



Design for Summer House.

and its blossoms are so tender as to be easily injured by late frosts. Indispensable to the amateur, but for market, we decidedly prefer the Doyenné d' Ete. Ripe first half of June.

Osband's Summer.

This ripens immediately after the Madeleine and Doyenné d' Ete—and with the Blood-good—to which it is inferior in most respects, except fairness; forms a complete succession up to the ripening of the Julienne and Beurré Giffard. The tree is a good grower, but uncommonly liable to blight when young, and does not come into full bearing very easily. The fruit is medium in size, and of a beautiful light yellow color; that, with its smooth, glossy skin, makes it the handsomest pear of its season. Ripe June 15–30.

Beurre Giffard.

This is one of the handsomest and best of the comparatively new pears. The only objection to it is that the tree is a miserable grower when young, and requires very careful and judicious attention to bring it into a well shaped and evenly balanced tree. It bears quite early, and is sufficiently productive to always enable the fruit to come up to a good uniform size. Ripens about with the Julienne and Tyson, from June 25th to July 5th, and is one of the very best for home use. Does not bear quite well enough for a market sort. Best as a standard, but will succeed also as a dwarf.

Tyson.

There are few better pears in the catalogue than this. If it has a fault we don't know it. The tree is naturally as symmetrical in shape as though formed by the hedge shears, holds its lively green foliage well through our hottest summers, and bears fine crops of delicious medium sized fruit as early as the average of varieties.

Still it does not bear quite so young as the Julienne, nor can the fruit be gathered quite so early; hence we prefer the latter for market.

But for home use, commend us to the Tyson in preference to all other sorts. Grows well on either pear or quince. This brings us up to the ripening of the Bartlett and Doyenné Boussock, and during *their* season of perfection nothing else is needed.

Beurre Superfin.

A beautiful, healthy tree that bears early and abundantly, either on pear or quince stock. Begins to ripen before the Bartletts are gone, and, with the Belle Luerative and Howell, completely fills the little hiatus that exists between the Bartlett and Duchesse d' Angoulême. Indispensable to the family orchard, and, next to the Bartlett, one of the best market sorts of its season.

Beurre Clairgeau.

Coming in immediately after the d' Angoulême and forming with the Chaumontelle, a complete succession to this noble fruit, we can't see how any market or family orchard can dispense with this most excellent variety; and yet we doubt if there is one orchard in ten that contains it. It is a good grower as a standard, but does not succeed well on the quince; nor is it necessary to cultivate it as a dwarf, as upon pear stock it bears as early as the Bartlett and fully as abundantly. The fruit is nearly as large as the d' Angoulême, much handsomer, and almost as good. The best market pear of the season, which is from August 20th to September 15th, and, with care, may be kept all through September in fine condition.

Chaumontelle.

This variety has been in cultivation for hundreds of years, and is still one of the best of the large fall pears. There is no more healthy tree on our grounds than a tree of this variety, some twelve or fifteen years old, that this year bore a good crop of its fine, large, beautifully colored fruit. With the Chaumontelle, at least, the theory of the running out of varieties does not hold good; it succeeds either on pear or quince. Ripens just after the d' Angoulême, and lasts until the Winter Nelis and Lawrence comes in, or from the last of September to middle of October.

Lawrence.

If we were asked to name the variety of pear that combined the greatest amount of excellence in both tree and fruit, we would unhesitatingly name this sort. The tree would

make a good ornament for the lawn if it bore no fruit, it is so healthy, vigorous and symmetrical in its growth and clings to its cheerful looking foliage with such persistency through our long, hot, dry summers, and so late in the fall. We have never seen the least sign of blight, canker or other disease, in either tree or fruit during the many years we have been acquainted with it. The fruit is of the very best quality, of full medium size, and keeps in good eating order all through November. Succeeds on both pear and quince.

Winter Nelis.

Too much cannot be said of this old but most reliable variety. If the reader could have seen our crop last season, and could have taken a bite or two out of some of the fine specimens we kept for Christmas desert, we are confident he would never order another bill of pear trees without a few Winter Nelis being set down as among those most wanted. Read the descriptions in the books, increase the comparison of all the adjectives to the superlative degree, and you have the Winter Nelis as it exists in the South.

St. Germain.

Like the Chaumontelle, this is an *old* variety and as good as it is old. To immediately succeed the Winter Nelis we know of nothing better. Tree is a good grower, succeeding equally well on pear or quince, and bears young and profusely. Indispensable as an early winter pear.

Young Fruit Trees.

THE most vital period in the life of a fruit tree is during the first three years of its youth. It is then only when it can be properly trained, easily managed, and well protected. If—as many undoubtedly are—they are crammed hastily into small holes dug in hard soil, left without manure, permitted to be over-run with grass and weeds, or what is still worse, the ground persistently cropped with grain, is it at all surprising so many trees fail, and so many orchards are utterly starved? Treatment like this, is nothing but throwing away capital, with absolutely no prospect of returns. If, on the other hand, a few trees are well planted, in good deep rich soil, well pruned yearly, and kept clear of insects and worms, it takes but a few years to bring them into a productive condition, and *ten trees* well cared for, will yield five fold more than one hundred indifferently planted. The contrast between thrifty and unthrifty trees, stare us every where we go. We are astonished, after all the exhortations of the press to cultivators “*to take care of their fruit trees*,” to see how little heed the great mass give to it. Young trees must be well treated. *Plant less*, rather than more; always manure highly, and once each year examine the trunk and bark for worms. Precautions like these, demanding only a few moments time to each tree, are the *Alpha and Omega* of successful fruit culture. Care for your trees as well as for your children, and it will never be said of you

“He planted for his heirs,”

for your own hands will pluck the fair fruit that never would have come if the trees had been *left to themselves*.

Evergreens.

A GOOD coat of manure, applied every fall, as far out as the branches extend, will insure next season a deep glossy green to the foliage; the effect is sometimes so peculiarly ornamental, it seems as if the shrubs or trees were of a new variety. The Norway Spruce, we have often observed in some grounds, of a light, sickly green, while in other yards, it is of a fine deep color; the difference comes only from treatment, one is in poor soil, the other is in rich. Those who wish their Evergreens and shrubs to thrive and grow handsome every year, will not fail to remember this hint. Do not apply fresh manure, it should always be well rotted.

Select List, Best Varieties of Fuschias.

ARABELLA, white tube and sepals, with reflexed corolla, rich rose. The best early variety. Empress, an exceedingly graceful variety. Large, long, white corolla, crimson tube and sepals. First of the Day, finely expanded, lavender corolla, scarlet tube and sepals. *Lustre*, vivid crimson vermillion corolla; tube sepals waxy white, elegantly reflexed; good habit and free bloomer. Minstrel, pink tube, and sepals horizontally reflexed, rosy lavender corolla. Puritani, white corolla, carmine sepals. Rose of Castile, blush white carmine corolla. Souvenir de Chiswick. Rosy crimson tube, violet corolla. *Elm City*, sepals enclosing corolla forming rich crimson balls, and dwarf, compact habit. Grand Duke, bright crimson, reflexed sepals, violet purple corolla; large. *Marksmen*, tube and sepals, bright carmine, corolla very large and full double, finely expanded and flat, of a rich dark violet color; free grower, extra fine. Mastadonte, immense flower of globular shape, deep crimson sepals, very dark corolla. Sir Colin Campbell, scarlet tube, dark purple corolla. Symbol, crimson tube and sepals, the latter reflexed; creamy white doubled corolla; extra fine.

The Hanging Gardens of Babylon.

THESE have always been a mystery to all unacquainted with classical literature. It is generally supposed, that these hanging gardens are either large floating islands, full of verdure and bloom, or else some specimens of elevated gardening on the top of public buildings in some special quarter of the great city.

The real facts are these:

The great Babylonian king, Nebuchadnezzar, among other works to signalize his reign and promote peace, made Hanging Gardens. This work was undertaken to gratify his wife, Amyitis, a Median princess. Having passed her younger days in a mountainous region, she disliked the uniform level of the country about Babylon, and pined for the woods and hills of Media. The lofty rocks and various trees of this wonderful paradise were an attempt to imitate Median scenery. These gardens were high enough to overlook the walls of the city, and occupied a square four hundred feet on a side.

It has been a question how these gardens were supported at this great height, as it was, until lately, taken for granted that the Babylonians did not understand the principle of the arch. But it is now known that very perfect arches were built in Egypt, in Assyria and in Babylonia centuries before Nebuchadnezzar's time, and so the question is simplified.

The ancient Romans when they had to carry a stone aqueduct across a deep ravine, sometimes built three or four tiers of arches, one above another, till the required level to which the water was to be carried was reached. In the same manner, only on a larger scale, were the Hanging Gardens raised. They built one story of arches, covering the required space; on this was placed a second story; and thus was story after story raised. A great mass of earth covered the top, and water was supplied from the Euphrates through pipes.

Not only flowers and shrubs grew there, but trees of the largest size; some of them so large that their trunks, according to Quintus Curtius, were twelve feet in diameter. The ascent to the gardens was by steps, and on the way up, among the arches, were stately apartments, whose pleasant coolness, the heat of the climate could little affect.

Summer Flowering Bulbs.

By W. H. H. Pearson, in *Rural New Yorker*.

THE summer flowering bulbs are a very brilliant and beautiful class of flowers, and in comparison to many varieties of annuals, require but little care to produce fine flowers. The Anemone is the earliest. This is generally considered and is described in the catalogues as a hardy bulb, or more properly tuber, to be planted in autumn with the tulips, hyacinths, &c. But I have had the best success with these delicate and beautiful flowers when the tubers were left in a dry place through the winter, and planted in the spring in a

mixture of leaf soil and sand. In this latitude, from the middle of April to the first of May, is, I think, about the right time to plant the tubers.

The Anemone is a very curious and beautiful flower. The tuber, which, at planting, seems to contain about as much life as a dry stick, swells rapidly in moist soil, and soon a single deep green leaf appears above the ground. In a few days another leaf appears, and, after several have made their appearance, the large, green bud arises from the ground, in the midst of the leaves, in a very curious manner, and soon unfolds its truly splendid flowers.

The Anemone is rather difficult to raise, which is one reason why it is not oftener seen in the flower garden. When planted in the autumn, the tubers are liable to mold or decay, and when kept till spring, the ground often is not in a fit condition to receive them as early as they should be planted. But the great beauty of the flowers makes them well worthy of a trial, their cheapness places them within the reach of all, and, as Mr. Vick truly says in his catalogue, "those who succeed will be delighted." No bulbous flower ever gave me as much satisfaction as my first Anemone.

The Gladiolus is a very showy and beautiful flower, not, in my opinion, equal to the Anemone in delicacy and beauty, but of easier culture. The bulbs should be planted in rich, warm soil, about the time of year that the ground becomes warm enough to plant corn. The ground should be frequently stirred and the plants thoroughly watered in dry weather, or they may become injured or spoiled. The colors are very brilliant and the tall, branching varieties very showy. Among the varieties, *Brenchliensis* is of the richest imaginable scarlet, fine spike of bloom, early, and very desirable in all respects. *Couranti Fulgens*, brilliant crimson and good shaped flower; *Adonis*, rosy salmon; *Archimedes*, red, chamois and carmine; *Daphne*, cherry color, stained with carmine; *Diana*, white, flaked with dark red, and *Imperatrice*, white, tinted with carmine, are all very fine flowers. *Don Juan*, orange, lower petals yellow tinted, is a very fine variety, and I consider it one of the best. The spike of bloom is shorter than many varieties, but very compact, and the flowers large and well opened, and it is among the earliest to bloom. *Pellonia*, rose spotted with crimson, is a tall, branching variety, flowers large and splendid. *John Bull*, light sulphur; *Raphael*, vermillion red, shaded with purple; *Rebecca*, white, variegated with lilac; *Triumph d'Engheim*, rich, flame crimson, are all splendid varieties.

These notes were mostly taken last summer, from the middle of August to the first of September, when the flowers were in full bloom, partly from my own flowers and partly from others. Several late varieties did not begin to bloom until the middle of September, and were soon after destroyed by frost. The Gladiolus is very easily affected by dry weather, and many were entirely ruined last summer. With this exception, they are of the easiest culture, and when a little extra care is given them, almost always give good satisfaction.

Next to the Gladiolus, the Dahlia is the most desirable of the summer and autumn flowering bulbs, and is much more common in the flower gardens, though not as easy to raise; it should be started with artificial heat several weeks before the ground becomes warm enough for out-door planting. Those who live near a green-house can obtain good growing plants earlier than they can obtain them in any other way. Those who raise their own tubers, or buy dry ones in the spring, and have not the convenience of a hot-bed, can plant them in a box in the house, from the first of April to the first of May, in this latitude, or even later. As soon as the ground becomes warm enough, not generally much before the first of June, they may be carefully removed from the box to the flower garden. Very choice varieties may be planted in a large pot or box, and be allowed to remain and grow in it.

Before the frost kills the tops in autumn, three or four inches of dirt, fine chips or other litter, should be heaped around the stem to prevent its freezing too low down, and to protect the growing tubers from heavy rains and sudden changes, and as soon as the top becomes ripe or killed by the frost, the stem should be cut at the surface of this heap of dirt, and as soon as the ground begins to freeze, the tubers should be carefully dug and allowed to remain on the stem (not separated from it and from each other, as many do), and preserved through the winter in dry sand or moss. I think if the sand or moss is kept a very little damp the tubers will keep better.

Anemones and Gladiolus may be preserved in the same way. They should be looked at occasionally to see if they are keeping well. The tubers should not be separated from the stem until well started in spring.

The Dahlia is injured by dry weather nearly as easily as the Gladiolus. As to varieties, all the perfectly double, well formed flowers are beautiful, and many of the old varieties are too well known to need description. Many new and splendid varieties are introduced every year, and while some are improvements, some are no better than the older varieties. Mark Antony, moderate sized and very double flowers, variegated red and yellow, pleased me the most of any variety I have yet seen. The pure red, white and yellow are all fine, and the variegated flowers are very curious and beautiful.

The Amaryllis is a splendid summer flowering bulb, nearly equal to the Gladiolus, and in the estimation of many, much superior. The bulbs should be planted about the same time with the Gladiolus, and are of equally easy culture. After the frost has destroyed the tops, the bulbs should be placed in a dry cellar until spring. Amaryllis Bella Donna, or Bella Donna Lily, is white, flushed with rosy purple, and very handsome. *A. Formosissima*, or Jacobean Lily, is a finely shaped flower, velvety crimson, and is truly beautiful beyond description. *A. Lutea*, yellow flower, is a later autumn blooming variety. *A. Vittata* is white with beautiful red stripes, but is a more costly variety.

The double Tuberose is a pretty flower, but rather difficult to raise, as it must be started quite early in order to produce good flowers. The *Tigridia* is described as a beautiful flower, but though I have planted them several times, I never succeeded in making one bloom.

Hardy Climbing Plants.

From Report of Commissioners of Agriculture.

THERE are many situations in small gardens where it is essential to give variety by intricacy of parts, and where the limited space renders its accomplishment impracticable by the ordinary expedient of planting a border of trees and shrubbery, but which may be effectually secured by erecting a screen of trellis work to be covered with climbing plants.

To secure some degree of permanency in trellis work, cedar or locust posts should be used, and covered with laths, made smooth and thoroughly painted. What is called rustic work, for which many rural improvers seem to have a great *penchant*, is a very expensive ornament, requiring constant care in repairing, varnishing, etc., and after all, its rustic beauty is hidden in the twining foliage, which is frequently an improvement to the general effect.

Screens of trellis work for climbing plants, should be constructed with a view to architectural effect, if in proximity to buildings, divided into panels, by projecting piers, and the elevation relieved by moldings. A very appropriate division-wall, or fence between the flower and vegetable gardens, or for the purpose of defining any other portion of garden or lawn, may be formed by a low structure, as indicated above, the piers being capped and surmounted with vases. Much of the adaptability and propriety of this arrangement will depend upon its position and the manner in which it is connected with contiguous objects.

The following list comprises the best of hardy climbing plants, with remarks upon their peculiarities and habits of growth:

Trumpet-flower (*Tecoma radicans*).—This is a robust plant, and is fitted only for large arbors, or for covering walls. It is well adapted to plant against old or mutilated trees, such as are often present in old grounds, and they may be utilized by allowing this climber to cover their nakedness, and soften their rugged points. It produces a profusion of dense clusters of flowers, which are favorite haunts of the humming-bird; and it has the valuable property of adhering firmly to walls. It must however, be occasionally pruned, or it will, from its weight ultimately break down the overhanging branches.

Golden Bignonia (*Bignonia capreolata*).—This fine flowering climber is not so commonly planted as its merits deserve. It supports itself by tendrils and has great adhering powers; a very choice plant, nearly an evergreen.

Virginia Creeper (*Ampelopsis quinquefolia*).—Also called American Ivy. A well known plant of great beauty of foliage, more especially in Autumn. At this season it assumes a crimson shade which deepens into scarlet, producing a striking with evergreen foliage, as may be seen when it takes possession of the red cedar, a tree for which it seems to have a natural partiality. Its delicate tendrils clasp very minute projections, and hence it may

frequently be seen profusely covering brick walls. In such situations it is very liable to be blown down during storms, unless care is exercised in trimming and keeping the branches close to their support. This plant is eminently cleanly and neat, with leaves elegantly formed and of a shining green color during Summer. It is also of rapid growth, quite flexible and readily trained in any desirable position.

The Poison Ivy (*Rhus toxicodendron*) is sometimes mistaken for the Virginia Creeper, but they can be easily distinguished by the leaf. The Poison Ivy has its leaflets in threes, the Virginia Creeper in fives, the leaves of the latter being large, and the leaflets oblong.

Carolina Jasmine (*Gessemium sempervirens*).—Although this plant is tender north of Virginia, yet it succeeds in sheltered city gardens further north. It is one of the most attractive plants, with large yellow, fragrant flowers. In cold green-houses or conservatories, it is an admirable plant for twining around pillars and other supports.

The Pipe Vine (*Aristolochia siphon*).—In rock soils this plant will make a large growth, and cover a great extent of trellis in one season, producing leaves from ten to twelve inches in breadth, and of a vivid green color. In poor soil it is less beautiful in color, as well as diminished in size. It is liable to be infested by a large black caterpillar, easily destroyed, if carefully watched, before the plant is disfigured. The peculiar shape of the flowers gives it the name of Dutchman's Pipe, to which they have a very strong and remarkable resemblance.

The Climbing Bitter-sweet (*Celastrus scandens*) is a twining plant of much beauty, especially in autumn, when the orange colored capsules open, and show the scarlet seed covers; the vaccine-like clusters hanging like small bunches of grapes. It should not be planted near, or at least ought not to be allowed to twine upon any choice tree or plant. Its tough, twining stem clasps so closely as to interfere with the swelling of the bark; and instances have been observed where young trees have been so far cut through by the wiry coil of this climber as to kill the plant.

The Japan Honeysuckle (*Lonicera brachypoda*) is a more beautiful vine than the older known Chinese evergreen (*Lonicera Japonica*). The leaves of this species are somewhat larger, of a bright shining or glistening green color; flowers delicate and of sweet fragrance—there is no hardy trailing or climbing plant that can excel this as a covering for verandah pillars, arbors, or trellises. One of the most agreeable beds in a flower garden is a large oval figure rounded to a pyramid (by filling up with soil in the centre) and completely covered with this evergreen, for in such a position it is truly an evergreen, although it will lose its foliage in winter, when exposed on a high trellis. In order to produce the best effect in trellis work, it should be carefully trained, so that the branches may be regularly distributed over the entire surface to be covered. A regular system of winter pruning, which consists in removing all the young growth of the previous year, will keep a neatly covered surface. This surface will be supplied yearly with a graceful growth of young drooping and slender shoots. If the lower branches show diminishing vigor, they may be strengthened by pruning the upper portions of the plant during summer.

Chinese Wistaria (*Wistaria Linensis*).—A strong growing, woody climber, adapted for large trellises, or for twining upon trees. Its racemes of flowers are large and fragrant, and it will rapidly cover a large surface, if planted in a good soil and favorable situation.

Coculus (*Coculus Carolinus*).—A native climber, with ornamented fruit, hanging in clusters of a deep red, nearly scarlet color, and resembling a bunch of the common red currant.

Moonseed (*Menispermum Canadense*).—A small foliaged, delicate climber, producing clusters of black fruit in autumn.

For covering a large trellis, or an arbor, in a very short time, our native grapes are among the best plants, and where fruit is not an object of particular consideration, any of the varieties of the frost grape (*Vitis Cordifolia*) will be preferable to those of the larger and coarser fox species.

Ivy (*Hedera Helix*).—This fine evergreen climber requires to be planted on a northern aspect. It adheres readily to a tree or stone wall, but requires a slight support against a brick structure, at least until it becomes well established. The dryness of our climate prevents it from clasping to walls with that tenacity for which it is famed in Europe. There are many varieties in cultivation, having great diversity of foliage, the most beautiful being variegated with white and yellow.

Notes for Cottage Gardeners.

New Varieties of the Achryanthus.

THE *Achryanthus* is one of our best bedding plants, and especially desirable in combination with other plants of lighter colored foliage; is not quite as showy as the *Coleus*, but hardier; can be transferred from the open garden to indoors, the sitting room or conservatory, and will preserve its distinctive ornamental character throughout the year. The old, well known variety of the *Verschaffeltii* hardly needs our special commendation. Foliage is brilliant carmine, shaded a trifle toward a dark crimson, and attains a height of eighteen inches. The best new varieties are the following:

Acuminata—foliage, dark bronzy green, ground color, with rich reddish crimson mid-ribs and veins: very conspicuously marked: has a dwarf bushy habit and compact style of growth.

Lindenii—the foliage is of a rich dark red color, each leaf having a conspicuous amaranth mid-rib. It is admirably adapted either for ribbon gardening, or sown on the edgings of flower beds, its rich and attractive foliage always producing a striking effect.

Portulacas.

The contrast between the old common single flowered *Portulacas* and the new double flowered of the present day is almost without comparison, the latter being exceedingly showy, vigorous and abundant in bloom. The seeds have been somewhat scarce, but this season are probably plenty.

Portulaca Grandiflora fl. pl., or Double Flowering *Portulaca*, means a selection of seeds of best double varieties of all colors. Scarlet, crimson, white, buff, yellow, and intermediate shades of most brilliant hue; many will produce double flowers of one to two inches in diameter, somewhat resembling small roses.

The *Portulaca* only needs a warm, sunny spot in the garden border. Sow the seeds shallow, keep the weeds constantly pulled, and in July our lady readers will have a bed worthy of pride.

Best Geraniums.

We have seen nothing yet among the new varieties so likely to give general satisfaction like the two following, well known as they already are:

Mrs. Pollock, of strong robust habit, its green leaf disc being overlaid with a bright bronze red zone, belted with crimson and edged with golden yellow. When well arranged in masses, or still better in a ribbon bed, with a back ground of showy *Coleus*, it is especially entitled to our admiration. During the hot months of July and August, it loses color to some extent, but in the early summer, or, again, in the late fall months, it recovers its brilliancy of coloring, and displays a peculiar richness and beauty. Flowers of a dark scarlet color, in good sized trusses, borne on short foot stalks but a few inches above the leaves.

Mountain of Snow Geranium.—This, too, is old and well known, but better liked every season. Growth very vigorous, retaining its characteristic variations of foliage during the entire summer in even the hottest and driest seasons; foliage distinctly marked with broad silver edge. As a bedding plant it is unexcelled in contrast with the *Coleus*. It is even more startling than the *Mrs. Pollock*; succeeds also as a pot plant either in the window, garden or conservatory.

Salvias.

The following comprises the names of all varieties now generally grown in this country, and obtainable from almost every prominent nurseryman. They are so easily grown, and in early autumn make the garden so gay with their long slender spikes of brilliant crimson bloom, we would like every beginner in horticulture to make room for one or more of these varieties in the best part of his garden.

Salvia Splendens, a plant of extraordinary beauty, displaying in late summer a profusion of large scarlet flowers in spikes, which continues until cut down by the frost. The plants grow to the height of two and a half feet, and are quite bushy; in many locations hardy enough to stand the winter, but sometimes tender. Is the best and most brilliant of all the old varieties for general use.

Salvia Splendens Gordonii, a dwarf variety, with dense spikes of the most brilliant scar-

let crimson flowers; in bloom from July until frost, and if lifted and potted before frost will flower finely in the green house until Christmas.

Salvia Fulgens, flowers, rich crimson, in spikes six inches in length; blooms also during the winter months; foliage peculiarly variegated, but very beautiful; grows two feet high, a little tender, and not quite as free a bloomer as the *Splendens*.

Salvia Patens, used as a contrast to either of the above, the flowers being large and of an exceedingly rich shade of blue; flowers rather sparingly in the border; a green house plant properly.

Salvia Grahamii Ppurata, a winter blooming variety of dwarf habit; flower spikes six inches in length of a deep purple crimson, a color very scarce in winter flowers.

Salvia Leucantha, a winter flowering variety; very small foliage and slender shoots; flower spikes six inches long, light blue, with white lip.

Salvia Patens Alba, habit like the *Patens*, and flowers same shape; color of the purest white.

Salvia Officinalis Tri-color, a variegated variety; leaves green and white, beautifully shaded with pink, changing to purple.

Salvia Coccinea, good for beds and borders, is raised easily from seeds; grows one and a half feet high; bears small scarlet flowers in spikes; in bloom most of the season.

Salvia Roemeriana, a new dwarf crimson variety from South America, one and a half feet.

Salvia Pumila, a dwarf, dark red variety, very compact, one and a half feet.

Salvia Graciliflora, flowers of rose lilac color; very delicate.

Salvia Amabilis, lavender blue, two feet.

Salvia Argentea, large silvery foliage, two feet.

Salvia Aurea, yellow, two feet.

Salvia Hilleana, blue and white, three feet.

Salvia Japonica, a fine, dark red foliaged species with long spikes of dark blue flowers, sweet scented.

Salvia Russelliana, beautiful sky blue.

Salvia Hornienum, purple.

Salvia nana compacta, scarlet dwarf, only three-fourths of a foot high, very fine for bedding or groups.

Salvia bi-color, blue and white.

Salvia punicea nana, scarlet dwarf, eighteen inches high.

Salvia Gesneriflora, fine scarlet.

The *Salvias* need only any light rich soil, and will grow freely if well planted. As most of them are tender the plants should get a good start in the hot bed, and not be planted out before the weather is warm. In our Northern climate sowing the seed will not always prove favorable, but in warm locations, well protected, or in warmer latitudes there is little difficulty, but in general they are of easy culture south of latitude 44°.

Shall we Prune Close or Not?

English gardeners are discussing the question of restriction or extension in pruning; in other words, whether plants shall be pruned close or allowed more perfect development. The *Gardeners' Chronicle* maintains that "the rule of retaining and encouraging every inch of foliage, that light, the life of plants, can act upon, is the right one, and if we wish to regularly increase the vigor of our plants it can only be accomplished by a yearly increase in the respiratory and elaboratory organ of the plants, viz, its leaves." In confirmation of its position, it cites two fine illustrations.

One of the first gardeners in England wrote: "I have long been wavering between restriction and extension in plant management, and it was not until to-day that I was convinced that the doctrine of restriction is untenable, and will not hold water. In the flower garden here is a long avenue of roses, one row of which has had the shoots trained at nearly full length in the pendant manner, while the other has been pruned upon the strictly orthodox manner of close spurring. The trees had been planted at the same time and in the same soil, and about twelve years ago; but in taking them up to make way for

more modern kinds, I found those of extended growth had extended roots, and stems as thick as my arm, while the restrictive pruned plants had restricted roots, and stems scarcely large enough for a broom handle. Hence, I say, farewell to restriction, except where necessity enforces it."

Another writer startled us with the abrupt ejaculation, "Did you ever see a Maréchal Neil Rose with a thousand flowers upon it? If you have not, make a pilgrimage to Wollaton Hall. This plant, which is a standard upon the Brier, was planted a dormant bud three years ago last October. It is growing up an iron column about twelve feet high, it then divides, and is trained along a wire eighteen feet on each side the column and nearly ten feet another way, the blooming branches depending in most graceful festoons, forming a floral gem such as perhaps no other conservatory in England can boast of. Gloire de Dijon, and Climbing Devonensis, are not less vigorous and beautiful. Now these Roses scarcely know the pruning knife. The most they get of it is to cut away rude growth in the summer, and remove the immature points of the shoots at the winter pruning." We commend the attention of the restrictive advocates to these facts.

Persian Roses.

Persia is the very home of the Roses, and Eastern travelers have often referred to their wonderful profusion, especially in cultivated gardens. Sir Robert K. Porter, speaking of one of the royal palaces of Persia, says: "On my first entering this bower of fairy land, I was struck with the appearance of two Rose trees, full fourteen feet high, laden with thousands of flowers, in every degree of expansion, and of a bloom and delicacy of scent that imbued the whole atmosphere with exquisite perfume. Indeed, I believe that in no country in the world does the Rose grow in such perfection as in Persia; in no country is it so cultivated and prized by the natives. Their gardens and courts are crowded by its plants, their rooms ornamented with vases filled with its gathered bunches, and every bath strewn with the full blown flowers plucked with the ever-replenished stems. * * * But in this delicious garden of Negaaristan, the eye and the smell are not the only senses regaled by the presence of the Rose. The ear is enchanted by the wild and beautiful notes of multitudes of nightingales, whose warblings seem to increase in melody and softness with the unfolding of their favorite flowers. Here, indeed, the stranger is more powerfully reminded that he is in the genuine country of the nightingale and the Rose."

Sir William Ouseley accompanied his brother, the ambassador, on a visit to a man of high rank, at Teheran, and though there was a great profusion of meat and fruits at this entertainment, "it might," he says, "have been styled the Feast of Roses, for the floor of the great hall, or open fronted *talar*, was spread in the middle, and in the recess, with Roses, forming the figures of cypress trees. Roses decorated all the candlesticks, which were quite numerous. The surface of the *hawz*, or reservoir of water, was completely covered with rose leaves, which also were scattered on the principal walks leading to the mansion.

The surface of the reservoir was so entirely covered with rose leaves that the water was visible only when stirred by the air, and that the servants, during the entertainment, were continually scattering fresh roses both upon the water and the floor of the hall."

A festival is also held in Persia called the *Feast of Roses*, which lasts the whole time they are in bloom, in honor of which the poet writes:

"And all is ecstasy, for now
The valley holds its Feast of Roses;
That joyous time when pleasures pour
Profusely round, and in their showers
Hearts open, like the season's Rose—
The floweret of a hundred leaves,
Expanding while the dew-fall flows,
And every leaf its balm receives."



Editorial Notes.

Rose Hedges.

A CORRESPONDENT of the Florist and Pomologist constructed five Rose Hedges across one of the divisions of the kitchen garden, intending them for shelter and ornament. One, in particular, was planted with varieties of Noisette Roses, of which he observes: "Fellenberg is one of the best of all the Noisettes, for it is in flower all the summer and autumn, and its color is dark and fine. Mixed with other sorts, such as Aimée Vibert, Compacta Floribunda and Ciline Faresties, a fine effect is produced. A rose hedge formed of these Noisettes round rosaries, in pleasure grounds, or in even in kitchen gardens, will be found to yield one of the most pleasurable sights imaginable."

Geraniums.

A CONTRIBUTOR to the Country Gentleman, gives the following list of best varieties of the different classes of Geraniums:

ZONALE GERANIUMS.

White Perfection, pure white.

Christine, fine rose color.

Wiltshire Lass, bright pink.

Graf Bismarck, blue carmine, new color, rare.

Prince of Wales, salmon, tipped with white.

Crusader, crimson scarlet, white eye.

Leonidas, dazzling scarlet, immense flowers.

Madame Werle, white, pink centre.

Madame Rudersdorf, bright carmine, white margin.

Helvetica, velvety red, white centre.

Lord Derby, intense scarlet, the best Zonale.

Incomparable, clear salmon, striped with white.

The Double Geraniums are well worthy of attention; they do not drop their leaves; are as double as roses, and very great additions to every parterre. *Gloire de Nancy*, is a bright carmine; *Andrew Henderson*, deep scarlet; *Capt. Le Hermit*, rose, tinted with amaranth, very double; *Madame Lemoine*, bright rosy pink; *Madame Charmeux*, brilliant scarlet, Tom Thumb habit.

Hybrid Perpetuals and Fragrant Geraniums.—Six best sorts: *Graveolens*, *Malvæfolium*, *Touchstone*, flowers crimson and violet. *Prince of Orange*, white, spotted with maroon. *Cardinal Richelieu*, scarlet, crimson spot. *Diadematum*, bright rose.

New Strawberries.

We observe a growing disposition among our horticulturist and amateurs to submit new seedlings to the test of at least three years in different soils and climates before being introduced to the public. J. F. Turner, of Moorestown, N. J., who has originated some very fine seedling varieties, desires to submit his to this role. Mr. Durant, the originator of the Late Prolific Strawberry, has decided to retain his seedling for several years longer, and the same may be said of quite a number of other cultivators. This is right, and we count it a healthy sign of horticultural taste and judgment. If the fruit is good, it will bear a test of several years, and come forth more highly honored than ever. And there are double chances of endorsement and success. If it does not stand the test should it ever be offered to the public?

Thinning Fruits.

D. T. Fisk writes the Florist and Pomologist a few simple practical rules on thinning fruits.

"A fortnight or three weeks after the fruit is set is a suitable time for the first thinning; a second might take place in another fortnight; and the third, or final one, should be after stone fruits are stoned, and when apples and pears have grown to about one-sixth of their full size. No set time can be laid down for the process. The size and condition of the fruit determines the time. And it is safest not to thin severely until the natural period, when each fruit tree throws off its superfluous fruit has passed.

As to the manner of thinning, nothing can well be more simple. With the fingers and thumb nail as the handy instrument of the eye, go to work upon the trees as soon as the fruit is fairly and thoroughly set. Remove every ill-formed and badly placed fruit, and thin the thickest of the clusters where the young fruit is crowded together.

At the second thinning, reduce them again by one-half, and if the clusters are placed closely together, only one should be left to each at the final thinning. The largest should be invariably chosen to remain, provided their form is perfect and their position good.

He that grows small fruit grows trash, it is said. Stone, seed, anything, everything but good, sound flesh or pulp. Fine fruit is much more easily gathered and stored, and more pleasing to the eye than small fruit. Surely more need not be added in favor of prompt, vigorous and thorough thinning. It preserves the health and husband the strength of the tree, guides the vital force into the most useful channels, and enlarges the size, improves the quality and enhances the value of the fruit."

Dwarfing Trees.

A FOREIGN correspondent of the Boston Traveler relates with how much curiosity he witnessed some remarkably successful specimens of dwarf trees in Japan.

I have seen in the gardens, more especially those about Owari, a maple, a pine, a peach and a camphor tree, all more than fifteen years old, with their limbs, leaves and trunks as perfect as any in a forest, and all grew from a box not a foot square, and not one were over two feet high. The trunks looked like old trees, and the limbs were gnarled and rugged as the mountain tree of the same kind. The owner told me that these trees would grow no larger for fifty years. In one garden there was a complete fruit orchard in a box four feet long and two feet wide. Pears, peaches, plums, apples, oranges, lemons, olives, bananas and cherries, represented by perfect trees, the tallest of which was not over three feet. Whether these ever bear fruit I failed to ascertain; neither could I learn the process by which the tree is kept so small. But I am satisfied that it is done by killing a large tree and keeping a sprig, which starts from the old root for the dwarf. The climate and soil favors this torturing process, for a root will not die as long as it remains undisturbed in some localities. I saw great trees near the gateway of a temple yard at Sinara, which were bent over making a large circle like the curls in the pipe of a bugle. It must have been bent around something, fifty years ago. At another place a large oak tree was bored out from the joint of two limbs near the top to the roots, and a magnolia tree set out down in this hollow, which grew up inside the oak until it spread out its branches in the top, making of it an "oak magnolia." This tree has been spoken of by Japanese writers in native newspapers as an oak tree with a magnolia graft upon it. The system of grafting is carried to great perfection, and if they would introduce a larger variety of fruit trees they would find it very profitable. Yacca said that they successfully graft orange into apple, and pear into cedar (which seems almost impossible).

Japan Lilies.

THE Japan lilies are unsurpassed by any flower which is cultivated; they are very easily propagated, and deserve a place in the smallest garden. Even amid New Hampshire's granite hills, they will live out of doors. A rich loamy soil, mixed with sandy peat, is their favorite compost. These lilies can be grown in pots by those who have no open air gardens, with very fine effect. Twelve-inch pots will hold three good-sized bulbs. A white, pink and crimson bulb will make a good contrast. Purchase a supply of compost or cocoa fibre when you buy the bulbs; plant them in this, and give no water until the leaves appear; they should then be watered sparingly, as the most important prelude of success is to *grow them slowly at first*. As the flower stalk appears, they will require more water, and a slight mulching with charcoal dust will greatly increase the beauty of the flowers. By the last of July or the first of August, they will be a great ornament to boudoir or dining-room. Every night they should be placed out of doors to receive the refreshing dews. The trouble needful to cultivate them will be fully repaid by their brilliant and dazzling flowers. Those grown in the garden are much improved by a mulching of moist manure during the heat of July. Our summers possess such scorching heats, that most of our plants are improved by this process. Many object to it on account of the littered appearance of the flower beds, but this is obviated by

using charcoal dust, which not only retains the moisture, but also fertilizes the soil, enhancing the brilliant coloring of many flowers.

Lilium candidum, the tall white lily of our gardens, is a general favorite. Many a country garden is beautifully adorned by this stately and deliciously fragrant flower. Its cultivation is exceedingly simple; it increases by offsets. These lilies look best when grown in clusters, each bulb one foot apart, and the flower stalk should be tied to a stake. Every three years the offsets can be removed from the parent bulb.—*Country Gentleman*.

California Raisins.

A CULTIVATOR says: Raisins are produced, but are not very remunerative. I found that one vineyard I visited of about twenty acres, realized only a little over \$4,500. The Muscat of Alexandria, a grape excellent for table use, gave a profit of \$160 for two acres and a half, but this is more profitable than wheat at 1½ cents a pound.

Coboea Scandens—Climbing Vines.

NOTHING can be more graceful and beautiful than a really fine climbing plant; to the impatient none can exceed the *Coboea Scandens*. It is as easy of cultivation as any plant can be, all it requires being heat and water, with a rich soil. It is a very rapid grower, thriving and blooming magnificently in the hot sun of the summer. In one season it will literally festoon and drape doors and windows, growing from the pot it is sown into the ceiling in an almost incredible short space of time. It has such clinging tendrils that it will attach itself to anything and everything in its way.

The Wandering Jew, although common and easy of culture, is like many other things, none the less beautiful for its commonness. It makes a most luxuriant decoration for a hanging basket or screen for any unsightly place.

American Entomologist and Botanist.

THE new Botanical department, edited by George Varey, is excellent indeed. We observe the Entomological department is unusually copious and well sustained by frequent contributions.

Delaware Fruit Crops.

THE Strawberry crop of 1870, amounted to nearly 800,000 quarts. The crop of Peaches is estimated at 1,350,000 baskets. In proportion to area, no State has so large fruit interests as Delaware, and in no part of the country are market facilities so excellent. Besides the Peach, Delaware has not devoted special attention to other orchard fruit until lately. The Pear succeeds there with such remarkable thrift that it will become in time a crop hardly less important than the Peach. All kinds of small fruits are abundant, and, in ordinary seasons, quite profitable.

Mulching Bearing Fruit Trees.

THERE is no doubt now by our most intelligent horticulturists about the practical advantages to be gained by mulching the surface of the orchard and fruit garden. This should be more generally practiced in fruit producing districts, for it is the least expensive and most effective method of protecting the fruit trees against the bad results often following the frequent and sudden changes of temperature during the summer and fall months, when the surface of ground is left exposed to the direct rays of the sun. Again, when the mulch is put two or three inches in thickness, the surface soil is constantly moist and loose, even when no rain falls for a term of several weeks, and the trees or fruit receive no check for want of moisture and food under such circumstances.

My method is to cultivate the spaces between the rows of trees in the orchard, using a small one-horse plough and cultivator, running not more than two inches deep, during the early part of the season. From the first of July I have put on a heavy coating of salt hay, covering the surface as far as the branches extend. After this there is no more trouble with weeds and grass. There may be a few scattered ones start up, but they are easily destroyed.

Every fruit-grower knows that two or three weeks before the time of gathering the main crop of fruit, fine specimens are constantly falling off or blown off by strong winds. When the ground is mulched the majority of species are not bruised or injured for sale. This saving alone I consider pays me for the trouble of mulching the orchard.

There is only one serious drawback to the application of mulch, that is the danger of the hay or straw getting on fire when rendered dry by continual warm weather.—*P. T. Quinn in N. Y. Tribune*.

Pear Blight.

WILLIAM SAUNDERS writes a Maryland correspondent of the best way to treat his Pear trees. All observations prove, however, that luxuriant growing trees, or rather those that make a late fall

luxuriant growth, are more liable to blight than are those who mature their growths perfectly before winter. Whether your trees were rendered more liable by their manuring you gave them, is a question worthy of investigation. I think it quite probable.

I have learned to be careful with regard to a very strong growth. I have abjured all summer pruning or pinching in any shape, as I found but little, if any benefit from it, so far as encouraging fruitfulness, and it certainly tends to late secondary growths which do not become thoroughly ripened. Even winter pruning is apt to encourage a heavy growth of young wood, which prevents the formation of fruiting spurs on the branches. I have, therefore, in a great measure, abandoned pruning of any kind, at any season, only doing it so far as thinning out the branches. One rule I now strictly follow with all trees that bear fruit, and that is, never to cut back a leading branch either summer or winter—that is, I never cut back or stop a shoot; as already mentioned, I thin out when necessary, and I do that at any convenient season, but prefer winter, because I get a new shoot from the cut part, which takes the place of the one cut out, and enables me to cut out other branches that lose their fruiting spurs on the lower portion of the stem. This is analogous to the renewal mode of grape pruning. Were the trees in an orchard standards, say 18 or 20 feet apart, and dwarfs say 12 to 14 feet apart, I think I would not prune at all. When once the tree was fairly started with a good head, *let it grow*; of course, the fruiting spurs would always be most plentiful near the extremities.

I also have, in a great measure, refrained from cultivating or working among the trees. This, however, I would always regulate according to the wants of the trees. So long as they made moderately good growths, I would keep the orchard in grass, but would consider it quite good treatment either to manure on surface, or break up the ground when trees became stunted, or failed to make a healthy growth.

I have now great faith in washing the trunks of the trees with a mixture of lime and sulphur. I place a peck of lime and two pounds flour of sulphur in a vessel and slake it with water, same as for a fence wash. If the white color is objectionable, it can be colored.

The blight being a fungus growth, and lime and sulphur being certain destruction to "fungi," I am hopeful of success by its use on the main trunk and principal branches of the tree. We can all notice that trees around hotels and taverns that have been whitewashed for years preserve a clean, fine bark, and we know that it cannot injure the tree, as the outside bark is not vital to the plant. I have stopped the spread of the blight on the bark by this mixture, and it may be that we will find it a good general practice.

Cause of the Yellows in Peach Trees.

MR. SAUNDERS also advances the following opinion concerning the "Yellows," which so well tallies with the experience of every intelligent cultivator we have ever met, that we think the real cause is discovered at last.

"I am clearly of the opinion that the great drawback to the peach is that it very seldom has a chance to fully ripen its wood. I mean that it grows so continuously, and sometimes very luxuriantly, until its foliage is suddenly destroyed by frost. There is no gradual change of color in the foliage during autumn, followed by natural fall of leaves before cold weather, as we see in most other trees, but, on the contrary, the trees maintain their *green* foliage, and pushing out young leaves, until a severe frost occurs and completely checks growth. This sudden check and its effects upon the vitality of the plant, produce, in my opinion, the disease called "yellows." I have long held this opinion, and have many facts to bear out the supposition.

It is evident that the culture given the peach, at all events, after ripening of the fruit, should not be of a character to encourage wood growth. It might not be advisable to allow weeds to grow, but I doubt whether there are many cases where anything more than mowing the ground over to destroy weeds, is required after the crop is gathered."

And as to whether plowing should be necessary in early summer or not, I would be guided by the appearance and general health of the trees. While I am not prepared to advocate laying down peach orchards in grass, I would certainly not cultivate among the trees with anything beyond a common hoe harrow, merely to stir the surface and prevent growth of weeds, without disturbing or breaking the surface roots."

Washing the Bark of Trees—a Timely Topic.

If it has not been done before, no time should now be lost in washing the trunks of all fruit trees with some solution to soften the bark, destroy insects which harbor under its rough surfaces, and thus enable it to perform its office in the circulation of the tree, by admitting the descent of the sap. Where it is scaly, hard and impenetrable, as we often see, especially in old trees, this sap is impeded in its course, and becomes congested, an unhealthy condition of the tree results, and the fruit is knotty and imperfect. Insects also are much more liable to attack both tree and fruit, in an unhealthy condition of the bark, or indeed of any other of its important organisms.

On the farm no cheaper and more effective remedy is at hand than a mixture of equal proportions

of soft soap and lye. Give one or two applications, according to circumstances, to the body of the tree, as high as one can reach, and to where the branches fork. One pound of potash dissolved in a gallon of water will answer the same purpose. Apply with a whitewash brush, and in *hard* cases we have often used a hand-scrub. The bark of a tree should be soft and pliable, so as to be easily indented with the finger nail. Avoid whitewash in all cases, not only as a matter of taste, conveying the idea of whited sepulchres and graveyards to an orchard where there should be only the most vigorous life, but also because in our observation it makes the bark hard, when it is wanted to be softened. It should certainly be borne in mind that no tree can bear fine and perfect fruit which will sell well, if it is unhealthy or unthrifty from any cause. Vigorous, healthy life, constant thrift, should be the watchword for fruit trees; and this requires the unremitting care of the fruit grower. The time has gone by when, as in the early settlement of the country and with a virgin soil, vegetation of any kind will take care of itself.—*Practical Farmer.*

New Varieties of Phlox.

THE following new varieties have appeared in England, and from a description by a contributor to a foreign horticultural journal, seem worthy of introduction here by our florists.

Phlox stolonifera is now a dense mass of flower, and is certainly one of the best alpine Phloxes. It requires no care in its cultivation, for it creeps steadily over the ground, rooting as it goes, and soon forms a complete carpet of soft green foliage, which is smothered with purplish rose-colored flowers from the middle of April to the end of May. These are produced upon stems about 4 inches in height, and generally number from five to eight flowers upon each. It frequently flowers again in the autumn, but not so freely as in the spring, and I have seen flowers at intervals during the whole of the summer. *P. subulata* var. *frondosa* is very distinct in character from the one just mentioned. It forms large cushions of moss-like foliage, of a bright green color, which is now completely hidden by its flowers. It grows very rapidly, and good plants planted now will form tufts at least a foot across, and from 6 to 8 inches in height. The flowers are of a bright rose color, with a conspicuous dark eye; these are produced close to the foliage, and in innumerable quantities. *P. Nelsoni* is another beautiful variety, and a charming companion for either of those mentioned. It is supposed by some to be a variety of *subulata*, but I am inclined to think it is a near relation of *P. nivalis*. It grows very freely in light sandy soil, but is subject to injury from drought. I find large stones placed close to the plant of great service, for they help the soil to retain the moisture, which is very essential to many plants of this character, and there are many more of these alpine plants which will not grow without this assistance. The flowers of this variety are of a pure white color, and I think, if possible, are produced in greater profusion than in any other of this class.

The Catawissa Raspberry.

THE Germantown Telegraph in commending this variety, says: "We raise only the late crop because we have plenty of other raspberries at the usual time of ripening of the summer crop, and we get a better crop by allowing the whole strength of the roots for the late one. We cut down the canes close to the ground the last of November, and apply to the stools a good coat of manure, which in the spring is forked-in. The fruit with us begins to ripen about the 20th of August, and continues to furnish a supply until checked by the frost, but commonly all *through October*, and on more than one occasion up to the *twelfth of November*. About thirty stools, the canes being planted three feet apart on a single line of trellis, (which we prefer,) are sufficient for a moderately sized family.

A New Beet.

WE would call attention to the new variety called "*Dark Red Early Egyptian Beet.*" It is said to have been introduced from Egypt, is quite tender, excellent in quality, very deep red, flat as a turnip, and exceedingly early. A cultivator at Newark, N. J., found it a week earlier than the Early Flat Bassano, and esteems it the most profitable variety now grown.

Pruning Raspberries.

WE set in the fall or spring only young fall layered plants, being careful to spread out the roots and have the germ up, and covering with about an inch or two of well pulverized soil. On the rich prairie soils of the West they should be set at least eight feet apart—the rows, and in the rows five to six feet; with us here we advise seven feet, and in the row three to four. When they get such a growth as to interfere with cultivating, we clip them off to within a foot or 18 inches of the crown with any sharp instrument. Keep them well cultivated and hoed, and if by fall they throw out a large quantity of side branches, trim them back to within a foot of the main stalks.

Don't rely on as large a crop of fruit the *first* bearing season, for if you allow them to bear too heavily, you make the plantation much shorter lived. Let the roots get *well established*, and you may then rely on a good, profitable plantation for a number of years.

The second season, and each season afterwards, nip the new growth at the extremities when it

gets two to two and a-half feet high. If more than four stalks come up, cut out the overplus, and as these throw out side branches, nip them off also when they get two to two and a-half feet long, and not allow any stalk to run up perpendicularly over four to five feet in height. If this nipping is well attended to, the bush will become very stocky and require no staking. Keep well cultivated, and in the course of winter throw a large forkful of coarse litter close around each plant. As soon as they are through bearing each year, trim out all the old wood, throwing it into every fourth row, from which it can be carried out with manure forks.

All that is necessary for our inquirer to do is simply to trim out all stalks but four or five of the strongest. Cut these back to four or five feet, and "head in" the side branches to 18 inches or two feet in length, and give his bushes a good heavy mulching of straw or any coarse material—not for the purpose of enriching his soil—but more particularly to keep moisture about the roots, so that they will not be effected by the drouth and dry winds of summer.—*By A. M. Purdy in Am. Farmer.*

Experience with Peas.

THE gardener of the Illinois Industrial University, makes the following notes concerning Peas the past season: "There are eight varieties of peas now growing in the market garden—Dan O'Rourke, Early Kent, Caractacus, Tom Thumb, McLean's Little Gem, Brown's Early Dwarf Marrow-fat and Champion of England. It is difficult to find a pea that combines good flavor and large pods with early maturity. The nearest approach to such a pea we have, are McLean's Little Gem and Early Tom Thumb; they are dwarfs, neither exceeding a foot in height. There is but little difference between them, the first being two days earliest, and we think sweeter. Seed sown April 12th, ready for use June 7th. The very earliest is Caractacus. It is a stranger among us, but is well worth a trial; height 12 to 18 inches; pods well filled but rather short; a good bearer; flavor medium. Planted April 16th, fit for the table May 28th—42 days. Next in season, Early Kent; a good, old pea hard to beat; height 18 to 24 inches; pods and flavor medium; a good bearer. Sown April 10th, ready for use June 1st. Next, Dan O'Rourke, an old favorite and still a good standard variety; height 2 to 3 feet; profuse bearer and good flavor. Sown April 9th, fit for use June 9th."

A New Currant.

A CORRESPONDENT of the Country Gentleman, writing from Illinois, says: I have something new in the currant line. In the fall of 1857, A. Barker brought from the Rocky Mountains some currant seed, two kinds, black and red; the paper that contained them was stuck together as the currants were rolled up in the paper. I planted the seed the same fall. They now, at this date, stand six feet and six inches high. Canes grew in 1869 from the previous year's growth four feet and six inches high; they are now in good condition, with a large quantity of fruit hanging on the bushes, about double the size of ordinary currants.

Slow-Fruiting Trees.

It is a common belief that dwarf pear trees come into bearing earlier than the standard. With us this has not been the case. Our standards are equally as early. We have several varieties of standard that commenced bearing the second year and have borne ever since. We have dwarfs planted from four to fourteen years that have never borne a single specimen. We have other dwarfs that fruited the second year and then stopped. We have the standard Buerre d'Anjou, planted in 1858, and for two years only have given us a few specimens.

We have been often asked of late if we were not tired of dwarfs and had changed our opinion about them, and our answer has uniformly been in the negative. We think as highly of them now as we ever did, but we should not plant them promiscuously. We would not select many varieties, as some never bear at all, and others give but poor satisfaction. The list published periodically in the Germantown Telegraph, is selected from an experience of twenty-five years, and can scarcely be improved on. We shall continue to cultivate dwarfs along borders and little spare spots where a standard would be too large, and give them the same care that we would a crop of cabbages; but we shall set out only such varieties as have proved to be long-lived and productive. But where room is abundant and the object is profit, we should certainly grow standards in preference, and it needs no argument to prove their superiority.—*Germantown Telegraph.*

The Salix Laurifolia.

AMONG all of the willow family none make more beautiful trees when clipped in form than the laurel-leaved. Its foliage is large, deep rich and glossy green, and if cut back each year so as to make it form a bush or round-headed tree, it is one of the best of ornamental trees for lawn or small grounds.—*Rural New Yorker.*

Nicanor Strawberry.

A BOSTON correspondent of the Gardener's Monthly says: "The only strawberry I had freely in bloom on the first of May, was the Nicanor, which shows it to be a very early sort, supposing that early blooming and early fruiting go along together."

Rocky Mountain Currant.

L. EASTERBROOKS, Will Co., Ill., writes the Rural New-Yorker, June 4th:—"In the fall of 1867, I have planted in my garden the seed of a Rocky Mountain Currant. At this date one of them is over seven feet high. I planted both red and black currants. This is the first year of their bearing fruit; the fruit is more than double the size of our ordinary garden currants. Canes grew in the year 1869 four and one-half feet. They are a great curiosity, and are exciting quite a currant fever here. Nothing of the kind has been seen by our oldest settlers here. The borer has not, as yet, troubled them; they stand within twenty feet of our common currants, which the borer is slaying right and left. If the fruit proves to be of good quality, out of the garden go all other kinds of currants."

The Everbearing Strawberries of Mexico.

DR. SPRUCE, the great South American traveller, tells us in his notes, of the characteristics of the true Everbearing Strawberries of the Mountains of Mexico and the Andes, and as it is now a subject of interest with special reference to the plants recently advertised in the West, we quote the passage entire for the benefit of the lovers of Horticulture and Botany.

"The 'Everbearing Strawberry,' from the highlands of Mexico, is doubtless one of those varieties of *Fragaria vesca* commonly cultivated throughout the Andes within the tropics, where the perpetual spring of that favoured region has had the effect of rendering the Strawberry perennially fruitful, and many of the deciduous-leaved trees of Europe evergreen. In the Equatorial Andes the province of Ambato is famed for its Strawberries, which equal in size and flavor some of our best varieties, and which are to be seen exposed for sale in the market place of Ambato every day in the year. They are cultivated at an altitude of from 7000 to 9500 feet above the sea, where the mean temperature of the year ranges between 59° and 67°; but the best are grown a little way out of Ambato, as you go towards Guayaquil, on the slopes of Guachi (lat. 14° S.), at near 9000 feet, and in a mean temperature of 60°; where, however, the thermometer does sometimes descend to the freezing point in the early morning, perhaps half-a-dozen times in the year, and scarcely ever on two successive days. Down-right rainy weather is almost as rare as frost, and the climate is, on the whole, dry. The soil is entirely derived from matters ejected by the adjacent volcanos, and consists chiefly of loose sand and baked mud, to appearance almost utterly sterile, but by the aid of irrigation it is rendered exceedingly fertile, gardens, corn fields, and meadows meeting the eye on all sides, wherever water can be thrown over the soil. From the main 'acequia,' or watercourse, water is every day turned into the furrows that alternate with the rows of Strawberries, or Maize, or Alfalfa (*Medicago sativa*), or Meadow-grass. A native poet, describing this very spot, speaks of the fertilizing streamlets—

'Entre cesped dormidas ó entre fresas.'
('Sleeping in the turf, or among Strawberries.')

Without this artificial aid, a moisture-loving plant, like the Strawberry, would hardly survive under the vertical sun of the equator, even at that great altitude; but near Quito, where the climate has much moisture—10 months out of the 12 being rainy—little irrigation is needed. Quito, however, is near the upper limit of Strawberry cultivation, and the fruit is much inferior to that of Ambato. The Strawberry is generally considered a true native of the Andes of Ecuador, and I have seen it wild in two or three places, especially on the northern declivity of Pichincha, at 10,000 feet; but even there it grew by the side of a much-frequented path; and as the Indians appear to have no native name for it, but call it by its Spanish names 'Fresa' and 'Frutilla,' I can only consider it an introduced plant. However that may be, it is known to have been cultivated there fully 300 years; and its character of perennial fruitfulness—whether native to it or acquired—would doubtless be preserved in any other locality (so far as changed conditions would allow) for a good number of years, especially if propagated by stolons; so that its introduction to England, as the foundation of (at least) an autumn-fruited Strawberry, seems highly desirable. Whether it will retain its everbearing property here when raised from seed, will, I hope, soon be tested, as seeds of it, obtained from Ambato, have already been sown near London, by Mr. D. HANBURY."

Ornamental Shade Trees for Street Planting.

THE most popular class, perhaps, of all our trees used for this purpose, (and it is one to which we nearly all feel some attachment,) are the Maples; and this is the class to which I now desire to call attention. As a general thing, nearly all hard-wooded deciduous trees do best on a high and dry soil, and soft-wooded deciduous trees on one that is moist—but the Maples, if not altogether an exception to this rule, will in most cases adapt themselves to nearly any kind of soil, especially the

soft maple, which thrives with vigor on any up-land—hence nearly all the maples are held in great repute as shade trees for streets and public highways in the country.

Almost every one knows the difference between a hard maple and a soft one; but as very few know anything of the different varieties beyond this, it will be necessary for me to enter somewhat into detail when describing them. The first I shall notice, although not new to practical arboriculturists, is quite new to many, as it has only been disseminated to a limited extent—and it gives me pleasure to see it advertised at a very moderate price by one of our leading Rochester nurserymen. It is one of our finest native trees, and is thus described in Loudon's *Arboretum* :

"Acer Macrophyllum, the long or large-leaved maple, a tree of the largest size, a native of the northwest coast of North America, and introduced into England in 1812. It is found exclusively in woody mountainous regions, along the sea coast, between 40° and 50°, north latitude, and on the great rapids of the Columbia River. It is one of the most graceful trees of the country it inhabits, varying from forty feet to ninety feet in height, and from six feet to sixteen feet in the circumference of its trunk. The branches are wide spreading, the bark rough and brown, the wood soft but beautifully veined. Specimens of the timber which were sent home by Mr. Douglas, exhibit a grain scarcely inferior in beauty to the finest satin wood. It is perfectly hardy, and of rapid growth. The flowers are yellow and very fragrant."

Acer Saccharinum, sugar maple.—This is such a well known shade tree, that a description of it here is quite unnecessary.

Acer Eriocarpum, the white maple, or *Acer Dasycarpum*, of some catalogues. This is a fine tree of very rapid growth, and any one that requires a quick growing shade tree, will find this variety invaluable for that purpose.

Acer Rubrum, scarlet maple.—This is also a rapid growing tree; it prefers a moist soil, one that is occasionally inundated, suits it best; although it will grow and thrive in almost any kind of soil that is not too dry. It is a great favorite throughout the Eastern and Middle States, and is chiefly distinguished from the white maple by its blossoms, which are of a deep red, and appear sometimes from two to three weeks before the leaves.

Acer Pseudo Platanus, the sycamore or great maple.—A large handsome tree of quick growth, with round spreading branches. There are several varieties of this fine tree, which are mostly distinguished by some peculiarity of the leaf. It is a native of the wooded mountainous districts of Switzerland, and other parts of Europe, and grows well in this country. Those which I have mentioned are all fine ornamental shade trees, and well adapted for planting along the sides of our highways. There are many other varieties of the maple which I could name, but none that will give such general satisfaction as ornamental street trees.—*William Webster, in American Farmer.*

Experiments in Mulching.

Our first experiment in mulching was for potatoes. The ground was prepared by plowing and harrowing in the usual manner, and the potato cuts were sown at intervals of about one to the square foot. The covering was then laid on from four to six inches thick, and a few rails placed upon it to keep it from blowing away in case it become very dry. That was all the work of preparation and planting; the attention nothing, until gathering time, when we raked off the sedge and disclosed a surprising sight. The ground was literally covered with well grown potatoes, clean and beautiful. We raked them into heaps and measured the crop, as well as the plot of ground occupied, and determined that the yield was within a fraction of seven hundred bushels to the acre!

I have also used the mulch for raspberry and blackberry plants where it was impracticable to cultivate, and with the best success. It stimulates the growth of the canes and briars, increases the size of the berries, and causes them to bear profusely.

I have now upon my grounds a row of Lawton blackberries, planted two years ago, and never cultivated since, of which the briars are from five to seven feet in height (having been pruned), and which be t down with their burden of fruit. All who saw them conceded them to excel in productiveness and size of berry anything of the kind they ever witnessed. My success with raspberries under the treatment was equally satisfactory, growing more vigorous canes and a larger crop of fine, well matu red berries, than we have produced by any other system.—*Rural American.*

Gloire de Dijon Rose as a Stock for Marechal Niel.

The time for budding Roses will shortly arrive, and many will be looking around them for suitable stocks upon which to bud, and thus to increase the number of some especial favorites. I need, therefore, make no excuse for offering a few remarks upon the merits of Gloire de Dijon as a stock upon which to bud that most lovely of all Roses, Marechal Niel. Two years ago, as well as last year, I placed some buds of the Marechal upon about the middle and more natural part of some grossly grown shoots of Gloire de Dijon. The buds having taken, I reduced the young shoots upon the stock in each following spring down to the buds which had formed prominently, as a preliminary in making a strong "start;" and the result, as to progress afterwards made, both in regard to the growth and

the profusion of bloom, has surpassed anything I could have wished for. The buds grew so as literally to exceed the stock in size, and the base of each bud has so enlarged as to overlap the wood upon which it was inserted. The young shoots made thereon last season in some instances exceeded 10 or 12 feet in length. One thing I have particularly noticed in connection with the Gloire de Dijon as a stock, which is, that if an old branch, or branchlet, be budded upon, and afterwards cut into the bud as is customary, the bud of the Maréchal so placed seems to lose its capability of growing large, and produces wonderfully shortened growth in regard to its branches, as well as yielding blooms more profusely. I therefore advise all who have a large plant of the Gloire, to try its effects either way upon Maréchal Niel. I have not yet tried the former as a stock, treated in the ordinary way, but hope to do so in the ensuing autumn, as I have a small stock of cuttings well rooted, in preparation, upon which I intend to experiment.—*William Earley, in "Florist and Pomologist."*

Hemlock Hedges.

THE Gardener's Monthly says:—"Some think that as the hemlock is a large forest timber tree, it cannot be kept down as a hedge plant; but summer pruning will keep the strongest tree in a dwarf condition for a great number of years. The pruning has to be done just after the young growth pushes out, which generally is about the end of May. It is very important the hedge should be cut with sloping sides, so that every part of the surface should have the full benefit of the light. No hedge with upright sides or a square top will keep thick at the bottom long."

The Chinese Primrose.

A CORRESPONDENT of the London Journal of Horticulture, speaks of the new varieties of Primrose obtained by hybridization, which render this beautiful plant more worthy than ever for cultivation: "It is one of the best of all plants for the decoration of the green house and conservatory, the drawing room or the dining table—any time from November to April. Watering is a prime feature in the cultivation of the Primula. Water should be given in the morning, though on some days the plants may require it at night. Keep the soil in a moderately moist state, for if it is allowed to become saturated with wet, and should happen to be so when evaporation is slow, the plants will turn sickly and die off at the neck. I do not advise the application of manure water, for I have found it produce the same bad result.

For general decorative purposes I have not found any sorts so good as the common *Primula sinensis fimbriata alba*, and *sinensis fimbriata rubra*. The white and red Fern-leaved varieties have not such perfect flowers, nor such a compact habit, but they are well worth growing for distinction. There is also a salmon-colored variety called *fimbriata coccinea nova*, which appears too delicate to thrive under the same conditions of treatment as the commoner sorts. It is more apt to damp off; many of its flower stems damp off in an atmosphere in which the others thrive.

One great advantage the Primula possesses over most winter-flowering plants is that it is rarely, if ever, infested with green fly or other troublesome pests."

Ornamental Plants for Gardens of Amateurs.

THE *Double Crimson Thorn* (Paul's), is, perhaps, amongst the most beautiful. As a variegated plant of the "first water" *Acer Negundo variegatum* would, whether as a dwarf or standard, afford the most pleasing contrast to the former; and again, to form a trio, what could be more suited than the well known *Copper* or *Purple Beech*—and especially the larger leaved improved *F. s. macrophylla*. The *Weeping Ash* is a well known and distinct object, forming one of the most beautiful of Nature's bowers. Standard *Almonds*, such as *Amygdalus domestica* A. nana, and especially the double variety, *A. persica flore-pleno*, are very pleasing objects in the early spring. *Ailantus glandulosa* (Tree of Heaven) has a tropical looking appearance when in leaf, though of rather stronger growth than those previously enumerated. The cut-leaved *Weeping Birch* (*Betula pendula incisa*) looks pretty as a standard. The double flowering *Cherry* (*Cerasus Avium multiplex*) is like the Almond above mentioned, yet very distinct; the flowers, which have longer petals, are plentifully produced in spring. *Colutea arborescens* (the Bladder Senna), with its olive green foliage and strange, puffy, bladder-like seed-pods, has much that is interesting. For the sake of variety, the *Cornelian Cherry* (*Cornus mascula*) and its variegated form, *C. m. variegata*, flowering as they do, rather abundantly ere the leaves peep forth in the early spring, may be added. Turning to the well known *Laburnums*, we have in this division one of the most strikingly pretty objects, and one having a great amount of botanical interest. I refer to the *Cytisus Adami*—a supposed hybrid, the flowers of which are more or less of a reddish purple tint, others being of a bright yellow; whilst here and there amongst the blooming wood push forth branches entirely of the dwarf purple *Cytisus*. There are others belonging to this class which are very pretty objects, and may be obtained where the varieties needed are not limited, without occupying further space in their enumeration herein. A beautiful hardy tree is the *Tulip tree* (*Liriodendron tulipiferum*), the foliage of which, independently of its peculiarly striking blossoms, is extremely handsome. *Paulownia imperialis* is a very ornamental tree, with large

leaves. *Populus nivea* is a fast growing variety, preferable even to the Abele, with the leaves white beneath. *Prunus triloba* blooms somewhat in the way of the Almond in early spring, the blooms being less densely packed together, but individually much larger. *Acacias* (Robinia), in three or four varieties, have very chaste foliage, independent of their blooms; they also make very pretty standards. The several varieties of the *Sumach* are exceedingly beautiful, more especially the Venetian (*Rhus Cotinus*.) The dark crimson, double flowered, white and yellow varieties of the flowering *Currants* (*Ribes*) are sufficiently known to render further notice unnecessary. The scarlet-fruited *Elder* (*Sambucus racemosa*) bespeaks by its name its own peculiar merits, and deserves further trial.

Amongst the many lovely *Spireas* choose *S. ariaefolia*, which makes so beautiful an object with its white plumes of inflorescence. Of *Brooms* (*Spartiums*), standards are procurable of the showy white Portuguese and the yellow varieties. Amongst *Elms*, *Ulmus emarginata* is very showy as a variegated one, and somewhat new. Amongst *Fibernums*, the striking old Guelder rose is to be found, and should not be rejected.—*Gardeners' Chronicle*.

Planting Fruit Trees.

WITH respect to proper treatment, the first thing is to get good soil. To set good trees on bad land is like sitting down to dine with empty dishes; there is nothing to support the growth of the tree, nor any food to supply it with proper nourishment. Therefore if the soil is not already good, it should be made so previous to planting. If the trees are expected to thrive well, the first thing is to obtain sufficient depth of soil to enable the roots to extend themselves freely, and to hold moisture without drying up in protracted droughts; this may be obtained by digging large holes eight feet in diameter, and two feet deep, and filling them with good earth. The soil should be kept clean and mellow for many feet about each tree during the whole season. Treated in this way the degree of moisture which the tree will retain a few inches below the surface, compared with the meagre supply in a hard or grass-grown surface, is surprising, and it renders watering rarely necessary. It is a frequent occurrence to find young fruit trees which have been well transplanted and properly cared for in the spring entirely neglected at midsummer. The soil becomes hard, its moisture is withdrawn, and its fertility lessened by a growth of grass and weeds. To remedy this evil, the unskilful water the surface, but instead of reaching the roots, the hard soil excludes the water, which only tends to further hardening and baking of the surface, while the roots remain dry below. Many young trees thus perish in hot weather; or, surviving, make a feeble growth, and thus are more liable to destruction by winter frosts. Where, however, trees have been neglected till the period of severe drought, and where watering becomes necessary, the hard surface should be removed as far down as the roots will admit, and the water then poured on, and the earth replaced. Mellowing the surface and mulching will afterwards prove very beneficial. Mulching or covering the ground about the trees with straw and stable litter, or leaves, will (if timely performed) obviate the necessity of watering, even in extreme cases. Midsummer droughts will scarcely affect trees thus protected, in connection with a clean, mellow surface. As the time required for their fruiting depends very much on their management, while the quality, even more than the amount yielded, is influenced by the treatment they receive, it is well worth some pains and labor, to give them every advantage. As soon as the trees arrive from the nursery, they should be planted without delay in their respective places, previously selected and prepared for them, and be firmly staked, watered, and finally mulched. This will conclude nearly all that is necessary the first season, with the exception of perhaps a little pruning and pinching in the summer growths.—*Gardeners' Chronicle*.

Value of Strawberries near New York.

At the Farmers' Club, this city, June 21, a display of Strawberries, was made by Messrs Reising & Hexamer, at which remarks by Dr. Hexamer, was made as follows, respecting the best varieties to plant for market and family use. When I am asked, I say plant Wilson to begin with. We sell more plants of this variety than of all others combined. It grows well every where, in any sort of soil, in hills or rows; endures neglect well, though good cultivation pays here, as everywhere else. True, the Wilson is very sour, but that is no objection in the eyes of city purchasers, who buy for color and size. The *Triomphe de Gand* is with us more profitable; so is the *Jucunda*—these sorts selling in New York for about three times as high price as Wilson. We have engaged our entire crop at 40 cents net. We have been able to do this because the gentleman to whom we sell has found our berries reliable. The big ones are not all at the top. The *Triomphe* has hardness, is more solid, dryer, and less liable to be affected by rain, than Wilson and most other sorts, which are easily ruined by rain. The *Triomphe* needs more care, and to find out where it succeeds, one must make experiment. The *Jucunda* I like less; it is softer, but keeps about as well as Wilson. A good point is that it continues large to the end of the season. Early varieties we do not raise except for local market. First in the list of these, I class Brooklyn Scarlet. Burr's pine is a little later but more prolific; softer, but grows everywhere. French Seedling is hardy, but has a disagreeable taste. The most prolific early variety is the Downer. Nicanor is first-class, and comes just before the

Wilson. The Ida, another very early variety, I do not recommend. Lady of the Lake changes its color, like the Wilson, after being picked a day or so. Barnes's Mammoth is not very good, according to my experience, the present season. Boyden's No. 30, has a long soft neck, which makes it unfit for a market berry, but is superior in most respects to the Agriculturist. For drying and preserving, there is nothing better than the Lady Finger. This is very late. The Green Prolific is even later, but very soft, and liable to be injured by rain. Lenning's White is the highest flavored of any, and if it were a little more prolific there would be nothing better for home use. The meanest and poorest of all the sorts is Colfax, which was sent out last year with sound of trumpets. I invested \$20, and would now sell for twenty cents. This shows that it costs something to test the new varieties which are offered from time to time.

Value of Wood Ashes around Fruit Trees.

MR. E. A. KING, a farmer and pomologist on the eastern shore of Cayuga Lake, N. Y., writes to the *Cultivator and Country Gentleman*, that, in many sections of the country, the White Doyenne or Virgalieu pear has been for the last eight or ten years a failure. "About twelve or fifteen years ago it was supposed to be the very best and most productive of all the varieties of pears. Many set extensive orchards. The trees have grown thriftily, being subject, however, to blight in many instances. The trees each season are full of blossoms, set thickly with fruit, which fails to mature. And, when about half grown, it becomes shrivelled, blowed, often cracked, and that is the end of the crop. This pear has, in fact, come into such disrepute, that nurserymen in this vicinity neither offer trees for sale nor pretend to propagate them.

"Solomon Bradt, of Genoa, and Mr. Townley, of Lansing, have each a tree of Virgalien which have invariably for the last ten years borne splendid crops of finely developed and luscious fruit. The tree of each stands near a leach, put up for leaching wood ashes for the purpose of making soap for the household. Mr. Bradt has other trees of this variety, which fail to mature a single perfect specimen, while this one tree is noted for the large, splendid fruit which it bears. I should have stated that some years ago the leached ashes were thrown under the tree, making quite a heap, which still remain, and of course get considerable leach from those in the leach each season. Now, without doubt, he owes his fine fruit to the ashes, and the query is, will it pay to apply ashes in sufficient quantity to bring back this pear to its former fruitfulness?"

The Maple Leaf.

THE representative plant and badge of Canada is said to be *the Maple Leaf*, as is told in the national song of that dominion.

"On merry England's far-famed land
May kind Heaven sweetly smile;
God bless old Scotland evermore,
And Ireland's emerald isle;
Then swell the song, both loud and long,
Till rocks and forests quiver—
God save our Queen, and Heaven bless
The Maple leaf for ever!
The Maple leaf, the Maple leaf,
The Maple leaf for ever;
God save our Queen, and Heaven bless
The Maple leaf for ever!"

Editorial Notices.

An Agricultural and Horticultural Excursion to the Pacific.

By the time this number reaches the eyes of our readers, it is probable we will be doing good horticultural service in the gardens and fruit orchards of California.

An excursion party of 25 or more, left New York on the 19th of July, composed of representatives of the principal Agricultural Journals of this city and vicinity, while others were expected to join the party at Chicago and other points West. Among the party are the following names:

J. B. Lyman, agricultural editor N. Y. Tribune.	P. T. Quinn, editor N. Y. Tribune.
Henry T. Williams, "Independent.	Prof. Poey, of the Rural New Yorker.
Henry T. Williams, editor The Horticulturist.	X. A. Willard, "
H. L. Reade, editor Hearsh and Home.	H. D. Emery, of the Prairie Farmer.
Mrs. L. E. Lyman, "	Sophie O. Johnson, of the Springfield Republican.
Frank Curtis, editor Troy Times.	Dr. J. V. C. Smith, } Representatives
L. H. Tucker, editor Country Gentleman.	Prof. James A. Whitney, } of The Farmer's Club,
A. B. Crandell, editor N. Y. World.	P. T. Quinn, } New York.

When returning, the party will probably visit St. Louis, Alton, and other points in Central Illinois and Ohio, reaching New York again about August 20th or 25th.

Heartly Commendation of the Horticulturist.

THE following is one of the many compliments our readers are pleased to give us in their appreciation of *The Horticulturist*. It comes from one of our oldest subscribers, whose subscription commenced with the very first volume, and now he has reached the twenty-fifth:

"I have taken the Horticulturist from the time it was started, with the exception of two or three years, and I am better pleased with it now than ever before; it is more practical—just what fruit growers, and those starting new places, need."

Yours, respectfully,

M. L. BUNNELL.

Fall Campaign of The Horticulturist.

OUR Fall Campaign begins with this number and continues until December. We offer unusually excellent terms to all who will aid in extending *The Horticulturist* among new subscribers. We will send it as a trial trip—3 months for 30 cts.; 6 months, do. \$1. Club Terms—2 copies, \$4; 3 copies, \$5; 5 copies, \$7.50, and a copy free. We invite all our friends to make up a list of their neighbors and acquaintances interested in gardening and horticultural literature, and induce them to register their names for a trial of at least three months. Every one can afford 30 cents. We suggest to Secretaries of Horticultural Societies, to introduce our trial trip proposition to their members. We hope to make our fall campaign the best series of numbers in literary interest ever issued. *Send in the names.*

Advertising Value of the Horticulturist.

OUR well filled advertising pages need no special notice from us of the value of the *Horticulturist* as an advertising medium. The *Horticulturist* is so well known as the oldest and best established of all of its class, and its circulation so thorough among readers of means, taste and ready patronage, that its popularity with advertising patrons seems to increase year by year. Our readers, both old and new, find in our advertising pages both amusement, instruction, and real horticultural knowledge often quite as practical and useful as the reading pages. We suggest to every reader to consult the advertising column as soon as every number appears, in search of any novelty or article of real merit.

We have several instances of successful results from advertisements. An advertisement of Conover's Colossal Asparagus, in our March and April Nos., at a cost of only \$35, brought the owner orders for 45,000 plants, at a value of over \$600!

Premiums.

THOSE Subscribers who failed to receive their Premiums of *Roses*, safely through the mails, will please inform us, and we will re-place them as far as possible. We regret any disappointments, but *Roses* can hardly go as nicely as *Bulbs*, nor can any one guarantee safe carriage. We aim to have everything leave here in good condition.

Subscription Terms for Fall Campaign of the Horticulturist.

IN compliance with the wishes of many of our best readers who think, if our terms were cheaper, thousands more would be disposed to take it who think it now too high, we herewith offer the following list of reduced rates for our Fall Campaign:

3 months, as a trial trip, 30 cents; 6 months, on trial, \$1. Club Terms, 2 copies, one year, \$4; 5 copies, do., 7.50, and a copy free. In addition to these, to every subscriber, old or new, *who will bring one additional new name, both copies* will be supplied for the year, at \$3.50.

Now is the time for all our readers to aid in extending it widely everywhere. These terms are *very cheap*. Scarcely a true and interested cultivator of the soil and lover of rural literature, but can afford at least 30 cents, for 3 months, or \$1.50 per year in a club of 5.



Vol. 25.

SEPTEMBER, 1870.

No. 291.

A Horticultural Trip to California.

A RIDE of 7,000 miles across a continent and back again, to view a land full of majestic scenery, cloud-capped mountains, and fruitful orchards, whose shores are washed by the waves of the peaceful Pacific, gives to an excursion party an interest of more than ordinary value, and brings forward incidents and memories worthy of the enthusiasm and zeal of more than one able pen. None can do ample justice to the task of describing that vast field of 2,500 miles, which stretches on and on, with unlimitable expanse, from Chicago to San Francisco. Those wide regions were the work of thousands of years of creation, and it will yet be many hundred years before the true idea of their magnificence and worth becomes appreciated. Our editorial capacity has been specially directed toward the evidences of horticultural progress and knowledge in California. And first of all we mention a visit to

The Fruit Orchards of Santa Clara.

Leaving San Francisco one bright morning, we took the cars of the San Jose Railroad, and after passing through a territory skirted on the east by the waters of the San Francisco Bay, and on the other by fields of grain, stretching upward in undulating slopes to the top of the coast range of hills, 500 to 1,000 feet high, we reached Santa Clara, after a ride of nearly 60 miles. On the opposite side of the Bay, as we pass along, we observe in the distance, a number of low buildings, and are informed that extensive salt meadows are found there, where the water is admitted and afterwards evaporated, enabling the manufacture of salt to be easily and largely carried on. This form of individual enterprise would not seem so singular, were it not for the fact that salt can be produced *only on one side of the Bay*, and that on the east; while on the western, the nature of the water renders it absolutely impossible. The lands, during the entire distance from San Francisco to Santa Clara, are a constant succession of large and beautiful farms, mostly covered with waving grain or wild oats. For twenty miles or more the prices of these lands will average from \$300 to \$1,000 per acre, and not easily procured even at those figures. It is held mostly for private residences, controlled by a few wealthy families, who desire only the admission of a good class of residents, able to make valuable improvements and become good neighbors. The farm of D. O. Mills, known widely for its extensive dairy (Milbrae dairy, which has 500 cows milked daily, and supplies the Occidental Hotel), and also of W. C. Ralston, both officers of the Bank of California, are especially noticeable for their size, richness, and the architectural magnificence of their mansions. One mansion, lately erected, belonging to Mr. Mills, is the finest ever built, west of Chicago, and presents an imposing appearance,

as it graces a little elevation at the foot of one of the coast hills. We see immense fields, known as *volunteer lands*, upon which grow second crops of wheat, oats, &c., started from self-sown seed, dropped in the harvest of the previous year. These lands yield excellent crops, sometimes as high as 25 bushels of wheat per acre, and thence downward to 10 and 15. But they are esteemed more valuable as *hay lands*. Real genuine *timothy* or *herds grass* and *clover* are unknown in California. It is almost impossible to form a sod by sowing any variety or amount of grass seed. The only hay, in fact the *staple crop* of the country, is the *wheat* and *oat straw*, left after harvest. It is gathered loosely in immense piles or winnows, often reaching 20 feet high and 300 feet long, and compressed into bales of about 300 lbs. each. These are carted to the depots or landings, and again form tremendous piles of freight, often reaching 50 feet high, 50 feet wide, and 500 feet long. This hay is forwarded to San Francisco and sold for an average price of 45 to 50 cents per one hundred lbs., or from \$9 to \$10 a ton.

During the month of May this entire valley is full of wild flowers, of exquisite bloom and splendid hues. Upon a single hill side there will be a mass of flowers of one solid color, deep yellow; a little farther on would be another clump of light blue, and still another of exquisite crimson. In fact, a person can hardly make a step but it would be in a bed of flowers, and *such flowers*, only a botanist can really appreciate.

Santa Clara is a pleasant town of perhaps 2,500 inhabitants, and contains a few splendidly managed fruit farms. We visited first that of Mr. L. A. Gould, where an entire farm of 94 acres is devoted exclusively to fruit; 35 acres are alone planted in strawberries, and undoubtedly it is the largest strawberry farm on the Pacific coast. Two crops of berries are gathered every year. The first crop commences the last of April, and continues a couple of months, then partially ceases, a few berries continuing to ripen during the entire Summer, and then the second crop appears again in September, and lasts a couple of months longer. The *Longworth's Prolific* is considered by far the finest for amateur or market purposes; the Wilson is only moderately successful, while the Jucunda bears continuously from April to December. I did not observe as large berries as we often find in our own eastern fields, still it was not the best season for examination. Mr. Gould stated that he had often gathered thousands of baskets daily, where the average size would be four inches in circumference to each berry, while larger specimens of six and seven inches were very common. Over the remaining portion of his farm, about sixty acres, he has planted the land entirely with standard and small fruits. Seventy men are employed constantly in the busiest season of the year, in planting, cultivating and gathering. At the time of my visit early pears were just beginning to arrive. The Madeleine had already been gathered, and the Dearborn Seedling was very plenty. This pear is very popular with California growers, comes in at a time when there are few other pears in the market, has a pleasant, agreeable taste, and good size. The average of the fruit we beheld would be about the size of a good medium Roxbury Russet apple; color, bright lemon yellow; quality, however, not spicy or aromatic. The farm is divided into blocks of regular size. Along each wagon road, between the blocks, are planted rows of cherry trees. Back of these are planted, in distances of about fifteen feet, standard pears, apricots, plums, and a few apples. Between each row of trees there is also planted a row of grapes, which, growing in true California style, ramble all over the ground and display their glorious clusters in close proximity to the lap of mother earth. The pears are packed in square chests, of about two-thirds of a bushel, and the Dearborn variety was then bringing \$1.50 per box in the market.

The best varieties most popularly preferred for planting were the Bartlett, Flemish Beauty (which escapes blight here entirely), and Beurre Clairgeau. Common varieties bring \$1 to \$1.50 per box, but Bartlett and other specimens, choice assorted, bring \$2.50 to \$3.50. A rough estimate of this fruit orchard, which numbers 9,000 trees and 8,000 vines, placed the production at about 20,000 bushels. The crop of strawberries is about 100,000 lbs. per annum, each pound being two-thirds of a quart, and bringing an average price of ten cents. The crop of cherries is also estimated at 15,000 lbs., which range from 60 cents down to 20 cents per lb. These have been exceedingly profitable, this class of fruit having yet not been over done. The Black Tartarian is universally successfully cultivated.

The entire place is irrigated from an elevated tank, supplied from an artesian well,

sunk 150 feet, which flows night and day, and is their only resource in the long dry time. Mr. Gould has near his house some fine specimens of fig trees, also splendid English walnut trees, fully thirty feet high, and as many broad, bearing profusely. An Isabella grape vine covers an arbor about 25 feet square, yielding 300 lbs. annually. Mr. Gould has favored us with a detailed statement of his success in fruit culture, which we herewith subjoin, and we will in another letter refer more particularly to the *great pear orchard of the Santa Clara College*.

EDITOR HORTICULTURIST: My grounds contain 96 acres, 73 of which are devoted to fruit. No. of apple trees about 4,000, pear trees 3,350, cherry trees 500, English walnut, apricot, peach, plum, prune, quince, fig and shade trees, number about 1,200. Two acres of white, and eight acres of black grapes; two acres Kittaninny and Early Wilson blackberries, and about 35 acres of strawberries; a large portion of which are grown among the trees, and irrigated by means of red wood boxes or fluming, connected with three artesian wells that flow continually.

That portion of the orchard without berries is not irrigated, as I have proved to my own satisfaction, that both tree and fruit do better without irrigation.

I have $1\frac{1}{2}$ miles under drain to protect the trees where so much water is used for the berries. We have very few enemies to fruit culture here, and almost our only obstacle to success, pecuniarily, is the lack of a sufficient market near our productions.

My choice varieties of pears, for profitable cultivation, after fifteen years' experience in this country are: Bartlett, Flenish Beauty, Duchess, Beurre Hardy, Beurre Clairgeau, Winter Nelis, and Eastern Beurre. Of apples: Red Astrachan, Danver's Red, White Astrachan, Fall Pippin, Rhode Island Greening, Yellow Bell-flower, Spitzbergen, Baldwin, Hoover, Smith's Cider, White Winter Pearmain, and Yellow Newtown Pippin. Of cherries: May Duke, Black Eagle, Elton, Black Tartarian, and Napoleon Bigarreau.

The cultivation of the English Walnut in this country promises success, and I now think if I had cultivated this fruit largely, instead of the more perishable kinds, I should have been at present receiving ample rewards for my labor.

The Osage Orange hedge, five-eighths of a mile long, in protecting the orchard front from the depredations of both stock and bipeds, is exceedingly useful, and can be easily cultivated in our dry climate without irrigation.

Amount of strawberries, produce of Longworth's Prolific and Jucunda varieties, for the year 1869: 100,000 pounds, or 50 tons.

8,860 boxes of apples marketed as follows: Japan and China, 3,450 boxes; Honolulu 200; Mexico, 250; San Francisco, 2,628; dried, 332; ground for vinegar, 2,000.

4,609 boxes pears marketed, as follows: San Francisco, 1,729 boxes; Chicago and Boston, 600; dried, 2,000; fed to stock, 280.

Cherries, 12,000 pounds; White grapes, 13,000 pounds; Black grapes, 52,000 pounds.

SANTA CLARA, CAL.

L. A. GOULD.

Raspberries in Illinois.

I PROMISED to notice the difference between the Mammoth Cluster Raspberry and the Collinsville. *I can find no difference as far as I can see. They were ripe together, at same time; taste alike, and have the same shape.* I give herewith notes of several varieties arranged in order of the time of ripening:

Doolittle, yield moderate. *Ohio Eeerbearing*, good crop, also yields a fair crop in the fall. *Surprise*, not so good as Miami. *Ellisdale*, better than the Purple Cane, also hardier. *Miami*, or *Collinsville*, same as Mammoth Cluster. *Philadelphia*, yield well, second quality. *Arnold's Red*, winter killed, second quality. *Yellow Canada*, winter killed, second quality. *Clark*, quality good; does not set full, large berries; fruit stalk also dries sooner than the Antwerp.

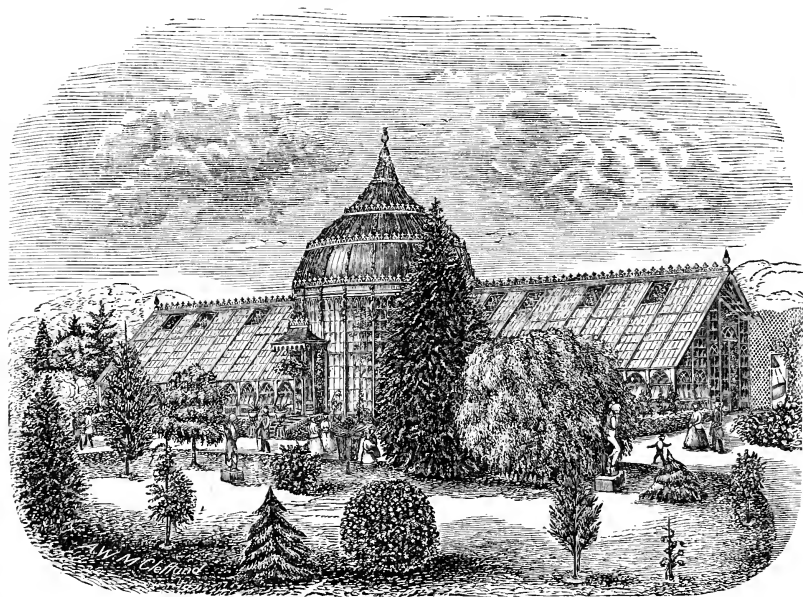
G. DREW.

BUNKER HILL, ILL.

Woodward's Gardens, San Francisco, Cal.

AN attractive feature of San Francisco, is the famous Woodward Gardens, located about a mile and a half from the centre of the city, and styled by some *the Central Park of the Pacific*. The grounds comprise only five acres, but so arranged by the disposition of galleries and buildings, and the planting of trees and shrubs, as to appear fully twice the size. In comparison with the surrounding country, its barren hill-tops and sandy fields, these pleasant gardens really (more than customary) appear a little "beauty spot" of ornamental character.

Mr. R. B. Woodward, formerly of Rhode Island, having removed to San Francisco, and there accumulated a fortune in active business, purchased the land in 1860, just in the suburbs of the city, as an investment. He gradually added trees, shrubs and ornamental buildings within, in order to form pleasant home grounds for a future residence.



View of Woodward's Conservatories, San Francisco, Cal.

Their beauty attracted the public attention, and requests to visit them became so frequent, that a special day was set apart each week for visitors; a small charge was made for admission, and the proceeds handed over to the Sanitary Fund during the time of our recent rebellion.

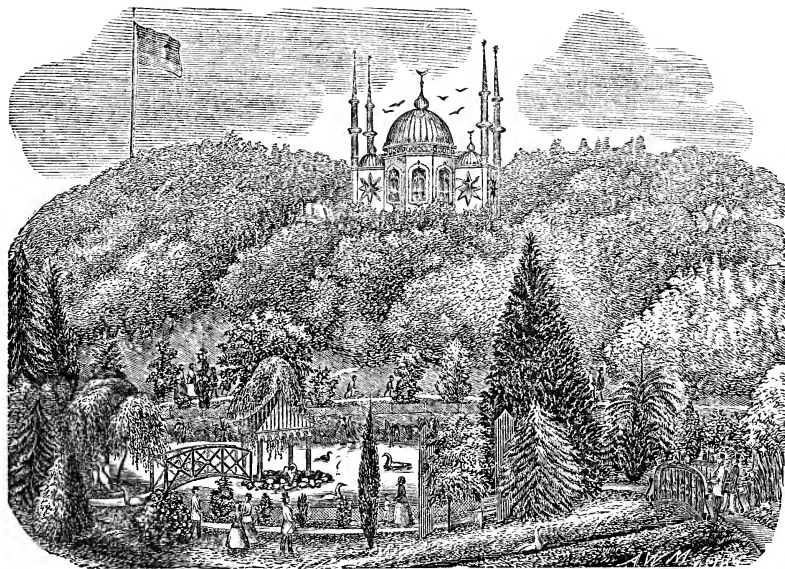
The public attendance became so great, and the reputation of the place having so widely extended, the grounds were at last given up for private purposes, and thrown open to the public for daily visits and pleasant enjoyment, and they have thus become, within five years, the great resort of the people of the city, combining in one entertainment the pleasures of the park, the garden and the museum.

Directly in front of the entrance is the large Conservatory, with all the smaller ones connecting. There are five in all, supplied with an abundance of plants, gathered from all parts of the world. Here, in one beautiful view from the art gallery, we behold one house

devoted exclusively to tropical fruits and palms, the Banana, Plantain, Coffee tree, Tamarind, Pine apple, Rose apple, Alligator pear, Cherimoyer tree, eight varieties of Palms, three of Pandanus, while here and there, in the other greenhouses, are scattered Dracenas (eight varieties), Caladums, Begonias, Coleus, Marantas, Crotons, Ferns, Agaves and Aloes, while a few Cinnamon and Camphor trees complete the representatives of the tropics.

In the same series of houses are found trees from a more temperate climate. The *Magnolia grandiflora*, *Camellia japonicas*, in many varieties; India-rubber tree in many varieties, the Orange, Lime, Lemon and Citron trees, six varieties of the *Auricularia* and the Azalea.

Our American greenhouse plants did not all appear as thrifty as with us on the Atlantic slope; the ornamental leaved plants seeming to suffer greatly. The *Coleus* was hardly as finely colored as we have here, but the *Begonias* were overflowing with bloom. It was certainly intensely interesting to behold, grouped into one place, trees from all parts of the world. Here is the India-rubber tree from Central America, fifteen feet high; there the Camphor tree from India; again, the Orange tree from Mexico or the West Indies, and in a corner the Banana or the Sago Palm. The Coffee tree from Arabia and from Australia. *Acacias*, beyond number, also are gathered there.



View of Observatory, Lake and Ornamental Grounds.

Connected with the conservatories is a museum, devoted to curious specimens of stuffed animals and birds. In one of the rooms was a specimen of the *bark* of one of the big trees of California, *thirty-two inches thick*.

In the centre of the large conservatory is a Fine Art Gallery, containing many acceptable paintings, the vestibule to which is lined with tiles painted after the fashion of the olden days of Pompeii and Herculaneum.

In the rear of the greenhouses is a pond devoted to aquatic animals, fish, etc., and for pleasure sailing in a circular boat. Back of these are the dens and cages, where are gathered living animals peculiar to the mountains and coast, as also some imported from the tropics.

In an adjoining yard, approached by a tunnel under the street, is a large amphitheatre, where stalks the camel and its young, and on stages are chained the panther, black and cinnamon bears, with other living curiosities dispersed at convenient distances.

The gardens have a natural ascent of fifty or more feet, rising first behind the museum and conservatories, on the summit of which is placed a fine Turkish Observatory, seen in illustration No. 2. From this can be caught a charming glimpse of the entire extent of the gardens and of the crowds beneath intent on solid pleasure. The sides of the hill are planted thickly in trees, and the observatory is hidden from sight, save its very top.

In various parts of the garden, along the walks or on the lawns, and particularly in front of the conservatories, are grouped specimens of native and foreign trees, flourishing with the slightest care, and affording a delightful sight to the botanist or tree lover. We saw the Norfolk Island Pine, 10 ft.; *Acacia verticillata*, 20 ft., from Australia; *Acacia linearius*, 25 ft., from Australia; *Callistema lanceolata*, from New Holland; *Pittosporum Tobera*, from Japan; *Cupressus lawsoniana*, 20 ft.; Japanese loquat, 12 ft.; *Leptospermum lanigerum*, 15 ft.; *Pinus insignis*, 20 to 30 ft.; *Veronica macrocarpa*, from New Zealand; European laurantine; *Metaluca decurrata*, 25 ft., from New Holland; *Melrosia*, from New South Wales; *Fabiana imbricata*, 5 ft.; Japan Spindle tree; Dwarf pomegranate, from West Indies; Chinese Cypress; *Vinea Major*, 6 ft. by 8 ft.; Deodar Cedar, 15 ft. high by 10 ft. broad—this tree is remarkable for its beautiful, graceful, drooping habit. Peruvian Mastic tree, remarkable for its large head, 20 ft. high and as broad; Norway Spruce, 30 ft. high.

The short time limited to our stay prevented fuller notes as to the trees and shrubs. It is sufficient to say that beyond a few specimens of native cedars, spruce and cypress, the entire collection of ornamental trees, plants, etc., has been gathered from *foreign countries*, and here thrive with perfect luxuriance in the open air. As yet no gardens in the world can present contrasts of so vivid a nature, nor grow trees from sections so widely remote, as has been done here.

In ministering pleasure to the tastes of the visitors who have constantly visited the grounds, Mr. Woodward has unconsciously given a lesson of great importance. He has pointed out the absolute possibility of the introduction of trees from foreign countries, and demonstrated their successful culture.

Ornamental gardening, hereafter on the Pacific coast, will receive an impetus from the influence of these facts, and already we find many streets and public and private grounds adorned with choice shade or ornamental trees from Australia or the islands of the Pacific Ocean.

Was ever a country so gifted as California, where, in one garden, can be grown trees from the snowy summits of the Sierra Nevada, by the side of the tropical palm, coffee and orange; where, too, the apple and pear, from our Atlantic States, thrive; where the cacti bloom with the geranium, where Australian, Chinese and Japan trees twine and droop and mingle their branches together, and still the bear and panther tumble over the lawn, or the beaver works his silent way among the waters of the meandering streams, or the fountain bubbles out its lucent music at same time with the richer melodies of the Mocking Bird.

The grounds have cost, exclusive of land, over \$100,000, and still the proprietor is adding every available curiosity suitable to California climate and soil. Future visitors will find the collection of plants and trees deserving of an extended and interesting study.

Select List of Roses.

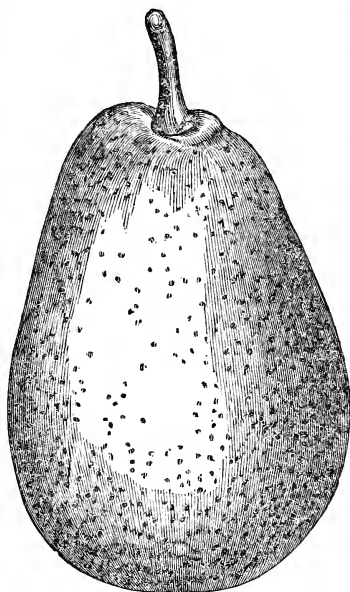
HEARTH AND HOME suggests to a Tennessee subscriber the following list of stand-ard and blooming roses:

Marshal Niel, Safrano, Solfaterre, Honnora. Geo. Peabody, Souvenir de la Malmaison, Madame Lujiat, Isabella Sprunt, Paul Joseph, and Annie Vibert.

Climbing Roses.

The same journal recommends—*Queen of the Prairies, Gem of the Prairies, Baltimore Belle, and Russell's Cottage.*

The Chambers' Pear.



WE send a few specimens of the *Chambers'* pear, which we consider the most profitable early pear we have in Kentucky. It brings double the price of other varieties of the same season.

It was brought to this county (Jefferson) about seventy (70) years ago, by a Mr. Chambers, from Maryland, with some other varieties, this one proving to be the best. The tree is difficult to propagate, and long coming into bearing—from ten to twelve years. With age, it becomes a regular and good bearer.

Our crop of this variety has brought from four to six dollars per bushel in the Louisville market, this season. We have often realized twenty dollars per barrel, and never under four dollars per bushel. They are sought for by fruit dealers, in preference to all others. They ripen a few days after the Madeleine—one week. The Chambers commences to ripen about July 4th. We shipped our last on the 13th of July. From the specimens, we leave you to judge upon its eating qualities.

The blight has played sad havoc in the pear orchards of this County and State generally, so far as we have heard. Some orchards have suffered more severely than others. In this neighborhood, those orchards which have been highly cultivated received the "brunt of the battle," while those of little cultivation escaped with far less injury.

We have an orchard of about one thousand trees, mostly situated upon an elevated position, with nothing to prevent the free circulation of air. We give but little cultivation, and that early in the spring. We have had but little blight, and firmly believe this is mainly the cause of our success. There are two other orchards in our neighborhood under a high state of cultivation, and surrounded by trees which prevents the free circulation of air; which, we think, was one cause of their suffering so much. The varieties mostly affected by the blight were, Doyenne d'Ete, Swan's Orange, Belle Lucrative (badly), Easter Beurre, Glout Moreau (badly), Seckel (same), and some few others slightly.

HOBBS STATION, KY.

S. L. GAAR & COX.

Apples for Long Keepers.

American Golden Russet.

OF first importance to every family and orchardist is a good late-keeping apple. A cellar well stored with them, in prime condition, has a mine of wealth, and a source for real pleasure which few ever reach. We always knew the American Golden Russet to be just this treasure, but never fully realized it as I have the present summer. Up to July 1st, they were in our market, as firm, crisp and tender, "sound to the core," as the autumn before when gathered. It *was* a feast good to look upon, but one seldom presented; for, as I know, a large majority use up their best late keepers long before they are in their prime. The Golden Russet is really not fit to eat till May and June. But "how to keep it, mine all rot." Pick carefully by hand each apple as (almost) so many eggs; place in a new oak apple barrel; fill full to the level; press in the head; leave in some cool shady place till cold weather; then place in the cellar, free from frost, but as cool as possible without freezing; and the next June, any one so doing, can have as good an apple as was ever eaten, and far more pleasant and healthful than the too many early and half-matured apples of our fruit stands. Try it, and there is none better.

O. S. WILLY.

A Beautiful Flower Farm and Garden.

DURING the months of July and August last, we visited the flower grounds of Messrs. C. L. Allen & Co., near Queen's Station, L. I. Here are gathered together, in one fine farm of over 50 acres, choice bulbs of all kinds known to commercial florists, and planted for testing and growth before sale. Japan furnishes lilies by the hundred thousand, and Europe sends over her choicest gladiolus and hyacinths. At the time of our visit the entire fields were gorgeous with the vari-colored hues of over 200 varieties of gladiolus, while beyond, in one solid block, could be seen fifty choice varieties of lilies, from the well known Auratum down to the common tiger lily. We never beheld such a sight. Here was a feast for the eye, equal to the highest imagination we had ever formed, of the beauty of flowers, while the senses were regaled with perfumes of most exquisite odor. Wonders have been accomplished within a short time. One year ago the land was an ordinary truck farm, and many portions of it seeded down to grass. Since then it has been thoroughly worked, this spring was re-planted in bulbs, and in an incredibly short space of time we beheld the field aglow with the successful growth of flowers, the most tasteful of earth's curiosities.

The soil is peculiarly well adapted to the culture of flowers, being of a fine loamy character, light and easily worked, but deep, capable of withstanding the severest rays of the hot sun, or extensive droughth, without damage to the appearance of the flowers or the successful maturing of the bulb.

There are now planted thirty acres entirely to flowers, of which eleven acres alone are covered with solid rows of *tuberoses*, estimated to average 80,000 good bulbs per acre, or nearly 900,000 in all. Seven acres are devoted to gladiolus, forming a fine solid block, almost deserving the name of "*Sea of Flowers*." Within this space are gathered something like 150,000 bulbs of the choicest varieties, while of the smaller kinds there are estimated to be not far from 2,000,000 roots.

A solid block of six acres of *lilies* attracts our attention, and here are gathered all the old well known kinds, together with many new varieties not yet introduced, but full of remarkable characteristics. The field of *Lilium Auratum* alone contains over 75,000 in one body, in bloom, while of the other varieties, numbering fifty or more, there are at least 100,000.

Among the other features of the farm is a fine specimen of ornamental gardening, a narrow strip of ten feet in width running a thousand feet or more directly in front of the entire space devoted to the flower beds. Here are growing, with ample luxuriance, cannas, twelve varieties; ricinus, five varieties; coxcomb, dahlias, verbenas, and a few other miscellaneous plants of flowering character. We are pleased to see how easily a bed of such an ornamental character is made, and how little labor it apparently requires to keep it up.

The peculiarly fine subtropical effects arising from the free use of the Cannas and Ricinus, are arguments for their general introduction into all private ornamental grounds throughout the country.

The bed of *Double Portulacas* was also noticed and admired. Here is a small bed of only twenty-five feet square, containing the most perfect strain of perfectly pure double portulacas to be found in the United States. The flowers are of every hue, of the most intense scarlet, deep lilac, brilliant crimson, or plain yellow and white. The seeds from this little bed are said to be worth over \$500. In one end of the large field is a space devoted to *Double Balsams*. Here is another record of astonishing success. *Such Balsams* would fire the enthusiasm of more than one lovely lady who has hitherto thought that her lady slipper of one tall stalk and a dozen flowers were perfectly satisfactory. These balsams form stout bushes about two feet high, with twenty-five to fifty side shoots branching out close to the base of the principal stem, and loaded down with one continuous truss of large double flowers, almost as fine as roses. Some of them measured nearly three inches across, and we counted fourteen rows of petals on many of the flowers. The white colored varieties are noticeable for the sturdiness of the plants and luxuriance of bloom. Many of the stalks measured at the base, close to the ground, over an inch in diameter. Other varieties were also represented, numbering by actual count over a dozen colors, while one funny little *dwarf* variety, hardly six inches high, hugs the ground and shakes in the wind

its top-knot of crimson bloom. At the front end of the field are two long trellises of 500 feet or more, to the centre line of each are trained in one row the climbing *Ipomoea*, and in the other the *Cypress vine*. How is it we see so little now in home gardens of this last charming climbing plant, with its deep green feathery foliage and showy flowers. Three varieties are grown here with red, white and rose colors. We have selected the best varieties of lilies and gladiolus that came under our notice, and herewith place them on record.

Japan Lilies.

The *Lilium Auratum* is still the queen of the group. Its large magnificent flower, with deep golden band and delicate spots, with still more exquisite and penetrating perfume, places it far beyond all other varieties for beauty and fragrance. It is easily grown, and if left undisturbed will continue to thrive year after year, increasing in the number and value of its blossoms.

Some specimens are of marked magnificence. We have seen flowers measuring twelve inches in diameter from tip to tip, of pure deep golden color, while other stalks of smaller sized flowers seem to outdo themselves in number, and pile themselves above each other in rows and circles truly marvellous. We have counted upon bulbs grown out doors, but two years old, at least fifteen large flowers, while from still older bulbs Mr. Allen has succeeded in producing over twenty-five. We have heard in England of fine potted plants that had never been disturbed for six or seven years, with eleven fine strong flowering spikes, each eight feet high and bearing 152 blooms, of which 132 were expanded at one time. Upon Mr. Allen's grounds are several "sports" of the *Lilium Auratum* of peculiar nature.

The *Lilium Auratum Virginialis* has all the other marked characteristics of the other *Auratum*, but has a pure white petal, without either the gold band or the colored dots over the surface. It presents a beautiful appearance, with its bloom of spotless white, and is highly interesting as a freak of nature.

The *Lilium Auratum Splendidum* is a variety of the *Auratum*, the golden band being edged with crimson almost to the very edge of the petals, while the spots are very distinct.

The *L. Auratum Rubra Vittatum* changes the golden band of the usual variety into one of bright red, while the spots are also larger and of a very bright color. In fact it is a mammoth *Rubrum*.

For ordinary family culture, in doors or out doors, we cannot too highly commend the *Lilium Lancifolium Rubrum*. The bulbs are large, hardy; throw up tall stalks of two and a half feet, crowned with six or more stems, upon each of which appears a beautiful white lily, colored deeply with bright crimson, whose petals are recurved back toward the stem, thus presenting a full rounded face of rosy beauty. For pot culture, in windows or the greenhouse, this variety is very suitable, while its delicate fragrance will always make it popular.

Lilium Album has the same characteristics of growth as the *Rubrum*, but the flower is perfectly white.

The *Lilium Roseum* differs only slightly from the *Rubrum*, the former containing only the crimson dots upon a white surface, while the latter has, in addition, a deep red tinged surface as well as the dots.

Lilium Lancifolium Melpomene is a new variety, with all the characteristics of the *Rubrum*, but a little darker red spots, having a violet or blood color, with a distinct border of pure white on the edge of the petals.

Lilium Monstrosum, *Album*, *Rubrum* and *Roseum*, are truly magnificent, possessing all the valuable features of the other flowers, but more of them. The *Monstrosum* is of more sturdy growth, and from the top of one stout stem there diverge ten or more branches which overflow with an abundance of flowers. It is not uncommon to see twenty-five fine flowers upon a plant grown in common garden soil, while 100 have been known. The usual varieties of *Rubrum* produce but four to six, while the *Monstrosum* branches out and covers its entire top with dozens.

The *Lilium Brownii* is one of our superb varieties, bearing on one slender stalk, but two feet high, two or more trumpet shaped flowers of immense size. The inside is pure white, with lines of dark purple or violet over the outside.

The *Lilium Chalcedonicum* is an early variety of brilliant scarlet color, three to four feet in height, with large recurved blossoms, resembling Turks caps.

The *Lilium Excelsum* is also early, grows six feet high, has a stately form, and plants bear from five to ten large beautiful lilies of a delicate light buff color. There have often been as many as eighteen flowers on a single stem. The flowers possess an exquisite fragrance, which make up for the lack of brilliancy in comparison with the other more showy varieties. The bulbs are very large and perfectly hardy.

Lilium Giganteum is a great curiosity, hardy, suitable for out-door culture, unless grown in the shade. Is best adapted for the greenhouse and conservatory; the stem rises from four to eight feet in height, has large heart-shaped leaves of a dark, glossy green, while the flowers are white, of drooping trumpet shape, marked with violet crimson streaks, and very highly perfumed.

Lilium Superbum is noticeable for the profusion of its bloom, often bearing from thirty to forty flowers upon a single stalk. Early, in full bloom in former part of July. In good soil will grow to the height of eight feet; flowers of a dull red color.

Lilium Tigrinum Flore Pleno, or Double Flowering Tiger Lily, is a great novelty. It is a plant of fine form, growing from four to six feet high, with dark green foliage, very long, bearing an immense number of light crimson flowers, spotted with black, with double or often triple rows of petals. As many as eighteen flowers of this double character have been grown upon a single stem the first year. As yet there is but a limited number of this variety known.

Lilium Fortunei has all the characteristics of the Tiger Lily, but of a deeper color; stalk also has no berries. The flower stems, on the upper portion of the stalk, branch out freely, and impart a pyramidal shape to the head.

Mr. Allen has also a large bed of at least fifty more unknown varieties, procured by chance from some one who imported them direct from Japan, which are real curiosities, hardly possible to account for or describe. Some of them will have all the characteristics of *growth* of many well known kinds, but the *flowers* will be absolutely different; while others will have precisely the same *flower*, and still a peculiar habit of growth. The study of them forms one of the pleasures of the farm.

Next in importance to the Lilies are

The Gladioli.

We herewith give a list of the best varieties, chosen from Mr. Allen's collection:

Agatha.—Fine spike, large flowered, colored red, with an orange tinge in centre, blazed with carmine amaranth, fine clear yellow spots; very fine and exceptional shade.

Cleopatra.—Very large flowers, soft lilac, the inferior divisions of a darker hue and violet tinged; stains striped purple.

Mary Stuart.—Very vigorous plant, very long spike of large well opened and well inserted flowers, white, tinged with rose, and blazed with a bright carminate cherry color.

La Favorite.—Flower large, rose blazed with carmine, lower divisions light yellow, white stripe up centre of petals.

Meteor.—Dark red, very brilliant, large stain of pure white; very remarkable.

Moliere.—Flower very large and wide, perfect, cherry-colored red, with large pure white stains.

Stella.—Flower large, well shaped; ground white, slightly tinted with yellow and rose, and blazed with carminate red.

Belle Gabrielle.—Large flower, perfect shape, fine lilac-colored rose, slightly marked with bright rose; a very superior variety.

James Carter.—Light orange red, very bright, with a large pure white stain; noticeable for its dwarf habit.

Lord Byron.—Very brilliant scarlet, stained and ribboned with pure white; a very showy and exquisite plant.

Meyerbeer.—Brilliant light red, blazed with vermillion, amaranth red stain, large flower, very long spike, vigorous and splendid plant; has a fine perfect shape.

Prince of Wales.—Very bright fiery red, stain white, striped violet, one of the finest of the red varieties.

Madame Vilmorin.—Clear rose and white centre, margined and shaded with deep rose, beautifully striped and spotted with carmine; remarkable for the beauty of its form and grandeur of its flowers.

Reine Victoria.—Pure white, stained with purplish carmine, has a very large open flower; plant very vigorous.

Shakespeare.—Very large flower, perfect shape, white, very slightly blazed with carmine rose, large, rosy stain.

Princess of Wales.—White, flaked with rosy crimson; extra fine.

Napoleon III.—Very bright scarlet, red and white striped in the centre of the divisions; extra fine. For perfection of form we found nothing superior to *Meyerbeer*, it is the gem of the collection.

Among the sorts of more moderate price, within the range of general cultivators, nothing will please better than the *Belle Gabrielle*, *Lord Byron* and *Napoleon III*.

The *Gladiolus* is now one of the most desirable ornaments for every flower garden. To be effective it must be grown in large beds and masses. Perhaps this may be costly, but the enjoyment thereof is the best argument for their use. We think that its culture is to be far more popular than it ever has been, and it only needs one sight at such a glorious garden as this, to tempt more than one hesitant to take the initiative, and plant both *gladiolus* and lilies as largely as possible.

“Characteristics of American Horticulture.”

A PLEASANT, gossipy article, with the above title, was written some four months since by the editor of this Journal for the London Gardener's Magazine. It has awakened the attention of some of our neighbor editors, who fear we may have assigned too mercenary and *profit-loving* a character to the nature of our American horticulture. As we never indulge in contra-criticism with our exchanges, we forbear any such remarks. The best comment upon the truthfulness of our statements is the evidence that they are noticed and have “drawn fire.” We have found, from observation and experience, that the rapid development of American horticultural interests, within ten or twenty years, has been due, *not to the love of horticulture itself*, but to the desire for profit to be gained by extensive planting of fruit trees or vines.

Horticultural literature would be far more interesting and better patronized to-day, if we could blot out the great fruit fevers and manias that have so sadly disappointed our people. The grape fever, the strawberry fever, have come and gone, and strewn the field with mementoes of amateur horticulturists, who started with high hopes, eager for horticultural knowledge, but failed at last.

The blackberry fever, the pear fever, are still upon us, and soon they must pass, and then some new branch will rise, and so it will continue down through the distant future.

The nursery interests of America have been developed to their astonishing extent simply from the extensive planting of orchards and fruit grounds for *profit*.

Our fruit interests have absorbed our entire energies, and proved, at best, only partially satisfactory; and now, when crops so often fail and bring disappointment, the cultivator finds he has followed a treacherous beacon, and, alas! discovers little else that is beautiful and attractive in horticulture.

Our remedy for all this is, place less dependence upon *fruit*, and more on ornamental planting; think more of home, its beautiful trees and flowering plants, its garden, and the pleasures of the flower-bed, the culture of green-house and conservatory plants.

We never knew the joy of any owner of a flower garden to fail, even if he lived to eighty years of age; neither have we ever known the admiration of the genuine *tree lover* to grow less. Yet we find the *orchardist* continually disappointed, and where the heart is gloomy there is naturally little love.

Friends! if you would have horticulture “*grow in grace*” with the American people, year by year, encourage more freely the development of a love for the embellishment of home grounds, flowers, and home gardening. The more we learn of *fruit culture* as an occupation, the less we esteem it in comparison with the still higher satisfaction that comes from a love of rural ornament, and the tasteful grounds and beautiful homes an elevated horticulture will be sure to give us. We would not discourage the culture of fruits for profit, but we esteem the other departments of horticulture far more desirable, and able to satisfy the most worthy enthusiasm.

Small Fruits in Western New York.

THIS has been a discouraging season to growers of small fruits for profit. I presume that a majority of them are heartily sick of the business. Few have realized a fair profit on the crop of 1870. Our large markets have been overstocked, and prices have averaged *very* low. Not that there has been more fruit grown in this country than required by the necessities of our people, but it has not been equally distributed, and there has been congestion at important points, and an inadequate supply at others. While a large portion of our rural population and villagers have not enjoyed all the fruit required for health, more has been thrown on the large cities than could be sold at profitable rates. The consequence has been loss and discouragement to producers.

Now, then, shall small fruit growers plow under their plantations, and retire from the business? I certainly would advise some to do so, while I would advise others to continue in the business, and even extend it. And again, I would advise many others to engage in it. The fact is, there is a constant and rapid increase in the consumption of fruits in this country, calling for a corresponding increase in production; but for the last five or six years there has been an increase in production out of proportion to the increase in consumption, and the result is a glut.

Our rural population are subject to *manias* that sweep over the country like an epidemic, leaving prostration and ruin in its track. Any one familiar with our rural history can recall many such manias—the *morus multicaulis* mania, the thoroughbred stock mania, the tobacco mania, the hop mania, and the horticultural mania.

The profits of these various branches of husbandry have been, in their turn, enlarged upon by rural journals, until many were induced to engage in them to their loss.

Many farmers have rushed into small fruit culture who should not have done so. Their mental habits and characteristics were not adapted to the business, or they cultivated too much land, or they were too far from markets and cheap labor.

Except in rare and exceptional cases, large farmers cannot profitably carry on small fruit culture in connection with the growing of ordinary farm crops. But there are always lying in the suburbs of cities and vicinities of villages, small places that will in coming time be required for city or town lots, that can, in the meantime, be profitably devoted to raising fruits and vegetables for the supply of the adjacent markets. Cheap labor, manure, and convenient markets—the indispensable accessories of horticulture—there exist.

Varieties.

And now, what has the experience of another year developed in regard to the most profitable varieties to cultivate? In strawberries, I confess I find nothing to supplant Wilson, Triomphe and Jucunda. Charles Downing has great vigor of plant, and is a good, bright-looking, fair-sized berry, but I am not satisfied that it will equal either of the above in productiveness. Perhaps in some soils and seasons, owing to its great vigor, it might do better than Triomphe and Jucunda, but in ordinary seasons and good soils the latter would produce the most money. On light soils, perhaps Barnes' Mammoth would produce more than Triomphe and Jucunda. Peak's Emperor is an excellent family berry, but its dark color is against it as a market berry. Next we come to

Raspberries.

The blackcaps are the best suited to a majority of our cultivators. They will endure greater extremes of climate and more careless culture than the red varieties.

Davison's Thornless was the first to ripen. It was nearly a week earlier with me, this year, than Doolittle. In quality, size and product, I could perceive no difference. Mammoth Cluster ripened about a week later than Doolittle, and even in this year of depression I derived some profit from it. It sold readily at 20 to 30 per cent higher than Doolittle, and I sold 60 per cent more from the same ground. Seneca—Although I have not fruited it myself, from information derived from those who have, I should place it next to Mammoth Cluster on the list. I would plant Davison's for early, and Seneca and Mammoth Cluster for succession, giving the latter decided preference. For size, quality and productiveness it stands pre-eminent.

Red Raspberries.

In the list of red raspberries for market, I still give the Franconia preference. But I wish to be distinctly understood that it will not succeed on poor soils, or under careless treatment. In rich, warm, mellow soils, and good culture, I believe it will produce as much fruit as the Philadelphia, and it will sell for 50 per cent more. But under less favorable conditions, the Philadelphia would probably be the most prolific. Kirtland is quite a profitable variety, owing to the earliness of its ripening the entire crop while prices are high. It is very hardy and vigorous—fruit sweet, rather dry, and small. Clark—Perhaps all things considered, Clark is the best family berry. The vigor and hardness of cane, and the size, color and quality of fruit, are greatly in its favor as a family berry. I am not satisfied that it is productive enough for market, although if its numerous sprouts were persistently cut down upon their first appearance, it would probably be more productive.

All kinds of small fruits have ripened with us, ten or twelve days earlier this year than for several past seasons. The very dry spring diminished the strawberry crop materially, but the quality was excellent. The blackberry crop is fair, but not large. I think it has been affected more by the drouth than raspberries.

In conclusion, small fruit growers have need of a plenty of patience; but I believe that those who hold on will find that the business will yet regulate itself, and again become profitable.

ROCHESTER, N. Y.

P. C. REYNOLDS.

An Hour at the Ellwanger-Barry Nurseries.

A VERY pleasant visit of but one hour was spent lately by the Editor in the garden and grounds of Messrs. Ellwanger & Barry, Rochester, N. Y. The attention of the visitor, as he enters the gates, and approaches the office, is attracted by a clean, well-cut lawn, with here and there a beautiful *entre piece* of ribbon gardening, flowers, or ornamental plants, the sides of the enclosure affording room for a charming display of ornamental trees, shrubs and evergreens. For instance, here is the *Pinus Ponderosa*, the largest specimen in American cultivated grounds, towering up 35 feet in height, while by its side is the *Sequoia*, 30 feet, with a circumference of $3\frac{1}{2}$ feet at the base. The *cut-leaved Weeping Birch*, which has become now so common, and yet so beautiful, as a lawn tree, was first imported by them from Hamburg, Germany, and is now twenty years old. It towers up in graceful feathery limbs 60 feet in height, the finest specimen we have ever beheld. The *Abies Morinda* is represented in a very good specimen tree, 15 feet high, and the only *hardy* tree they have yet succeeded in introducing. The *Oak-leaved Mountain Ash* swells up its round, compact form 25 feet in height, while not far off there stands a magnificent *Weeping Beech*, fit for any kingly garden. We know of nothing so ornamental, except the one royal specimen in the grounds of Messrs. Parsons & Co., Flushing. The *English Walnut* is as thrifty as our native American Walnut, and numerous trees were scattered through the grounds, varying from 25 to 40 feet high, and fruiting finely. Close by the gate is a good specimen of the *Virgilia Lutea*, 30 feet high, stretching forward its long, slender branches, and when in bloom, filling the air with its fragrance. The *cut-leaved Alder* is also not to be forgotten in all ornamental grounds; a fine low symmetrical tree, with beautiful leaves and slender branches. Directly in front of Mr. Barry's residence is a group of ornamental plants of peculiarly ornamental effect. In the centre are several varieties of *Canna*, and a specimen *Palm*. Surrounding these are the best varieties of *Coleus*, and some beautiful plants of the *Amaranth*, grown this year from seed, a fine *Colocasia*, and a ribbon line of *Mountain of Snow Geranium*. Not far off is still another bed, filled entire with *Gen. Grant Geranium*, shining brilliantly with its flowers of gorgeous crimson. A hasty walk through the fruit grounds, where the trees are overhanging with plums, pears and dwarf apples, added to the novelties we had already seen, and tempt us to "call again," for a more extended tour.

Among the Flowers or Gardening for Ladies.

BY ANNE G. HALE.

III—Continued.

Standard Parlor Plants.

OF all woody plants that are suitable for parlor culture, the *Daphne*, especially *Daphne odorata*, deserves the first mention, for it flourishes under the most adverse circumstances; patiently putting forth group after group of its glossy persistent leaves, each group through the winter months wearing right royally its cluster of pearly blossoms, whose delicate throats constantly distil a most delicious fragrance.

In foliage this shrub greatly resembles the laurel, and hence bears the name of that beautiful maiden who being beloved by Apollo, but not favoring his suit, besought the gods for aid in escaping him, and in answer to her prayers was changed into a laurel-tree.

Though the daphne is capable of enduring heat and dryness, it grows most luxuriantly in a cool, moist atmosphere; and it should be frequently syringed with tepid water, its leaves kept clear of dust by washing them often with a soft sponge. Give it a soil of garden earth mixed loosely with a little vegetable mould or stable refuse and a small quantity of sand. In May prune it closely to make it grow tall and symmetrical; at the same time re-pot it, and then keep the plant in the shade with slight watering till September; then give it sunshine and water freely. In early October take it to the parlor. Of the prunings make new plants by immersing the stems in a bottle of water and keeping the bottle in the sunlight till it is filled with white fibrous roots; these roots are very tender, and when they are placed in soil care must be taken not to injure them. The young plant must be kept under a bell-glass or an inverted tumbler for a fortnight, with a scanty sprinkling of tepid water every morning. It should have the sun three hours, at least, each day; but make the air of the room moist and let it not rise above 58° by day or 45° by night, if you would promote its rapid and healthy growth.

The azalea, of which we have several native species, has, of late years, become a favorite house plant; the foreign varieties, with their large and more showy flowers, are, however, most generally cultivated. Of these *Azalea alba*, originally from China, with its double white blossoms is very beautiful; but a *rubra*, a highly improved native variety, bearing crimson flowers, is also a desirable plant. The word *azalea* comes from the Greek and signifies dry; the plant should have a dry, light soil of leafmould and loam, and be sparingly watered,—yet the roots must never become dry. It needs a temperature of 65° by day, and flourishes best in the coolness of 40° or 45° for its night's rest. Trim and re-pot azaleas in May, and use the cuttings for making new plants; start them in moist sand under glass. Set the old plants in the shade out-of-doors in a warm situation till September. Water the plants with the stimulant mentioned in a former paper as soon as flower buds appear, and continue it once a week till blooming is over.

The fuchsia, always graceful and elegant, is highly esteemed by all amateurs in floriculture. It is a tropical plant of American origin; carried first by a poor sailor boy as a gift to his mother in England, under whose care it attained so much beauty that it attracted the attention of a florist, who purchased it at a large price and made it the subject of numberless experiments, resulting in still greater beauty of form and color. From these have sprung all the varieties now under cultivation, of which it is useless to particularize any, they are all so beautiful. The plant was named in honor of Fuchs, the German botanist.

Garden earth and leafmould in equal proportions suit the fuchsia, and it needs a plenty of air and water. Raise it from a cutting rooted like the azalea. When it is six inches high pass a stout rod or wire into the soil near its stalk and to this tie the stalk loosely. As branches are thrown out pinch off, when very young, all that would interfere with its open symmetrical growth, and serve all shoots from the root in the same manner. Fuchsias must have plenty of sun and free watering, and careful cleansing with a soft tooth-brush or sponge, to keep them clear of insects. When the stem is two feet high, cut off its head and trim back the branches so that no support is needed. When other branchlets are thrown out, rods may be arranged just within the edge of the pot, to which these should be tied till they droop gracefully without warping the main stem. After blooming, cut back

every branch beyond its drooping, take the plant from its pot, wash all soil from its roots with lukewarm water, re-pot it and close the hole in the bottom of the pot with a cork, or something of that sort; then sink it to the brim in a garden bed. In September take it in-doors and treat it as directed for azaleas, except that it needs more water.

The oleander, *Nerium odorum*, a species of laurel, is such a fine plant for winter blooming it ought to be seen in every parlor. Start this from a cutting rooted in the same manner as the daphne. Give it a soil of leaf mould, sand and garden earth, with pulverized charcoal; if you use the liquid stimulant freely the leaf mould may be omitted. A handful of old nails in the pot of an old plant gives the rose-colored oleander a deeper color. The white variety should be kept in the shade after the flower-buds begin to open, but the rose-colored, if profusely watered, needs all the sunshine possible. This is a thirsty plant; in its natural state it lives along river banks, and on this account received its botanical name.

In May the oleander should have new soil for its year's growth. While it is of moderate size this is easily furnished by re-potting, but a large plant may be kept several years in the same pot if the old soil is scooped out from among and around its roots and new soil filled in. A large iron spoon is convenient for this purpose. Care must be taken not to cut or bruise the roots at this time. After renewing the soil keep the pot in a shady place where trees cannot drip upon it nor worms enter it. Water it just enough to save the soil from crumbling, and pinch out all flower-buds till the last of August; then give it more water and sunshine. In September bring it within doors; accustom it gradually to a higher temperature till it can be taken to a warm parlor (it does well at 60°), and at Christmas its large clusters of rose-like blossoms, heavy with fragrance, will be the delight of all beholders. The foliage needs frequent washing to ensure the health of the plant and its steady blossoming. If kept clean and furnished with air and sunshine and plenty of water, it will remain in bloom several months.

The myrtle, with its fragrant evergreen leaves, though yielding so few and such small flowers, is so easily reared, and makes such a fine parlor ornament, that it will always be a universal favorite. Get cuttings from new branchlets and root them under a glass in wet sand; then transplant to good garden soil. Water it freely, wash it often; showering or syringing is not enough to rid it of dust and insects; give sunshine two or three hours of each day and it will grow luxuriantly. In May trim it to a handsome shape, re-pot it or give it new soil as for the oleander, and treat it through the summer and autumn as directed for that plant.

A beautiful parlor tree (it soon attains the height of eight or nine feet) is the abutilon, with its maple-like foliage and its bell-flowers of gold and crimson. Garden soil, loosened with sand, agrees with the abutilon; but if this is too rich, or if the air of the room it occupies is close and hot, it will not bloom; so give it air frequently, shielding it from draughts as you would a geranium, and water it well. Prune this tree in the spring, and root the best of these prunings in wet sand to get new plants.

The *Camellia japonica* is a desirable window plant, and its flowers are in great request for bouquets and decorations, particularly the double white varieties; but these are less hardy than the crimson, which, in a moist atmosphere, are as easily reared as the daphne, and require similar treatment. Propagate the camellia in the same manner as the daphne. Give this plant plenty of water when in bud and bloom, or the buds will drop; but apply it directly to the soil, the flowers are injured by sprinkling; and never shower the foliage when the sun shines upon it lest the leaves should be blistered and spotted.

Dwarfed orange and lemon trees, whether in flower or fruit, are a fine addition to any collection of plants. They may be raised from the seed or by rooting a slip of new growth in damp rich soil under glass. Good garden loam, sand and decayed leaves, in equal proportions, plenty of sunshine, moderate but regular watering, and a temperature of 60° by day and 45° or 50° at night, are requisite to keep them in good condition.

Very few roses thrive in the parlor except the old fashioned tea and Bourbon varieties; but any of those are beautiful enough to suit the most fastidious taste. These may be raised from slips of recent growth, rooted in wet sand. But a surer way is said to be by layering. For this a thrifty branch has its stem partially severed, and the cut thus made is buried just beneath the surface of the soil. When it has taken root the branch is cut

cleanly from the parent stalk and is given a new home in another pot. Roses need a rich moist soil; loam and leaf mould in equal proportions is the best, and slight but frequent watering of the soil. Their leaves should be showered daily except when the buds are opening. The flowers retain their beauty much longer when kept from actual contact with water, but need large supplies of moisture from the soil. They seem to enjoy the morning sun; but his noonday beams are too much for them. A moist atmosphere of 60° gives a healthy growth and bloom. Prune and thin out the branches, cut them back two or three inches on each flower stem and then re-pot them in May, and keep the plant in the shade with only water enough to prevent its wilting, till August or early in September. Set it then in a sunny but airy room and increase the water.

Strawberries in the South.

THE following is a report of experiments this Spring, by C. C. Langdon, Mobile, Ala.: *Wilson's Albany*, which fully maintains its reputation as the most prolific, most reliable, and, all things considered, the best market berry. Of uniformly large size, handsome appearance, good, but not high flavor (much better, however, than at the North), firm texture, hardy and vigorous, even in our hottest and dryest seasons, it still remains without a rival as *the* strawberry for "the million." However, as second only to the Wilson in this respect, we esteem

Longworth's Prolific.—Indeed, in consequence of its earliness—being fully a week earlier than any other variety we have grown, and ten days earlier than the Wilson—we consider it an indispensable accompaniment to that standard variety. The fruit is about the same size, of better flavor, and the plant equally hardy. Longworth, therefore, should not be omitted in any Southern collection.

Triomphe de Gand—is still one of our special favorites. Although not so prolific as the Wilson, and, the fruit, being more tender, not so good a market berry, yet it is decidedly larger, of superior flavor, and of more splendid appearance. The plants are also perfectly hardy and very vigorous, and, in good soil with high culture, may be relied upon for a fair crop of the most magnificent fruit, in all seasons.

Russell's Prolific—is another splendid variety, inferior to the Triomphe in no quality except in the hardness of the plant. In this respect, however, it has the present season in a great measure retrieved its character, by the production of a fine crop of fruit of unrivalled beauty and excellence. All that is necessary to place the Russell at the head of the strawberry list, is an assurance that the plant will stand the climate.

Agriculturist—has also done well this season, and, in its general characteristics, is entitled to a place alongside the Russell. It is, however, not quite so productive, nor even so hardy. In size, beauty and flavor, however, it is fully its equal.

Peak's Emperor—is with us a new variety, for the first time tested. In the appearance of both plant and fruit, it is similar to the *Agriculturist*, and we think will prove identical. If there is any difference, we cannot "see it."

Barnes' Mammoth—is another new variety of very great promise. Of immense size, good flavor and great beauty, the plant hardy and productive, we look upon it as a candidate for "the highest honors." It is, without exception, the most magnificent fruit in our collection.

Charles Downing, Seth Boyden No. 30, Durand's, Starr's and Stinger's Seedlings, have all been partially tested, and are certainly very promising. All seem to stand the climate, having yielded fair crops of very large fruit of the finest quality. We commend them, with a great deal of confidence, as varieties of decided merit.

Green Prolific, Fillmore, New Jersey Scarlet, Hooker, French's Seedling, Eclipse, Downer's Prolific, Hovey, McAvoy's Superior, Bartlett, Romeyn Seedling, Mary Stewart, Trollope's Victoria, Imperial Scarlet and Walker's Seedling—some old and some new—are all varieties of merit, but have more or less of defects, which, in comparison with the superior varieties above named, render them unworthy of cultivation.

Nicanor—grows quite vigorously, producing a fair crop of very good, medium sized fruit. But as it is under size and nothing extra any way, we "vote it out."

Napoleon III—started off nobly in the spring, exciting "great expectations," but under the first hot sun of May, "fizzled out."

Jucunda—is a dead failure. The last of a hundred plants obtained from Mr. Knox three years ago, has departed. The plant will not stand our climate.

Colfax—is small, soft and sour—as utterly worthless as it is possible for a strawberry to be. We have spaded all our plants a foot under ground.

Horticulture in Iowa.

WE had a meeting of the Iowa Eastern Horticultural Society, at Iowa City, June 22 and 23. It was a busy time of year, yet it was well attended; besides, we had six distinguished horticulturists from Illinois, who gave us valuable assistance at this our first meeting, in this our time of need.

We adopted a constitution and by-laws, and fixed the time for our annual meeting the third Wednesday in December, and the next meeting at Iowa City.

The following list of apples was recommended for general cultivation in our district: Red June, Sweet June, Red Astrachan, Duchess of Oldenberg, Benoni Fall, Maiden's Blush (this superb apple has proved a tender tree, and it was recommended to graft or bud up from the ground), Cole's Quine, Autumn Strawberry, Lowel, Baily Sweet, Fameuse, Winter, Jonathan, Demine, Talman Sweet, Minkler, Rawles' Janet, English Golden Russett, Ben Davis, and Willow Wtig.

This is a short list, but we are apt to get too many varieties in an orchard. I would like to say something about many other varieties, most of which are not sufficiently known to recommend for general planting. I have a variety called Alerson's Early, about as early as the Early Harvest—a better pie apple, a better bearer. It needs further trial, but with me it is number one for an early apple.

The Warfield is with me in competition for favor with the Duchess of Oldenberg. Both fine trees, early and abundant bearers, very handsome, fine market varieties; season of both, August and September. Kentucky—best market and cooking September apple. The Dyer for eating, but it is too soft and tender for market. I would not substitute the Kentucky for Cole's Quine in the list. The Iowa, a native of Washington county, Iowa, which is proving itself worthy of further trial—a superb, large, late fall apple; very fine tree. I wish it to be understood that I only name those varieties that we can raise here, in Iowa and Illinois. Your Greenings, Baldwins, and Newtown Pippins, are played out with us. We can raise them, but not *profitably*. Those I name are such as are adapted to our climate, grow thrifty, fill the basket, bring the cash, and satisfy the purchaser.

Jefferson County—described by Downing as a native of Jefferson county, N. Y. I have three trees in bearing, and I presume it is doing better here than in its native place, for it is one of my very choicest winter apples, so delicate, handsome and good. Tree very fine.

Grimes' Golden is the coming apple, equal to the Newtown Pippin; the tree and product all right. Many of us nurserymen are propagating it largely, and it is going to be set in the orchards.

We very much need an apple, good in quality, and that will keep till July. We have several of second rate quality that will keep and do tolerably well for pies and tarts. A friend of mine brought last winter, from Chester county, Pa., just the apple we want. I took a few of them to the meeting of the Illinois State Horticultural Society, at Ottawa, and had Messrs. Barry, Dr. Warder, and several distinguished pomologists taste them, who pronounced the quality "very good," and when I told them the apple would keep until July, they said then it was a valuable variety. My friend also brought a few scions in bad condition, but I see six of the root grafts are alive.

So you see we are making diligent effort towards progress in this line. I have very many other similar varieties which are not sufficiently brought out yet to say anything about.

I am getting a little tired of the nursery business; but how can I stop, just as I am getting well into the harness, and am vain enough to think that I am making myself a little publicly useful, if not privately. I have a specimen orchard, into which I set a couple of trees for trial, but I don't set everything there. I try to use some judgment. I haven't got the Mexican Everbearing Strawberry there, nor anything so unworthy my grounds. In looking about my orchards, the other day, my aged and discreet friend said, when I showed

him my specimen orchard, that it would not be very profitable. I acknowledged the truth of what he said; but then there is a wider view to take of it, and "distance lends enchantment."

Grapes.—We recommend the Concord. We have tried a great many others, and some with a good degree of success, but not generally. I have on trial, Ives, Martha, and a favorite of Captain James Matthews, of Knoxville, which he obtained of Mr. Rogers as No. 13*; but it is not that, nor can Mr. M. find a name for it. He says it is the best grape and vine he has ever found out of some fifty varieties he has tried.

Trees.—Evergreens, shade and forest trees, for our treeless prairies, has been the great theme of all our horticultural meetings which I have attended for two years past. Robert Douglas, when pressed with the question, gently laid aside his very retiring modesty, and said that he would estimate the number of Evergreens and European Larch, two and three years old, that he had transplanted, at 1,000,000, and those in seed beds, one and two years old, 20,000,000. So you see our works and our faith go together. SUEL FOSTER.

Cultivation of Asparagus—Should it be Eaten Green or Blanched?

EDITOR HORTICULTURIST: Noting what you say in the July number of your most excellent Journal on the subject of Asparagus, I beg leave to furnish some details regarding the practice pursued here, where the culture has long been prosecuted in the most successful manner—I mean in Virginia, and particularly by the market gardeners around Richmond.

It has been thirty or forty years since two brothers, residing near that city, John and Curtis Carter, abandoned the old method of crowding the plants. I remember seeing the plantations of both of these gentlemen many years ago. Mr. J. C.'s was in rows five feet apart, with the plants from two to two and a half feet in the row; while Mr. C. C. gave even greater space, the plants standing four feet apart each way. Two important objects were gained by allowing so much distance, namely, the saving of manure and economy in the cultivation. It had also the advantage of affording plenty of earth for blanching. During their day, and down to the present time, it is believed that no finer asparagus is anywhere grown than that with which the Richmond market has been annually supplied.

To be somewhat more specific in describing the mode of treatment, I will add that ridges were raised every spring over the plantation in rows, and mounds over that, in which the plants were equi-distant—high enough in both cases for blanching purposes. As soon as the cutting was over, the surface was levelled, and the ground plowed and kept clean during the summer. On the approach of winter the beds were cleared of all rubbish, and Mr. C. C.—whose management I noticed more particularly—laid about half a bushel of manure over the crown of each plant. This was worked in the soil early the next spring, when the mounds were renewed. I have seen him cut stalks eight inches long, of the purest white from base to crown, and uniformly large. He estimated that each plant would yield a bunch during the season, equal to upwards of 2,500 bunches to the acre. Asparagus is a ravenous feeder, and even at greater distances than those mentioned above, the roots will form a perfect network, occupying the whole ground in the course of three or four years.

In Virginia, as far as my observation extends, asparagus is always preferred blanched. The time to cut is when the crown cracks the surface of the bed. Any apprehension that it may be unwholesome at that stage is wholly groundless. When cut above ground its exquisite flavor is in a great measure lost; under the influence of the sun the taste soon becomes strong and grassy. We bleach celery, endive, and other plants; why should it not be equally beneficial in the case of asparagus? Cutting before exposure to the air would also act as an effectual protection against the fly, the existence of which is unknown here.

Our mothers, in preparing this vegetable for boiling, took the pains to divest every stalk of the tough rind which envelops it. This is done by shredding, beginning at the large end. The practice seems to have fallen into disuse, perhaps because it is too troublesome. But if any of your lady readers—who would like to serve up this superb dish to their hus-

* See *Western Pomologist*, July, page 89.

bands in its most tender and palatable form—will but try the experiment, my word for it they will receive the commendation which is so acceptable to every good housewife.

T. S. P.

“Is the Croton Grape a Hybrid?”

S. MILLER, of Bluffton, Mo., in the last number of THE HORTICULTURIST, in speaking of the Martha grape, also says—“the Croton, from all accounts, may be superior in quality, size, etc., but we must wait to see if it will prove hardy and free from mildew. If it is quite exempt from the latter, and hardy, it is the first *Vitis Vinifera*, except Weehawken, that we have tried. Any one who thinks it a hybrid will find themselves mistaken. If it escapes mildew, I am the better pleased that it is a full-blooded foreigner; for then we have a large white grape of great excellence, from all we have heard of it.”

As the Croton exhibits some peculiar characteristics on well developed bearing vines, not found on young vines, let me explain a few facts concerning its history.

The Croton vine was grown on a place where the nearest foreign vine was nearly two miles distant; no foreign fruit brought on the place for years before or after the seed was planted. The seed was grown on a Delaware vine, in a vineyard; was fertilized with pollen brought from a distance, and planted in a hotbed in soil not obtained near a dwelling, or where there was a chance of a raisin seed being in it. When six inches high, was transplanted without soil on its roots, in a nursery row in the open air; grew the same season about five feet; was transplanted the following spring, and notwithstanding its only shoot was broken off when it had grown nearly two feet, it made sufficient growth to bear the following season, and has not since failed in producing a crop of the most beautiful fruit I have ever seen grown in the open air. There were several other hybrids in the same lot with the Croton, all except one of which resembles the Croton more closely than either of its parents, or any pure foreign or native vine I have seen. Besides the positive proof in its history of its hybrid character, there are as many peculiarities of the vine as in the average of the hybrids that indicate it. The foliage, in size and form, is intermediate between its parents. It has considerable down on the under side, the small ones being quite white, it becomes very thin on the half grown ones, but re-appears again on the old leaves, which have about one-half the quantity of the Isabella, and a great deal more than the Delaware. Its full grown leaves are remarkably thick, being equalled by very few native varieties, and contrasting strongly with the thin foliage of the foreign grape.

It also resists mildew much better than either the Delaware or Isabella, having produced splendid crops among Isabella vines in seasons when both of these varieties almost entirely failed, on account of mildewed foliage, which is evidently not a foreign trait. It, therefore, in three very important and decidedly native characteristics, exceeds its native parent, which cannot be said of one in hundreds of hybrids.

In the stout growth of its shoots, the peculiar appearance of the young shoots near their ends, and gloss of the young leaves, it resembles its foreign parent, to which, as a hybrid, it has a perfect right.

Its wood, though resembling the foreign in its form, closely resembles the Delaware in its internal structure, being hard, and rooting slowly like that variety. It also resembles it in outward appearance when ripe. The color of the growing shoots, leaf stems, curls and stem of fruit, are very red, far exceeding in this respect either of its parents, or any pure native or foreign vine with which I am acquainted, although I have several hybrids of different parentage from the Croton that equal it in this respect, and a large number which exceed either parent. I therefore consider the color as decidedly indicating its hybrid character. Although the fruit is foreign in its appearance and flavor, it also resembles the Delaware in some respects. The berry is intermediate in size between its parents, but the bunch approaches the foreign grape. The flesh separates from the skin like a native variety, which is as delicate in its texture as the finest foreign grape.

The Croton grape is now being tested in North Carolina, Tennessee, Missouri, Kansas, and every State north of these, except Vermont and Rhode Island.

I also planted, last spring, two acres at Vine Valley, Yates county, N. Y., for the purpose of testing its value as a market grape.

STEPHEN W. UNDERHILL.

Horticulture in Salt Lake City, Utah.

ON our tour to California, we spent a few days very pleasantly at Salt Lake City. The houses of the inhabitants are embowered among hundreds of choice shade trees, along all the public streets, while the gardens are full of fruit trees of great health and luxuriance. We could hardly believe that, only a month before hand, a plague of grasshoppers had descended from the mountains and cleared the gardens and trees of every living leaf, and now all was bright and cheerful again. The trees were loaded with fruit, and apples, pears, plums, apricots, and cherries were hanging with ripe specimens from nearly every tree. It is curious to see the apples hug the branches and stem, as closely as if fitted for their place, while with us every fruit hangs from a twig or dangles from the end of a limb. The climate is exceedingly favorable, frosts rarely occurring after vegetation has really started in the early spring. The days are always pleasant, rarely very warm, the nights always cool, with agreeable breezes, and the abundance of water for irrigating purposes, favors the growth of almost every species of fruit. Elder Smith showed me a row of apricot trees, planted eight years ago from seed obtained from the Department of Agriculture at Washington. They had been fruiting four years, were an average of fifteen feet high, and proved to be of four different kinds. The specimens we saw, left from the attacks of the grasshoppers, were as large as a good sized peach, and fair quality, but not as delicate in flavor as our own varieties of the Atlantic States. The peach trees have more compact heads, less spreading, leaves are of a deeper green, leading shoots do not grow quite as long. We have more side shoots than they, but the entire top of their trees is a mass of dense leaves. No curculios, borers, or insects of any description are known. The yellows have never been seen, and apparently there is no natural enemy. The apple tree bears two years from cuttings or grafts, and fruit is beautifully colored. Several specimens of Red Astrachan, Sweet Bough apples, attracted my special attention; the latter for its size, being twelve inches in circumference; the former for its deep bloom, which where brushed off, revealed a brilliant red colored surface, equal to the tints of the rainbow, or the finest sun painting on the clouds of a sunset sky. We have nothing to equal it. Undoubtedly the dryness of the climate and the soil, composed of the washings of the mountains, helped materially in the rich coloring of the fruit. All the soil is full of mineral matter, and this exerts its natural effect in high color.

A Model Garden.

The best garden of the place is that of Mr. William Jennings, the richest man of the entire territory, and a successful merchant, who favored us with conveniences for a visit to his garden. His home grounds occupy about five acres, devoted almost entirely to fruit. A lovely lawn in front of his house, with its deep velvety green carpet, was skirted with rows of flowers, fuchsias, dahlias, roses, geraniums and lilies. From the balcony windows of the parlors, we catch an exquisite view of the snow-capped mountains of the distant ranges.

The city is surrounded in all directions with lofty peaks, varying from ten to fifty miles distant; and many with snow-topped summits, glittering bright and brilliant against the deep blue sky.

Cherries are a favorite crop with the proprietor, several varieties being planted, of which the Napoleon Bigarreau is most favored. The flavor is more rich and exquisite than with us, but it is not so finely colored. With the other kinds the family enjoy cherries for a season of six weeks.

Peaches were thriving admirably. In fruiting time they have gathered specimens fully thirteen inches in circumference.

Strawberries are abundant, and throughout the entire bed will average four inches in circumference. The Wilson and Longworth Prolific are the best. Agriculturist, Jucunda, and a dozen others imported from the Atlantic States, have proved a failure.

Grapes are successful beyond measure. The Black Hamburg, which we in the East must grow under glass, here is free and luxuriant in the open air; as also are the Chasselas, Sweetwater, White Frontignac, etc. Bunches of the Sweetwater have often been picked as big as a man's hat, and weighing over ten pounds. Gooseberries are large and sweet, almost of the size of crab-apples.

The Delaware, Union Village, Catawba, and a few other Eastern vines, are grown with success; and yet are mere pigmies by the side of the noble Hamburg and Chasselas. Apricots, almonds, mulberries are everywhere successful, while currants are luxuriant to a fault.

Asparagus is fully equal to some of the specimens of our famous Conover Colossal. Of Plums, the Green Gage and Magnum Bonum are much the finest, still not very productive. Potatoe beds had suffered greatly from the "hoppers;" the leaves had been stripped and the tubers become watery. Still, very fine specimens of the Early Rose were dug and pronounced of superior flavor by Mr. Jennings. The Ash Leaved Kidney is also successful, being perhaps the finest flavored of all he had tried. The White Ash Leaved is nearly equal to the Early Rose. Mulberry trees are very thrifty. The people are now engaging in their culture for raising silk. The growth is very rapid, usually four feet a year, but Mr. Jennings mentions several instances of eleven feet a year from cuttings. The Sweet Almond is at home by the side of the Plum and Peach, bearing fruit.

Mr. Jennings has some very fine vines of the Mission Grape, so universal in California. They bear large loose clusters, have short but very thick jointed shoots, some of the joints being nearly an inch in diameter. The fruit is fine for table, and universally made into wine. The Buckland Sweet Water Grape grows with perfect vigor and produces bunches large enough to fill a hat.

The Muscatel is also adapted to the climate. Specimens were shown us of an *Improved Rocky Mountain Currant*, berries as big as cherries, and $2\frac{1}{2}$ inches in circumference. The bush is large, fully six feet broad, and above four feet high; color of fruit deep black; flavor sweet for a black currant, but best fitted for preserves. On the posts near the entrance to the house, were specimens of the Mexican Cacti, thriving in the open air; what a singular sight to behold, on the one side apples from the East, grapes from the West, tropical plants from the South, the almond from Europe, flowers from the Atlantic States, lawn grass from England, while over topped by all are the unchanging mountains, always girt with snow, and picturesque in their contrast with the verdure beneath.

Mr. Jennings place is an exception to the general character of the gardens of the inhabitants. Some are very neat, but usually the gardens of the Mormons are not well kept; perhaps the devastation of the *hoppers* has taken away their enthusiasm, for we saw an abundance of weeds in many gardens, and not a soul working therein.

Evidently everything is left to climate and water, and only at occasional long intervals the gardener appears and cleans out the weeds.

The soil is dry and gravelly. It would naturally be poor and worthless, but the long streams of water come rolling down, and behold the leaves grow of a deeper green and their life is renewed again and again.

H. T. W.

SALT LAKE CITY, UTAH.

"Dyehouse Cherry."

BY HENRY T. HARRIS, STANFORD, KENTUCKY.

IN the March number of the *Horticulturist*, as well also in its June number, I gave the history of what I consider a new seedling cherry, and have named it "Dyehouse," in honor of the old gentleman upon whose grounds it originated. In the *Rural New Yorker*, of a recent date, I also gave a brief history; and with a view to determining its identity, I sent some of the bloom, in April last, and some of the wood and leaf, to F. R. Elliott, of Cleveland, Ohio, for his opinion. From these, Mr. E. concluded that it was the "*Belle de Sceaux*." The latter part of May, I sent him some of the fruit, not then fully ripe, in water, and it arrived in a damaged state. Judging from these specimens, Mr. E. still thought they might be "*Belle de Sceaux*," or "*perhaps* a seedling, and *new*." Again in June, I sent him some ripe fruit, put up in cotton, which arrived in good order, and Mr. E. then pronounced them the "Early Richmond" or "Early May." Such, now, is his candid opinion, and doubtless he believes it correct. I must, however, beg leave to differ with him; as I had some E. R. cherries sent me about the same time, from a friend in Illi-

nois, and on placing the two fruits side by side, a very marked difference is discoverable by any one. This new cherry of mine is larger, firmer, sweeter, of *different shape*, and every way more desirable. From information derived from various sources, the trees are even more different in shape, size, and habit of growth, than their fruit. Why should it not be possible that this is a new seedling? Is not Nature continually at work giving us variations? It is not only *possible*, but highly *probable*. From all the circumstances heretofore detailed by my former articles, the reasonable presumption is, that in the "Dyehouse Cherry" we have found the choicest fruit of its class.

I am not a nurseryman, nor do I depend upon fruit tree growing for my living. I am only an amateur cultivator for home supply, and my only object in bringing to public notice this fruit, is to enable others to share in its enjoyment.

Country Residences of our Merchant Princes.

How they look and who they are—A day on the Banks of the Hudson.

IN no country can so beautiful, so imposing, so natural, and so diversified a scene be had as on our majestic Hudson river. I have no doubt but if it had been discovered before the Rhine, it would have gained greater popularity. It has another feature of interest which no other river can boast of for its time—that it supplies homes to as fine and as rich a number of merchants and private gentlemen as any other river in the world.

I had occasion lately to visit Irvington, and at the same time to see some of the principal places in that locality. My first place was that of Mr. J. E. Williams, President of the Metropolitan Bank of this city. Not finding Mr. Williams at home, I sought his gardener, M. Castillo, who kindly conducted me through the grounds. His house stands some one hundred and fifty feet above water level, and commands a fine view of the river. It is also new, being only finished last spring. It is built of gray stone, roughly cut, and contrasts finely with the surrounding foliage. The roads and walks are constructed of the best possible material. After the regular draining and stoning is finished, about ten inches of broken limestone is laid on, about the size of beans. The stones come from Kingston, and are broken by steam power, the cost of which I could not find. The whole appearance of the grounds is picturesque; the land irregular, which gives it a rolling appearance to the water's edge. There are also some fine specimens of the following trees: Hemlock, spruce (*Abies Canadensis*), red cedar (*Juniperus Virginica*), American lindens (*Tilia Americanus*), &c.

Next I entered the grounds of Mr. D. G. Morgan, and through the courtesy of his gardener, was shown the place. In the first place I must say that Mr. Morgan's place is well kept, and his gardener thoroughly understands his business. When you enter the place from the turnpike road, you are at once struck by the beauty of the lawn; and although it is only about five acres in extent, yet it looks to be twenty. The characteristics of its grounds, planting, surroundings, contrast of foliage, are all so situated as to make the place look three times the size it really is. In fact, the beauty of the lawn, the green so velvety, at points massed with trees and shrubs of the rarest kinds, backed by the river and the opposite hill in the distance, is something which I should dearly like to be able to describe. The vinery is of the oldest style of architecture, but the grapes are fine; and as I looked them through, I thought some, and most all, of our American grape growers could learn a valuable lesson here. Here, for the first time I have seen, growing in private gardens, I am able to speak of the new Coleus. Of the very late ones are Her Majesty, Princess Royal and Setting Sun. Of these, Princess Royal is decidedly the best. There are many old ones, such as Verschaffeltii, Veichii, etc.. Amongst the grapes are Black Hamburgh, Muscat, Hambro, Muscat of Alexandria, Royal Muscatine, Victoria, Hamburgh, Wilmot's H., etc. Black H. and Royal Muscatine were ripe.

I next come to the place of Mr. Moses H. Grinnell, of the custom house; and as there is not much to interest me beyond a fine old farmed place, I leave and enter the grounds of Mr. Wm. Moller, sugar refiner of our city. Mr. Moller has spent considerable on his place, and amongst the features of interest are two fine green-houses; in one of which are some fine healthy specimens of peach trees, which are well fruited. There are some good

Austrian pines (*Pinus Austriaca*), and one of the finest Trumpet Creepers I have seen on the house (*Tacoma Radicans*.)

From here I wended my way to the mansion of George Merritt, one of the most interesting places on the Hudson. Mr. Merritt is engaged in no business whatever, so far as I could learn, except that of making his house and grounds beautiful. Mr. M.'s place is about five hundred acres in extent, and is all laid down as a public park in *appearance*, the credit of which must be given to the owner, who has shown himself to be an architect, landscape gardener and horticulturist, of high order. He has lately erected some conservatories which are not surpassed, if equaled, on this continent. There are 24,000 square feet of glass in them, and all under the same roof, and very ornamental in appearance. There are 4,000 three and a half feet pipe laid in the main sewer through the grounds, and 90,000 feet of small pipe. The water supply is from his own reservoir located on the grounds. There are some thousands of Rhododendrons, Kalmias, &c., in great variety, and from the most noted growers in Europe. In fact, almost everything new is to be seen there, as well as all the old things of merit. Expense seems to be only a secondary consideration. There are a great many plants on this place which are not in Central Park, and which are great acquisitions. The gardener, Mr. F. Mangold, is a horticulturist of the first order, and I must say, in many years I have not met with one who is so well up in the knowledge of plants. I shall speak more fully of this and other places at another time.

GARDENER.

Spring Flowering Bulbs.

THE following article, originally written by W. H. H. Pearson, for the *Rural American*, contains information so appropriate to the selection of Bulbs for Fall planting and spring blooming, that we copy it entire:

The spring flowering bulbs are a very interesting class of flowers, and most of the varieties are very beautiful and easy to raise, and it seems very strange that they are not everywhere found beautifying the homes of both the rich and the poor, in the city and in the country. They make the flower garden gay with brilliant flowers, before the perennial and annual flowers begin to bloom, and last a long time, keeping the garden brilliant at a season when without them it would look barren and dreary, and sometimes begin to bloom before the spring snows are done falling. One reason why they are not more raised is, that they should be planted in the autumn. But many wait until they are budded or in bloom, a time when they should not be disturbed, and then obtain them, and set them in the grass on the lawn, or some other equally unsuitable place; give them little or no further care, and if they live, they soon become so matted together as to produce no flowers, or at best but a few small and inferior ones.

But my object in this article is not to give your readers directions for the culture of these bulbs, but to give a description of some of the best varieties, from notes taken when they were in bloom last spring, which may prove useful to those who are but little acquainted with these flowers, when they make their selections for planting next autumn.

I think all the spring flowers were later than usual last year in this section. The little snowdrop, *Galantha nivalis*, bloomed first. It has small, pure white flowers, of no special beauty, and desirable only on account of blooming before any other flower.

The *Crocus* comes next, and is a very beautiful flower. It commenced blooming this spring a little past the middle of April, and lasted nearly a month. The earliest variety has a small yellow flower, with a brown stripe, called the cloth of gold. A bed of this variety presents a very fine appearance. Large Scotch and Large Striped are very large and fine striped varieties; and David Rizzio, large purple flower, is splendid. Donna Clara, pure white, is good for variety. There are other varieties which are no doubt equally desirable, but the varieties I have mentioned are the best I have seen this spring. Crocuses make the best display when planted very thickly in beds, the more the better. A very pretty effect can be produced by sowing the bulbs broadcast over the lawn, and planting wherever they happen to fall. The bulbs of the *Crocus* are very cheap, and every lover of flowers should plant a bed next autumn.

The *Hyacinths* and the *Early Tulip* were in perfection about the 8th of May. Ellwanger

and Barry, of the Mount Hope Nurseries, Rochester, had a fine display. Of the Hyacinths, Bleu Mourant, and La Vestale, blue, were splendid, spike of bloom very large, and with a great many large bells on the spike. Tubal Cain, double, has large and very double flowers, of a rich dark blue color. Queen of the Netherlands, pure white, was a very large flower, and very graceful in form. Sultan's Favorite, is a large single flower of a delicate light red color, and very fine form. Emiline, single light blue, has a very long spike of bloom, and enormous large bells, perfect form, and altogether one of the most desirable. Baron Thuyll, Charles Dickens and Emicus, are also very fine blue varieties. Hannah Moore, pure white, has large, graceful bells, but is not perfect in form. Orange Vlag, single, is described in the catalogues as orange color, but is a very light yellow. I do not admire the yellow hyacinths, as all I have yet seen have a very light color, and are not as large and perfect in form as most of the other varieties; but others may like them better, and a few will do for variety. Agnes, single, deep pink, almost red, is a splendid variety; spike very long, with numerous large bells, set so thickly together as to nearly conceal the stem. Bouquet Tendre has small, semi-double flowers, of a very fine red color. Emilius, single, rosy white, has very large bells, of a very beautiful and delicate light rose color.

Many members of the *Narcissus* family were in bloom at the same time. *Narcissus van sion*, or common double yellow, daffodil, is the earliest, and in this latitude is often in bloom in April. It has large, somewhat greenish yellow flowers, double, but not very perfect in form, but desirable, principally on account of blooming so early. Incomparable is a large double flower, deep yellow and orange. Orange Phoenix, white or light yellow, with deep yellow or orange centre, large and very double, is a very fine variety. Albo Pleno Adarato, one of the latest varieties, is of good size, double, and good form, very fragrant, and is one of the most desirable varieties we have. Of the single varieties, Maschatus Minor, sulphur yellow, and M. Major, larger, deep yellow flowers, are very fine early varieties. *Narcissus Poeticus*, white, with the central cup edged with red, is a desirable later blooming variety. There are other desirable varieties, but these are the best I have seen this spring.

The *Jonquils* (*narcissus jonquilles*) are very beautiful and fragrant flowers. The large double yellow has large and very double flowers, and is delightfully fragrant. The single sweet scented, has smaller single flowers, growing in clusters of three or four on a stem, of a deep yellow or orange color, fragrant, good form, and is a very desirable variety.

The most beautiful class of the *Narcissus* is the *Polyanthus Narcissus*. The flowers of most of the varieties are single, and all grow in clusters of from four to twelve or more flowers on one stem. They do not always flower the first spring after planting, and occasionally a bulb will produce but one flower on the stem, instead of a cluster. They are also less hardy than the other varieties, but when well grown are very beautiful flowers. The Double Roman has double or semi-double flowers, and is very easy to raise in pots or boxes in the house. I had one in bloom early last January. It was planted quite late in autumn, and received no special care. Toison d'or, white, yellow cup, is a large and beautiful variety. Grand Soleil d'or has splendid large flowers. States General, bright lemon color, and Luna, pure white, are also very fine varieties. All the varieties are very beautiful and fragrant, and no flower garden should be without them.

Many varieties of the Tulip were also in bloom at the same time, the 8th of May. The Tulip is the most brilliant and showy of the spring flowering bulbs, and I think it is the easiest to raise, and the most sure to give satisfaction when healthy bulbs of good varieties are planted and taken good care of. The earliest class is the Duc van Thol. I did not see them when they commenced blooming, but think the first flowers appeared towards the last of April. The earliest are the single and double red. The single red has small deep red flowers, with a narrow edge of bright yellow, and about six inches high. The double red grows about the same height, with semi-double flowers, bright red, beautifully edged with deep yellow. The single scarlet is a splendid variety, flowers of fine form, of the richest imaginable scarlet. The single yellow has clear, bright yellow flowers, and when planted with the scarlet, makes a splendid display. There are also the pure white, gold striped, rose, vermillion, and carmine varieties, all very beautiful.

Before the Duc van Thol's are done, the Tournesol begins to bloom. There are but two varieties. The double red and yellow has enormous large flowers, the largest of any variety I have yet seen. The flowers are very full and of perfect form; very bright red and yellow,

and continues in perfection for a long time. Were I to plant but one variety of tulip, I should choose the red and yellow Tournesol. The other variety is the double yellow. This also has large double flowers of perfect form, and makes a rich bed, either by itself or when mixed with the other variety. The color is clear, rich yellow.

Next comes the early single and double tulips, containing many most splendid. Those who have seen only the common varieties of tulips, as they are generally raised in the country, can have no idea of the dazzling display produced by a bed of choice varieties. Of the single tulips, Thomas Moore is a very large orange-colored flower, of perfect form, and is the largest single variety I ever saw. Red and Yellow of Leiden is a large flower, most beautifully striped red and yellow. Canary Bird is a very rich deep yellow. Dorothea Blanche is white and crimson, and is large and fine. Vermillion Brilliant, dazzling vermilion scarlet. Pottebakker, pure white. Knight of Malta, very large. Groatmeester, white and crimson striped. Golden Claramond, beautiful yellow. Heirerkroon, crimson scarlet, edged with scarlet; and Lac Bontlof, violet and white, are most splendid varieties.

The double tulips are yearly becoming more popular. The flowers are generally much larger than the single, and the colors are nearly as brilliant. Purple Crown, dark red, large flower, is one of the best. Gloria Solis, scarlet, edged with yellow, is a fine large flower, but as it is but little different from the red and yellow Tournesol, it is hardly desirable to have both varieties. Yellow Rose, large yellow, is a fine large flower. Grand Alexandre, yellow, striped with red. Imperator Rubrarum, red. Abbas, orange red. Admiral Kingsbergen, golden yellow, striped with bronze, and Crown of Roses, large rose color, are all good varieties, and most of them early.

The double tulips, when perfect, are very desirable flowers, but I think they are less hardy than the single varieties, and less sure to produce perfect flowers, and this is especially the case with the late double varieties.

The parrot tulips are very brilliant and very large, but much less regular and perfect in form than the other varieties. Belle Jaune, beautiful yellow; Cafe Brun, rich brown; Large Scarlet, and Perfecta, red striped, are some of the best varieties.

The late flowering show tulips are a most magnificent class, and are great favorites with florists. They are divided into Bizarres, Byblooms or Bybloemens, and Roses. Bizarres have yellow ground, and Byblooms and Roses have white ground, marked with various other colors. I think there is but little to choose between these; all are splendid, with tall stems, and very large and perfect cups, and of the richest imaginable colors.

Of all the spring flowering bulbs, I have always had the best success with tulips, which have always given the most satisfaction, and no flower, in my opinion, can compare with them for rich and striking colors. A selection of even no more than a dozen from the varieties I have mentioned, will make a brilliant bed if carefully planted this fall, and most of them are so cheap as to be within the reach of nearly every lover of the beautiful.

Best Soil for Currants.

WE have never had good success with currants on light sandy soils. Although well cultivated and well manured they never grew vigorously; bushes were small and fruit thin and imperfect size. At the end of two years we dug them up and threw them away. We believe that in such soils, as a fruit for family gardens, they can only be grown satisfactorily in the following places:

- 1st. Either close to the north side of high garden fences.
- 2d. In orchards or under the branches of fruit trees which overhang the garden.
- 3d. By *mulching*.

In such warm light soils the plants must have moisture, and this must come either from deep mulching or cool shade. The mulching may be efficacious for a time, but we believe the benefits would not be very lasting. The true soil for currants is a well drained clay soil, or clay and loam mixed. In this no mulch will be needed, and ordinary cultivation is amply sufficient. The finest currants we have ever seen were grown in the partial shade of apple and pear orchards, and the owners have never been affected with mildew or the currant worm. Coolness, shade, or mulching are indispensable to insure success in currant growing.

Flower Culture Sooner Remunerative than Fruit Culture.

BY ROBERT MORRIS COPELAND.

THE rapidly increasing interest in colored and peculiar leaved plants, is greatly due to the stimulus to horticultural progress which comes from the active efforts of horticultural societies to make their exhibitions attractive, by the novelty and variety of the plants and fruits exhibited. For many years the floral part of our exhibitions was considered less important than the fruit and vegetables, and few men avowedly gave all their efforts and energies to flowers alone.

But the result of experience with many who have been faithful fruit growers, discourages new men from giving all their space and time to fruits. The pear and grape blight, mildew, insects, bad years, and their hindrances, so rarely permit a satisfactory crop of fruit to be perfected, that none but the most pertinacious of cultivators are willing to give as much of their labor to fruit as they used to. The crop of grapes or pears which may attain perfection in three or five years is less interesting than the rich color and fragrance of a flower garden, whose full beauty may be reached in a single summer. The more liberally societies give premiums for successful effort, the sooner we shall be able to have an abundant supply of cheap and choice plants for decorative purposes, and were it not for the envies and jealousies often bred among competitors, by their success or failure, we might hope that flower culture would finally do as much to soften the minds and manners of men or to beautify the landscape. The element of selfishness and greed too often comes into the florist's mind, quickly, and fills it full, as stimulated by the desire to produce the best fruit or vegetable, he sees and measures color and form, rather for the prize they may give than for their personal excellence.

He measures beauty with scales and rules, whose standard is set by a horticultural society, may be as dead to effects, combinations and harmonies of color and form, as if his pets were cabbages. A prize collection of Asters, Dahlias or Chrysanthemums, whether quilled or legulate, must all be of a given diameter and thickness of head, every sub-flower to be just such a proportion of size and color. Roses are valued, not for the effect they give in masses; not for the sparkle of the dew-drop on their petal in the summer morning, but because they are globed or cupped, or a little more or less red or pink or white. Competition would have no field of action, and only a poor standard of measurement, if the award was to be given for the general effect the flowers produce in a garden, or for the beauty which results from good combinations into groups of form or color. This reduction of flowers and floral effects to scale and rule grieves one who loves flowers for their spirituality and fitness in nature's harmonies; to see the perfected heads with just so many inches of diameter or circumference, just such streaks or splashes of color, every flower stuck in bottles around an exhibition room, is as annoying as it would be to see the heads of Madonnas cut out of their canvas and offered in the same way for competitive examination. But for all that, the effect of competition and show is good. If a hundred persons are stimulated by the desire to have the technically best flowers, they will, in their struggle, produce something that they may throw aside, but which more artistic persons can combine on the large scale into harmonious compositions, and amongst the one hundred who delve for a medal, some will imbibe new and strong ideas about color and effect that would never have, in any other way, made entrance into their minds. A hundred square feet is room enough to cultivate the best collection of any of the best florists flowers, and to give a man a chance to spend the leisure of a summer in propagating, tending and enjoying flowers, which we must admit are the most wonderful of nature's bounties. From a dirty looking bulb, from a minute seed comes through the cold, dark earth, by subterranean and unexplicable processes, a tender plant so totally unlike bulb, seed, earth or manure, that did we not watch the process every year, we should call it a miracle. The soft, green leaves expand, under sun and wind, into the Lily, the Gladiolus, the Pansy, the Pink, the Rose, the flower as great a step beyond the leaf and stem, as they beyond the seed and earth. If the hanging basket in a window in winter, decked with Ferns, a Coliseum, an Ivy, or a Trosseahum, can wind its tendrils about the hearth of an entire family, who watch each new leaf, chronicle the appearance of every bud, and welcome every flower, how many times is the oppor-

tunity multiplied by the one hundred square feet that gives room for just twenty such groups. The sneer or condemnation of the man who despises flowers and their culture as unworthy; who lives like the worm with no eyes, but a mouth and a stomach, is of no consequence, and should never cause one to turn aside from the pursuit of beauty; he deserves pity just as much as if he were born blind, or deaf, or an idiot. Every one meets such persons, and hears the question asked, "What good is it; what does it pay?" And in our hurried business life we are liable to be moved, insensibly, perhaps, by the cynical enquiry, because it too often happens that the enquirer is some successful man of business, who has knelt at the altar of Mammon; his prayers have been answered, and his knees have acquired a permanent bend, but because he is crooked by his idolatry, shall no other man stand straight? Money is worth much, is the great prize of life, gives reputation, power, glory, but it is generally the easiest thing to get, if we will only pay the price for it; whilst a love of beauty and true understanding and appreciation of nature, comes slowly and only with very constant study.

For small places then, I would urge, most strongly, the merits of those tender plants which are equally beautiful in winter and summer, and I believe that as these plants become better known they will be wanted, and nurseries and green-houses will supply them at such moderate prices as will permit every one who cares to save a little from his back and stomach, to cheer his mind and eyes, to bring about the door the favorites of other lands, and to blend them with the no less lovely plants and flowers which grow in our lanes, hedges and meadows.

Inducing Fruitfulness in Trees.

BY DAVID Z. EVANS, JR.

THERE are several different ways of inducing fruitfulness in trees, such as root pruning, heading in, transplanting, and skinning, the last one being the one that I shall take up first, and explain the *modus operandi* as concisely as possible.

The benefits to be derived from a proper course of "skinning"—not the skinning done by careless cultivators—are numerous, prominent among which may be mentioned, the increased size as well as the quality of the fruit, and a clean healthy bark to the tree, and, as a matter of course, an abundance of healthy, well-ripened wood. Of course the above operations should not be performed on healthy, vigorous trees, for they do not need such careful or special treatment; but where the tree, through age, want of attention, or some peculiar or particular cause, does not bear paying crops, ceases to bear at all, or cracks the fruit, one or the other plans can, with some assurance of success, be used by the culturist. Where no such want is expressed—for trees speak by their actions—it is best to leave well enough alone.

The skinning process is successfully performed as follows: On the longest day of the year (June 21st), almost any time after sunrise, having selected the tree to be operated on, with a knife circle the bark of the tree as near the ground as you conveniently can; make a similar circle just below the first limbs or branches, and strip off *all* the bark between the circled bark near the limbs and the ground, taking care not to touch the fine, filmy coating which envelopes the tree between the bark and tree proper, for bad results will invariably ensue; for if the hand is pressed against the tree, after the removal of the bark, no new bark will grow where the hand was pressed. Do not cut through the film with the knife when encircling the tree, or you will very likely, lose the tree in consequence.

Trees, if properly barked, will immediately begin to put on new bark, without losing a single leaf, or exhibit any signs of decreased vigor, but, on the contrary, will exhibit undoubted signs of new life and rejuvenated energy, and will, the following year, bear a large crop of fine fruits, and continue to do so for a series of years, as we have seen verified. The experiment was tried with pear trees, with the above very flattering results attendant on the trial.

CHESAPEAKE CITY, MD.

Pleasant Thoughts.*The Walking Leaves of Australia.*

ALMOST everybody has heard of the wonderful walking leaves of Australia. For a long time after the discovery of that island, many people really believed that the leaves of a certain tree which flourished there could walk about the ground.

The story arose in this way: Some English sailors landed upon the coast one day; after roaming about until they were tired, they sat down under a tree to rest themselves. A puff of wind came along and blew off a shower of leaves, which, after turning over and over in the air, as leaves generally do, they finally rested upon the ground. As it was midsummer, and everything appeared quite green, the circumstances puzzled the sailors considerably. But their surprise was much greater, as you may well suppose, when, after a short time, they saw the leaves crawling along upon the ground towards the trunk of the tree.

They ran at once for their vessel, without stopping to examine the matter at all, and set sail away from the land where everything seemed to be bewitched. One of the men said that he expected every moment to see the trees set to and dance a jig.

Subsequent explorations of Australia have taught us that these walking leaves are insects. They live upon the trees. Their bodies are very thin and flat, their wings forming large leaf-like organs. When they are disturbed their legs are folded away under their bodies, leaving the shape exactly like a leaf, with its stem and all complete. They are of a bright green color in the summer, but they gradually change in the fall, with the leaves, to the brown of frost-bitten vegetation.

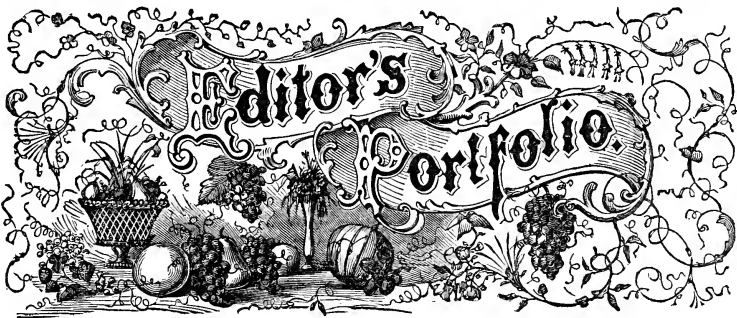
When shaken from the tree, they lie for a few minutes upon the ground as though they were dead, but presently they begin to crawl along towards the tree, which they ascend again. They rarely use their wings, although they are pretty well supplied in this respect.

Charm of Flowers.

“Flowers seem intended for the solace of ordinary humanity. Children love them; quiet, tender, contented, ordinary people love them as they grow; luxurious and disorderly people rejoice in them gathered. They are the cottager’s treasure; and in the crowded town, mark, as with a little broken fragment of rainbow, the windows of the workers, in whose hearts rests the covenant of peace. To the child and the girl, to the peasant and manufacturing operative, to the grisette and the nun, the lover and monk, they are precious always.”—**RUSKIN.**

God might have made the earth bring forth
 Enough for great and small,
 The Oak tree and the Cedar tree,
 Without a flower at all.
 He might have made enough, enough,
 For every want of ours,
 For luxury, medicine and toil,
 And yet have made no flowers.

Our outward life requires them not,
 Then wherefore have they birth?
 To minister delight to man,
 To beautify the earth!
 To comfort man—to whisper hope,
 Where'er his faith is dim,
 For whoso careth for the flowers
 Will much more care for *Him*!



Editorial Notes.

A Ramble among the Flower Growers.

THE editor of *The Michigan Farmer* has been rambling among the greenhouses of his vicinity, and gives his readers notes of a few old and new things.

While taking a saunter in the grounds of our friend Adair, the other morning, we took a glance at some plants that were beginning to make a very pretty show. Among them were some of the new zonale geraniums, over which we note they are making some considerable noise in Europe. Quite a handsome variety is the Belle of Detroit, a new variety grown from the seed by Mr. Provis, of this city, and the stock of which has been purchased by Mr. Adair. This variety has a neat, close habit, and makes a well-shaped plant with a handsome scarlet truss of flowers. But with the zonales the foliage is the charm, and the Belle of Detroit is clothed with neat, well-shaped leaves of a pale greenish yellow, with a dark bronze zone, that renders it quite distinct and handsome. We noticed Lady Cullum and Sophia Dumaresque close by, and some other varieties, but though these sorts were quite attractive, we must say that the Belle of Detroit outshone them all.

Among the new plants were also a *Hydrangea variegata*, a sort which has a foliage very much marked with white. The *Caladium esculentum* is a tropical plant that at present is beautiful with its great broad leaves so curiously veined, and its long fleshy leaf stalks.

The *Coleus* tribe, which have of late come forward as foliage plants, have two or three representatives, such as the *C. Martialis* and the *C. Verschaffeltii*, which are great beauties with their bronzed leaves and their various shadings. These plants are much used at present for ribbon borders, and form handsome stripes.

Another odd-leaved plant is the *Adenantha versicolor*, which is of deep crimson, variegated with pink, red and white, till it almost appears to be a bouquet of itself. A new plant is also the variegated-leaved *Spirea*, which, though not brilliant as a flowering plant, is handsome when we confine our notice to its foliage.

Pansies.

CHARLES D. COPELAND writes how to succeed in growing Pansies:

"Nothing in the world of flowers is painted with such exquisite beauty or endless variety of coloring, as the fancy or German pansy. They talk, and smile, and look you in the face, with intelligent countenances and cheerful eyes, as though they were creatures of life. To succeed well in their cultivation I have found it essential to locate my bed so that it will be shaded from the hot sun a portion of the day, say from three to six hours. Also to exercise great vigilance to prevent any of the small American violet, or the Johnnie-jump-up, from growing within several rods of them. The shade causes the plants to be longer lived, and the blossoms to be much larger and perfect. But it should be remembered they will all run out and become small, in case any of the small American plants are permitted to grow near them.

No flowers are cultivated more easily than the pansy, as they never winter-kill, and will become self-sown if the beds are kept free from weeds. Seed may be sown at all seasons of the year, and the plants continue to blossom from April to December.

Tillandsia Lindeniana.

THE London *Gardener's Chronicle* describes a new flower, one of the most beautiful *Bromeliads* ever introduced into European gardens. It was grown by B. S. Williams, of the Victoria nursery, and is the first ever flowered in England.

"The leaves are from twelve to eighteen inches in length, and about one inch in breadth, tapering upwards, and ending in a fine point. They are dense, sheathing at the base, arranged in a rosulate

manner and recurved, channeled above and light green, beneath tinged with rose, and streaked with fine longitudinal lines of reddish-brown. The scape rises from the centre of the plant and attains a height of eighteen or twenty inches, the upper portion broadly ovate, which is caused by its being clothed with long distichous imbricating bracts, which are light green, more or less suffused with rosy-pink. The flowers, which are round and of good substance, are produced from between the bracts, measuring nearly three inches in diameter, the color is rich blue, the centre being pure white. The flowers of this elegant plant are very attractive, and are specially valuable on account of its color being so rare among stove plants.

Tillandsia Lindeniana is a plant easily cultivated, and may be grown either in a pot or basket, but when in pots it can be used for the decoration of the dinner table, for which it is eminently adapted. The pots must be somewhat small, and well drained. The soil should be composed of two parts of rough peat, one part of loam and one of sand. This plant, like many other *Bromeliads* which have broad sheathing leaves, is adapted by nature to retain water, and the water should be poured into these receptacles and not emptied out, as is too frequently done in the cultivation of this class of plants. It is a native of Huancabamba, in Peru, where it grows upon the branches of the forest trees. It has been called, in some Continental gardens, *Tillandsia cyanea* and *Vriesia Lindeniana*."

Fruit Trees from Russia.

MINNESOTA is introducing fruit trees from Russia. The Professor of Agriculture and Horticulture in the State University has received a box of seventy-five varieties from the Imperial gardens of Russia.

Skill of Japanese Horticulturists.

HALF a dozen pots of flowers from different countries, and having the soil of the country from which they came, were set before a professional Japanese horticulturist for his examination. Then the pots were removed, and samples of the soil of each, and leaves from each shrub brought in and arranged with the intention of deceiving him. The question was then asked him, "Which paper of soil came from the pot where this leaf grew?" He looked closely at the leaf, and after examining the papers of soil, picked out the right one, without a single mistake.

High or Low Heads for Fruit Trees.

A CORRESPONDENT of the *Rural New Yorker* says: I have been looking through my orchards of pear, apple, peach and cherry trees, numbering over four thousand, and cogitating in my mind the height from the ground at which the branches should start. All my trees are fully exposed to severe strong winds, not quite as severe as the open prairie winds, but nevertheless, with a clear space of over a hundred miles for the northwest wind to gather strength. I find all my trees with the branches starting five to seven feet from the ground to have more or less a cast from an upright position; and on more than twenty per cent of the same trees, the bark on the west and southwest sides is more or less blackened and injured. In some of the said trees I have had the borer, *Saperda*, but he's not there now; because I got him out.

Of my trees, with heads varying from one to three feet high from the ground, I can see but little difference; all are healthy and all upright. The conclusion I come to is, that hereafter no tree of mine shall have its lower tier of branches higher than three feet from the ground, and when they can well be, they shall be, about one-half that height. If the trees I buy to plant have been trimmed up above my line, I shall cut them clear down and start them anew. The only reasons I have ever seen for high-headed trees are those of the man who wants two crops from his land at a time, and therefore must plow up close to the trees, no matter how much he barks the body and breaks the roots, and the other advocated by a man whose hobby is his curculio catcher, to use which he advocates a practice, if followed, I feel sure would in ten years produce ninety-fold of injury to its corresponding ten-fold of convenience.

Gooseberries—How to Grow them Successfully.

THE statement made by J. B. Moore, Esq., in his essay on the culture of small fruits, recently published in the *Farmer*, that the Fruit growers of the town of Concord, situated twenty miles from Boston, received the past year, after deducting commission, about eight thousand dollars, will be likely to arrest the attention of farmers and others in the vicinity of good markets. Mr. Manning, of Reading, Mass., states that seven dollars and fifty cents per bushel was eagerly paid for bottling, by a Boston fruit preserving company, for a lot of fifty bushels of the larger varieties of currants, and thirty-five cents per quart was readily obtained for the Cherry and La Versailles varieties, at retail.

The gooseberry likes a good, deep, moist soil, says Mr. Fuller, in his *Small Fruit Culturist*, but one that is not really wet. A rich soil is also essential, because it is only by keeping up a vigorous growth that large fruit and abundant crop can be secured. An open, airy situation is better than one that is confined, and in many sections of the country the north side of a hill would be far pre-

ferable to a southern exposure. The extreme heat of the summer has been the greatest impediment to the successful cultivation of the English gooseberry, and to counteract this the coolest available situation should be selected. Also in enriching the ground, use no fermenting manure; apply none but that which is old and well rotted. Cow manure is far better than horse manure, particularly on light, warm soils. Mulching the plants in summer is very beneficial, and if tan bark or spent hops from a brewery can be obtained, they should be used in preference to hay or straw. Good culture is required to produce good crops, the same as with other fruits.

Mildew is the great trouble in growing the gooseberry. Old plants are more subject to this disease than new ones. The following remedies are recommended:

Scatter flour of sulphur over the bushes soon after the berries have set, and repeat the application occasionally until the fruit is ripe. Water the plants with strong soap-suds or dissolve one pound of potash in a barrel of water, and then sprinkle the plants once a week with it. Soak fresh mown or dry hay in brine for twelve hours; then cover the entire surface of the soil about the plants with this, as a mulch. If hops, tan bark, or other mulch has previously been applied, then sprinkle it with salt; a single handful to each plant will be sufficient.—*N. E. Farmer.*

Tea Growing in East Tennessee.

THE *Knoxville Press* and *Herald* states that James Campbell, residing some ten miles from that place, has been growing the tea plant as an experiment some five years, and with entire success. There seems to be no doubt that the climate of that section is congenial to the growth of this plant, and no good reason can be assigned why its general cultivation would not prove a remunerative business. The plant is a deep evergreen shrub, which, when fully developed, is about five feet in height; is hardy, needs no protection from frost; bears bountifully, and in October is crowned with beautiful fragrant flowers. The following season it matures, its seed resembling the buckwheat, which germinates as readily as other seed.

Trees and Shrubs for Beautiful Autumn Foliage.

THE *Canada Farmer* says the following are especially desirable: Besides the maples, with whose beautifully tinted leaves we are all familiar, the Scarlet Oak, so named, we presume, from the deep scarlet color that its leaves assume in autumn, is well worthy of attention. Apart from its autumnal coloring, it is a beautiful and noble tree. It often attains a height of eighty feet, and its finely cut leaves are a bright lively green on both sides. It makes a superb object, either planted singly or grouped with other trees.

The White Ash will also find a place in groups of trees, not brought out too prominently, but mingling with the others, or skirting here and there a heavy plantation. In autumn this variety puts on rich tints of purple, which produce a most pleasing harmony with the more brilliant colors of other trees.

The Liquid Amber is always beautiful, beautiful in its regular and compact form, but more especially in its foliage, which all the summer long keeps its glossy freshness, and in the autumn puts on a vivid purplish red, as bright and gay as any parterre of flowers. Its effect, in combination with other autumn tinted foliage, is most magical.

The Pepperidge may well claim a place in this connection, for though usually to be found in low, moist grounds, it will nevertheless flourish well in dry upland, and its beautiful dark green, shining leaves, assume in autumn a most brilliant fiery color.

The Dogwood also can be introduced with great effect. In spring it is very showy, with its large white flowers, before the leaves are fully expanded, and in autumn it is covered with brilliant red berries, while the leaves change to a most beautiful deep lake red, by which it can be distinguished at a distance from any of its showy rivals.

The Plum-leaved Spirea is a medium sized shrub, and can be used in any place where shrubs are needed, whether to form a screen or fill a gap. In spring it is profusely covered with double white daisy-like flowers before the foliage appears. The leaves are a most lovely glossy green all through the summer, and in the autumn are most gorgeously colored with orange and scarlet.

Nor are we wholly wanting in climbing shrubs, whose foliage in autumn adds to the charms of the landscape:

"And creeping shrubs of thousand dyes,
Waved in the west wind's summer sighs."

The Virginia Creeper is a most rapid climber, fastening itself, like the ivy, by its little rootlets, and soon spreading itself over its support. The leaves are a rich deep green in summer, but in autumn they glow with scarlet and crimson. What more strikingly beautiful than the fiery leaves of this climbing shrub flashing through the dark green boughs of some tall old cedar, seeming in the distance like tongues of flame darting along its branches?

Editorial Notices.*Acknowledgments.*

WE are indebted to the following for complimentary favors received:

Messrs. *S. L. Gaar & Cox*, Hobbs Station, Ky., for a box of Chambers Pear.

To *J. J. Younglove*, for a box of Delaware grapes.

To *John Duncan*, Jackson, Miss., for a box of the Howell Pear.

These fruits arrived during our absence on the Pacific coast, and though we may have lost the personal pleasure of tasting the luscious samples, still we are none the less delighted at these pleasant remembrances, and testimonials of respect for *THE HORTICULTURIST*.

New Catalogues.

MESSRS. S. BOARDMAN & CO., Rochester, N. Y., have favored us with a new edition of their Catalogue. New cuts of fruits and trees have been used, and the arrangement is indicative of excellent taste.

The Commissioners of Internal Revenue have favored us with a published list of all Agricultural, Horticultural, and Pomological Societies known to exist in the United States, together with the names of the principal officers and addresses. It is a valuable manual of reference.

The Catalogues of Messrs. Graves, Selover, Willard & Co., are always well prepared and well printed. We have received their new Catalogues of Fruit and Ornamental Trees, the latter containing a colored frontispiece of new roses.

Prize Essays on Cooked Food for Cattle.

WE have repeatedly, in our agricultural articles, urged upon the attention of farmers the advisability and benefit of using caldrons or steam vessels for the thorough cooking and preparation of feed for animals. We know it saves both time, labor, and expense, and adds immensely to the value of the animals kept. We would call special attention to the above pamphlet, issued by Barrows, Savery & Co., of Philadelphia, Pa., as a document of great interest to every farmer.

We have received also the following Catalogues:

Ellwanger & Barry, Rochester, N. Y., Descriptive Catalogue of Fruits.

Prize List of Agricultural and Industrial Exhibitions to be held at Montreal, September 13 to 16.

Circular of Information of Bureau of Education for August, 1870, Washington, D. C.

Grape List of Cliff Cave Wine Co., St. Louis, Mo.

F. K. Phenix, Bloomington, Mo., Catalogues of Bulbs and Winter Blooming Plants.

E. G. Henderson & Sons, London, England, Spring Catalogue of Stove and Greenhouse plants.

Peat Fuel: How to make it, and how to use it. A pamphlet. By T. H. Leavitt. Boston: Lee & Shepard.

Hargis & Summer, Quincy, Ill.—Wholesale Catalogue Star Nurseries, Fall, 1870.

Special Catalogues.

WE invite attention to the new Rose Catalogues of Messrs. Dingee & Conard, Westchester, Pa.

Also to the Bulb Catalogues of C. L. Allen & Co., Brooklyn, N. Y. The firm is the largest bulb house in America.

Fall Advertisements.

OUR Fall patronage, from our old and well known advertisers, is unexpectedly heavy and *very encouraging*. We ask the careful attention of our readers to their announcements. It is only twice in the year, Spring and Fall, when they turn out in so fine a force and present their cards to the reading public. Every subscriber of *THE HORTICULTURIST* will find much to enjoy in the perusal of their advertisements; at the same time he cannot fail to appreciate their enterprise and energy. Write freely for their catalogues, and give credit to *THE HORTICULTURIST* for your notice of their advertisements.

Fall Campaign of The Horticulturist.

WE offer unusually excellent terms to all who will aid in extending *THE HORTICULTURIST* among new subscribers. We will send it as a trial trip—3 months for 30 cents; 6 months for \$1. Club Terms—2 copies, \$4; 3 copies, \$5; 5 copies, \$7.50, and a copy free. We invite all our friends to make up a list of their neighbors and acquaintances interested in gardening and horticultural literature, and induce them to register their names for a trial of at least three months. Every one can afford 30 cents. We suggest to Secretaries of Horticultural Societies, to introduce our trial trip proposition to their members. We hope to make our fall campaign the best series of numbers in literary interest ever issued. *Send in the names.*



Vol. 25.

OCTOBER, 1870.

No. 292.

A Horticultural Trip to California.

No. II.

The Great Pear Orchard of Santa Clara College.

THE grounds of the Santa Clara College contain many vigorous specimens of fruit and ornamental trees. In these gardens we see growing the Palm tree, and the Olive, the last over forty years of age, while not far off is a Fig tree, one of the most beautiful of all ornamental shrubs while young. Yet we find here, amid these evidences of tropical vegetation, a fine hedge of Arbor Vitæ, fifteen feet high—North and South in juxtaposition; how striking the contrast! In the same garden are gathered over 100 varieties of grapes, mostly foreign, thriving in the open air with the slightest attention, and all in fruit. As I looked upon the uniform success that attended the culture of the grape here, where every vine is sure to produce its fruit every year; where there is scarcely the possibility of a failure of a crop, and everything is almost as sure as the fixed laws of the Medes and Persians, I turned my thoughts backward to our Atlantic slope, where our vineyardists struggle on, year after year, hardly depending upon more than one good crop out of every three, and where prices are constantly fluctuating; where early frost nips their fruit before it is all marketed; where mildew cuts short the health and productiveness of their vines, and a score of discouragements, which form a remarkable contrast with the ease of the California grower; and yet we would hardly exchange places with him. Where grapes thrive with such abundance, they are too cheap to be profitable. I suppose the average profits per acre of grapes on the entire Pacific coast is \$60 per annum, and yet how common it is for our Eastern vineyards to yield from \$200 to \$600 per acre. We suppose an acre of Concord, in full bearing, will not fall below \$100 net, while at the low price of ten cents per pound; they will more often yield \$200 to \$300.

At a little distance from the College itself, is the enclosure containing the Pear orchard we have referred to. Here are now 600 trees of about sixty years of age, laden down with the most astonishing crop of pears we ever beheld. The trees, although old, would average about thirty feet in height, and have a diameter of ten to fifteen feet across the branches. All of these trees would average about a foot in diameter of the trunk, and we estimated a safe capacity of five to ten bushels to each tree, while on many the production would be fully five barrels. Years ago, when fruit culture was not as widely extended as now, the produce of this orchard brought an annual income to the College of over \$24,000; but now, so plentiful and cheap are fruits of all description, that the best terms of sale last year could hardly reach above \$100, and thousands of bushels were left to rot on the ground, or fed

to the hogs. We estimated at least 5,000 bushels of prime fruit upon the trees at the time of our visit, and if it could have enjoyed a market like New York, the lowest value we could have placed upon it would have been \$10,000. It is now a worthless property as a productive investment, and already 200 trees have been cut down, preparatory to the devotion of the land to other purposes. The varieties we noticed most freely grown are the *Easter Beurre*, *Bergamot*, *Madeleine*, *President*, *Bartlett*, *Clairgeau*, with a few more of our most popular Eastern sorts. The President pear is perhaps the most productive of all, the branches hanging down completely covered with specimen pears of fine size and color. The Pear, as a fruit, is quite as successful here as the Grape. All varieties do well. The California horticulturist has none of the anxieties we Eastern fruit-growers feel whenever we make our selection of varieties. With us we are fearful of the blight, or anxious as to climate, soil, and popular preferences in the market, but in California the grower sticks his graft upon his tree, or his young shoot in the ground, and in less than eighteen months he has his crop of fruit as perfect and luxuriant as heart can wish. *Every variety succeeds*, and only needs careful planting and culture.

We notice that after the Pear trees have grown for ten or twelve years, their full stature seems to have been attained; they make little or no new wood growth, and seem to stand still, bearing themselves almost to death. Year after year they bear heavy crops, without cessation, and it seems hardly possible they can stand such constant and tremendous strains, without sooner or later exhibiting signs of exhaustion. However, most of the orchards are young. We see as yet no signs of decay or wearing out. The old orchard of the College is still a marvel of luxuriance.

Among these pear trees are planted some beds of strawberries. Time was when a little bed of half an acre yielded them an income of \$500 per annum, but that time has passed, and now the most they can obtain is but \$60. Their berries are large and splendidly colored. The Wilson particularly we would hardly recognize. It has the same shape, but changes its dark red color into one of brilliant crimson; loses some of its firmness, and almost all of its acidity. We found it here quite agreeable eating, pleasant and spicy, with but little sourness or tartness. Still it is not their most successful variety. The Longworth's Prolife is far more popular and profitable.

They begin picking the fruit about the first of May, and it continues ripening down to the first of November. As high as 10,000 lbs. have been gathered from three-quarters of an acre.

After an observation of this orchard, and that of Mr. Gould, we felt that while we might envy the mere *profusion* of their fruit products, still we felt better satisfied than ever with our own Eastern advantages of profitable markets, and were quite content to bear our disadvantages of climate or soil, as long as we could sell all we could raise at something far better than losing prices. California only needs an increase of her consuming population, or a good export trade, to relieve her of her surplus products. Until that is done, fruit culture will continue to be unprofitable. Eastern fruit growers are enjoying far better rewards for their labor than those on the Pacific coast.

Ornamental Gardens.

A most delightful excursion was provided for us by Prof. Carr and wife, of the new Agricultural College of California, at Oakland. This place is to San Francisco what our Fifth Avenue and Central Park are to New York. The residences of the richest merchants are found here; the best gardens and ornamental grounds, and finest specimens of rural architecture. A ferry of only six miles across the bay connects the two cities, and Oakland is practically a large and wealthy suburb of San Francisco. General Kirkham's place first attracts our attention. Here are two fine specimens of the Century Plant, growing in the open air, one of them ten years old, stretching its long flower stalks thirty-five feet high, just ready to bloom.

On each side of the path stand, like sentinels, two noble specimens of the Monterey Cypress, trimmed as pyramids, and nearly twenty-five feet in height. This is the great ornamental evergreen of the coast. It thrives everywhere as finely as our Norway Spruce here, but is far more vigorous, and forms a more perfect, compact pyramid. A fine tree of

the *Pinus insignis*, and also one of the *Acacia*, attracts our notice; the latter being one mass of yellow blossoms.

We next visited the adjoining grounds of Messrs. Page & Bacon, where great pains are taken to keep all shrubs and trees in most perfect condition. Being the dry season of the year, at time of our visit, the grass is crisp and dry everywhere, unless continually watered. The expense of keeping the lawn in this place perfectly watered, we are told, is \$60 per month.

In these grounds is a Lawson Cypress, twenty feet high; specimen of the *Dracæna lanceolata*, *Acacia umbellata*, from New Holland; *Agapanthus*, Willow-leaved *Acacia*, thirty feet high, and nearly as much so in diameter; while we observe frequent trees of the *Eucalyptus* or Australian Gum tree, which in its native country has been known to reach 400 feet in height. At the entrance to the gate is the Monterey Cypress, 25 feet in height and 12 feet in diameter. Mr. Carr informs us that within a circle of thirty miles there are growing over forty varieties of *Eucalyptus*, and forty alone of the *Acacia*. Many of the varieties of the latter tree are totally unlike each other, in every possible way, both in leaf, manner of growth, flower, and would seem to be of a distinct order of tree.

The streets of the city are planted freely in the *Eucalyptus*, which here has a large, broad, silky leaf while young, which gives a very ornamental appearance to a long avenue of them; but in its fifth year it shoots upward in majestic branches, and its leaves dwindle down to a lanceolate, narrow form, and lose all beauty; they become mere threads in comparison with their former luxuriance. Still it is a rapid growing tree, often attaining in eight years a height of forty feet, and unexcelled in value as a timber tree. Prof. Carr says it would be a most profitable undertaking simply to plant waste fields in California with the *Eucalyptus*, for timber purposes exclusively, and in less than fifteen years every acre would be worth a small fortune.

In the grounds of a lady (Mrs. J. M. M.) we beheld the finest attempt at ornamental gardening upon the coast. The gardens are directly in the rear of her residence, and there is no entrance save through the front door of her mansion. Upon the piazza we see arbor after arbor covered with the most wonderful profusion of climbing vines. *Heliotropes* seem to have overrun their bounds and clamber up ten, fifteen, or twenty feet, and stretch out on each side. A single *Fuchsia* covers a trellis eight feet by 10. A *Lemon Geranium* stands up like a large shrub eight feet high. A *Wistaria* rambles all over the end of the portico, and displays its drooping clusters with elegant luxuriance. Here is a Mexican Cactus, nine feet high, and *Geraniums* of all descriptions are one mass of blooms (one of the flowers measured fifteen inches in circumference). In our own home gardens our lady gardeners are entranced if they succeed in producing one or two fine flowers; but what would they say if they could see, as we did, the *geraniums running like wild vines*, covering the fences six, eight, and ten feet high, and bearing hundreds of the most intensely scarlet flowers. California can never be exceeded by any other part of the United States for such displays as these.

In the garden of the same lady is a Chinese dwarf tree, sixty years old, and yet less than two feet high, while here and there are interspersed beautiful trees and shrubs of highest ornamental character. This place has been developed to its present taste in only seven years, yet many of the trees appear to be double that age, and some upward of thirty or more feet in height. The rapidity of growth of all kinds of vegetation, seems beyond our belief.

In the grounds of the Agricultural College there have been some attempts made at the planting of an Arboretum, and although the foundations of the building have but just been laid, still many of the trees have been planted several years, and are growing finely. We notice the free use of the *Eucalyptus*, which sometimes attains a height of twenty-five feet in three years. The Honey Locust, too, is used everywhere for street planting, and forms a beautiful regular tree, but not of very large size. The California Laurel is also a beautiful tree of small, deep green, tough leaf, but forms a large expanding head, and is green from one year's end to the next. Our Eastern Elms and Maples are used but little, and do not seem to relish their hot, dry climate.

The houses of Oakland are built of timber of the Red Wood tree, which is cut in a

peculiar way, so as to resemble building blocks. We witnessed more tasteful architectural effects in one short ride through Oakland, than in any other city of same size we ever visited. The style of building admits of very high ornament, at slight expense, and we see a taste in decoration which is not often met with here.

H. T. W.

Design for the Residence of Elias Howe, Jr., Bridgeport, Ct.

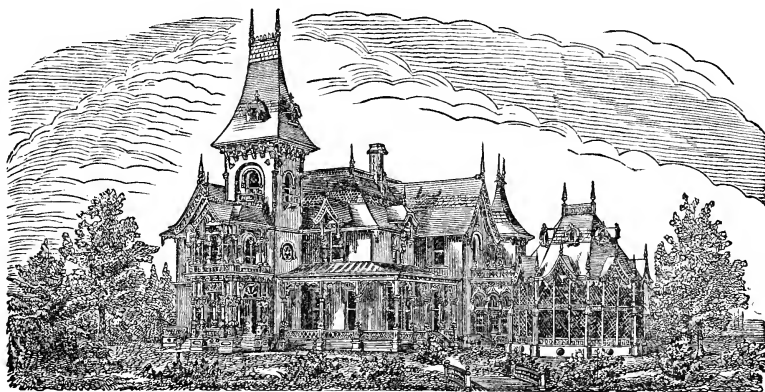
THE design on opposite page, by A. C. Nash, architect, of Cincinnati, O., was intended by Mr. Howe as a residence, upon the site of Iranistan, made so famous while in the possession of P. T. Barnum. The style is of unusual elegance and costliness; no expense being spared to make it architecturally complete without, and within it was intended to be richly adorned, and inlaid with the finest native and foreign woods. The death of Mr. Howe interrupted the plans and prevented the execution of the work. The cost was estimated at \$250,000. The following is a description of plans:

BASEMENT.—1, Wash Room, 11 feet by 15 feet 6 inches; 2, Laundry, 13 feet by 15 feet 6 inches; 3, Back Stairs, 7 feet 6 inches by 16 feet; 4, Bowling Court, 11 by 45 feet; 5, Main Staircase, 20 by 30 feet; 6, Supper Room, 16 feet by 40 feet 6 inches; 7, Light Cellar, 19 feet 6 inches by 23 feet 6 inches; 8, Dark Cellar, 17 feet by 17 feet 6 inches; 9, Heating Room; 10, Coal Room; 11, Potting Room shelves and benches; a, b, c, Area and Outside Doors; d, Arcade for Seats, 5 feet by 26 feet 6 inches; e, Ante-Room, 17 feet by 18 feet 6 inches; f, Coal, 7 by 10 feet; g, Coal for Bowling Court, 5 by 16 feet; i, Water Closet, 3 feet 6 inches by 6 feet 6 inches; k, Coal for Furnaces, 6 by 16 feet; p, Coal for Furnaces, 5 by 14 feet; l, Passage, 4 feet 6 inches by 20 feet; m, Waiters' Room, 6 feet 6 inches by 13 feet 6 inches; n, Side Board, 7 feet 6 inches by 10 feet; o, Wine Room, 10 feet 6 inches by 11 feet; q, Furnace Room, 11 by 18 feet; r, Wine Cellars, 11 by 11 feet.

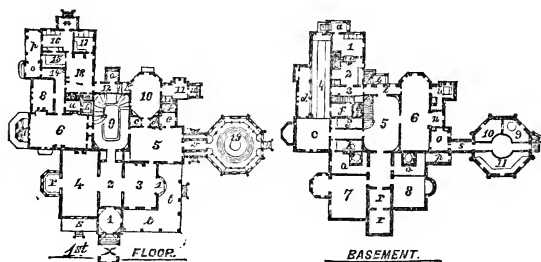
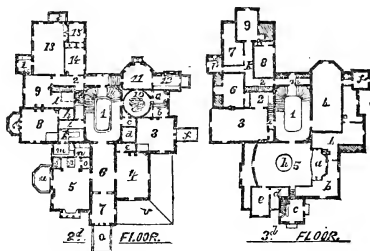
FIRST FLOOR.—1, Vestibule, 12 by 12 feet; 2, Hall, 12 by 24 feet; 3, Reception Room, 18 by 24 feet; 4, Drawing Room, 20 by 36 feet; 5, Family Parlor, 18 by 28 feet; 6, Dining Hall, 18 by 34 feet; 7, Bay Window, 7 by 11 feet; 8, Smoking Room, 12 feet by 17 feet; 9, Staircase and Art Gallery, 20 by 30 feet; 10, Library, 16 by 25 feet; 11, Office, 8 by 14 feet; 12, Entry, 5 by 13 feet; 13, Kitchen, 16 by 20 feet; 14, Passage, 5 feet; 15, Pantry, 7 feet 6 inches by 11 feet 6 inches; 16, Wash Room, 12 feet by 17 feet 6 inches; 17, Store Room, 10 by 12 feet; 18, Back Stairs, 3 feet; 19, Conservatory, 29 feet by 29 feet; a, China Closet, 6 by 10 feet; b, Vault, 3 feet 6 inches by 5 feet 6 inches; c, d, Closets, 5 by 5 feet; e, Dressing Room, 7 by 9 feet; f, Bath Room, 6 by 8 feet; i, Water Closet, 3 feet by 4 feet 6 inches; k, Closet, 4 by 5 feet; l, Closet, 2 by 5 feet; m, Closet, 3 by 5 feet; n, Porch, 7 by 12 feet; o, Porch, 8 by 8 feet; p, Verandah, 8 by 16 feet; r, r, Bay Windows, 9 by 12 feet and 4 by 8 feet; s, Terrace, 6 by 20 feet; t, t, Verandahs, 11 feet 6 inches and 12 feet 6 inches; u, Porch, 6 by 7 feet; v, Glass Passage, 5 by 12 feet.

SECOND FLOOR.—1, Principal Staircase, 20 by 30 feet; 2, Passage and Back Stairs, 3 feet 5 inches by 16 feet; 3, Chamber, 18 by 20 feet; 4, Chamber, 18 by 24 feet; 5, Guest's Chamber, 20 by 22 feet; 6, Hall, 12 by 24 feet; 7, Reading Room, 12 by 18 feet; 8, Chamber, 17 by 22 feet; 9, Chamber, 17 by 17 feet 6 inches; 10, Bath Room, 16 feet diameter; 11, Study, 13 by 16 feet; 12, Library, 7 feet 6 inches by 14 feet; 13, Billiard Room, 18 by 27 feet; 14, Serving Room, 10 by 14 feet; 15, Seamstress' Sleeping Room, 8 by 10 feet; a, Dressing Room, 8 by 10 feet; b, Bath Room, 8 by 8 feet; c, Passage, 4 feet 6 inches by 7 feet; d, Closet, 7 by 7 feet; e, Closet, 5 feet 6 inches by 11 feet 6 inches; f, Balcony; g, Back Stairs, 4 by 6 feet; h, Closet, 6 by 8 feet; i, Passage, 4 feet 6 inches by 13 feet; k, Linen Room, 6 by 13 feet; l, Alcove, 8 by 11 feet; m, Linen Room, 6 feet 6 inches by 11 feet; n, Bath Room, 7 by 8 feet; o, Closets, 4 by 6 feet; p, Alcove, 6 by 11 feet; q, Verandah, 10 by 15 feet; r, Wash Room, 6 by 8 feet; s, Closet, 3 feet 6 inches by 5 feet; t, Gallery, 7 by 12 feet; u, Balcony, 9 by 14 feet; v, Roof; w, Seats, 2 feet 4 inches by 9 feet; x, Balcony, 3 by 6 feet; y, Balcony, 7 feet 6 inches by 13 feet.

THIRD FLOOR.—1, Hall, 20 by 30 feet; 2, Back Staircase, 7 by 15 feet; 3, Children's Play Room, 18 feet by 32 feet 6 inches; 4, Gymnasium, 16 by 38 feet; 5, Private Theatre, 24 feet by 31 feet 6 inches; 6, Servant's Bed Room, 14 by 18 feet; 7, Lumber Room, 11 by 13 feet; 8, Bed Room, 10 by 16 feet; 9, Servant's Bed Room, 11 feet 6 inches by 17 feet; a, Stage, 9 feet by 17 feet 6 inches; b, b, Dressing Rooms; c, Tower, 12 by 12 feet; d, Wardrobe, 9 by 10 feet; e, Common Room, 10 by 15 feet; f, Dressing Room, 8 by 8 feet; g, Recess, 8 by 11 feet; h, Sky Light, 9 feet 6 inches diameter; i, Stairs to Roof, 3 feet wide; k, Passage, 4 feet 6 inches wide; l, Tower, 8 by 8 feet; m, Passage, 3 feet 6 inches by 20 feet.



Design for the Residence of Elias Howe, Jr., Bridgeport, Ct.



Setting Out Fruit Trees.

A FRIEND of ours, experienced in the culture of fruits and flowers, has furnished me with the following hints in reference to setting out fruit trees. The successfulness of his plan is demonstrated by the fact that the trees he set out in the fall bore fruit the following summer. On the 1st of September, 1867, having some trees he wished to transplant, he dug holes two feet and a half in diameter, and two feet in depth, carefully laying the top soil on one side and the clayey soil on the other. Some virgin soil or woods earth was then hauled in, and all things being in readiness, during the last of September, the holes having been half filled with the woods earth, he had his trees (peach, apple and plum) taken up, being very particular to prevent any injury to the small roots; the larger roots were cut off with a spade, and afterwards trimmed smoothly with a knife. The trees were top-pruned pretty closely. They were then set in the holes to the depth at which they originally grew, and the top-soil placed in among the roots, the balance of the woods earth being drawn in until the holes were filled. The time of transplanting was about ten days before frost, the leaves not having yet fallen from the trees. Four of them had been bearing trees, and when summer came they still yielded their fruit. The second summer they did not look quite as thriving as before, but they have since recovered and are now doing very well. The following February he had occasion to remove one of the peach trees, and found that the larger roots he had previously trimmed were full of small tender roots at the end, an abundance of fibres having grown out also on the other parts. This tree also bore fruit the following summer. During the season they had made a top-growth of nearly four feet.

G. H.

Uses of Horticultural Societies.

"Your voiceless cups, O flowers, are living preachers."

THE great labor attending the organization and continuation of Horticultural Societies, especially if annual or monthly exhibitions are attempted, causes this question, viz:—the "Uses of Horticultural Societies?"—to be often asked, and as often unsatisfactorily answered. It is often difficult to see the workings or the benefit; but the reason is there, and is as surely working as the Society ever had an existence. Take almost any existing organization for the promotion of horticulture, under any name whatever, and their history is nearly one and inseparable. At first small; slimly attended; exhibitions meagre and made up of the most common flowers and fruits. A few who have seen better, wonder that better is not here; and the masses may be even surprised at such a degree of success. And from this small beginning they take in the inspiration, and for the first time in their lives realize the difference between the sun-flower, hollyhock and poppy of their garden, and roses, geraniums and other choice plants which cost but the trifle more. Now this is substantially the history of every horticultural organization; and the faithful few who can take hold of and successfully found the Society, will have performed an herculean task which none need envy; but great shall be their reward, as in after years they will see the result of their labors in the revived taste and increased amount of plants and shrubs of the city gardens, and house plants in the windows. What better memento can be left than to have it said, "They did for the beautifying of their city more than all others beside." Such may be said of many a silent worker, who, by their zeal, spare no pains in developing the full resources of their town, and only by their perseverance is the organization kept inspired. In favorable seasons all goes well, but when a season like the present in the West comes, then new armor must be buckled on, and we must fight arduously for "a light of laughing flowers along the grass to spread."

The season, over most of the West, has been one of unprecedented drouth. From April 1st to July 13th, but three inches of water fell, while the evaporation was nearly sixteen inches. From 14th to 17th July inclusive, fine rains fell, amounting to 4.34 inches; during the entire month of July but 5.25 inches, with an evaporation of 8.55 inches.

What can Horticultural Societies do under such a pressure of influences? "Everything."

Their influence is worth much to the less persevering, as has been proven the past season in this State, when, notwithstanding the extreme drouth, the State Society held a very successful exhibition at Oshkosh, in June. It was their first effort as a State Society at a summer exhibition. It was not as successful in drawing from the whole State, as had been expected, yet it occupied and filled a large hall with flowers and fruits of the season. The exhibition of strawberries was remarkably good. Far the best *Jucundas* I ever saw, fully up to the pictures, and are said to do very well. Wilsons seem there, as in other places, to take the lead as a market berry. Russells were shown in good condition, and are grown quite extensively. Princes, Magnate and Chillian shown but sparingly. One circumstance was a little remarkable. In the southern part of the State, with some growers, the Agriculturist is the favorite berry, while, after diligent inquiry at Oshkosh and vicinity, I could not hear of a single grower who was cultivating it with any success. I think I may say, without much fear of contradiction, that Oshkosh is the strawberry town of Wisconsin. The moral of this first effort of a summer exhibition is, that "it is good," and provocative of much effort and healthy ambition to show the result of our horticultural labors. Let the ball move on, and this State and all other State Societies can and will exert a benign influence, till the whole country shall bud and blossom, and all from the first faithful labors of those few who learn to labor and to wait.

O. S. WILLEY.

MADISON, WIS.

Among the Fruit Growers of Delaware.

WITHIN a radius of six miles from Dover, Delaware, is found the largest area of land devoted to peach orchards, known to exist in the entire world. From this section there were shipped to market, in 1869, no less than *one million* baskets of peaches, of which 800,000 were transported by water, and 200,000 by railroad.

During the months of August and September, this entire region is beautiful to look upon. Every farm has its extensive peach orchard, usually located near the road, from which the passer-by catches sight of deeply-laden branches thickly hung with bright-colored fruit, in glorious contrast with the deep-glowing green foliage so abundant above and around.

Perhaps no part of the country will better please the curiosity-seeker, or the lover of pleasure, than to visit this section about the last week in August. Then the fruit show is at its full height, and at the same time the orchards of early apples and pears are to be seen to best advantage.

The country is level, with excellent roads never needing repair, never muddy; for they dry quickly after every rain. Hedges of Osage Orange are abundant everywhere. Shade trees of maple, elm, locust, or tulip, constantly occur. Fences are neat, generally kept in good repair and well preserved; and in the major part of this tract there is a neatness in the appearance of the farms which imparts an indescribable air of beauty, which more than compensates for the absence of bold scenery. Every foot of the soil is arable, responds quickly to cultivation and manures. Lands are easily and naturally drained, and climate improves yearly in health. Hence we find a far different system of farming in vogue now, and a far superior class of farmers, than were once beheld in years gone-by, under a different system of labor and debt-ridden style of government. Farms that would not bring \$35 per acre, ten years ago, are now easily sold at \$150 per acre. This rapid rise has been due to the profits of peach culture.

Of late considerable attention has been paid to other fruits than the peach; and, during our frequent visits to the State, we have noticed plantations of small fruits frequently set out; while the pear, the apple, plum, cherry and apricot are beginning to be appreciated, and some, especially the pear, extensively planted.

During the last two days of August we visited a few pear orchards, of which we have taken the following notes:

Dr. Henry Ridgley, of Dover, commenced, ten or more years ago, with a small orchard of dwarf pear trees. Many of these, of course, were untried varieties, which had to be experimented with. At the present time he has upwards of 3,000 trees, mostly standards, and as fast as peach trees die or are removed, they are replaced by pears. The *Bartlett*

has proved a fine, vigorous grower, an early bearer, free from blight, yielding exceedingly large specimens of fruit, and has usually brought an excellent price. The Doctor mentions one tree, which bore five baskets in 1867, four in 1868, and three in 1869, and brought \$3 to \$5 per basket, and still is not over seven years old.

The *Duchesse d'Angoulême* is the only really successful and profitable variety as a dwarf. The trees bear heavily two years after planting, and continue to bear crops every year, sometimes very heavy, at others very light, but always bringing an excellent price. The specimens of fruit are of extraordinary size and weight, and usually finely colored.

The *Louise Bonne* is a success in most portions of Delaware; on Dr. Ridgely's grounds very productive and healthy, but fruit of less than average size. Perhaps, however, this may be remedied by closer thinning hereafter.

The *Buerré d'Anjou*, as a dwarf, is certainly excellent; the trees bear nearly as well as the *Duchesse*, and the fruit is fine and fair. It is considered one of the choicest varieties on the place.

The *Vicar of Winkfield* is a prodigious grower and an enormous bearer, both as a standard and as a dwarf. One row of dwarf trees attracted our attention, from their superior size, luxuriance and fruitfulness, being fully eighteen feet in height, and having an average of fully two barrels of fruit to each tree. A number of the trees are afflicted with the blight, something which has hitherto been of unusual occurrence, and it is feared may suffice to prevent more extensive planting of this variety. As a cooking pear it is the best of all pears. It keeps well, even into December and January, and usually is quite profitable to the grower, even at so low a price as \$10 per barrel.

Flemish Beauty is entirely disfigured and destroyed with the ravages of the leaf blight, and is rapidly being grafted over into other varieties. We find the same testimony from other orchards, and it must be condemned as perfectly worthless here.

The *Howell* is a superb early pear, with fine large form, smooth skin, coloring up with bright yellow surface, and a pleasant, juicy, refreshing taste to the flesh within; flavor good, but not spicy. Tree is a fine grower, healthy, and an excellent bearer. Its only fault is, that it ripens too nearly with the Bartlett. In some seasons it ripens two weeks later, but this year it was picked at the same time. Perhaps this may be an unusual circumstance. For all northern localities we can recommend the *Howell* as one of our best and most successful new varieties of fruit.

The *Beurré Clairgeau* is superb in every respect; not yet sufficiently tested as to holding its leaves during the summer, still, in all else, an admirable variety. Tree, upright and vigorous grower; has few side branches, but forms strong perpendicular shoots; begins to bear at an early period, sometimes two years after planting, and produces abundantly on trees of good age; fruit is large and very handsomely colored. Specimens of the *Clairgeau* are frequent, weighing 13 ounces each. It ripens in October, when fine pears are much needed, and sell at high prices; keeps well over into January; quality excellent, fully equal to the *Duchesse*.

Lawrence—Successful in the highest degree. Although we met with it in other orchards to a limited extent, yet the Dr. esteems it the most valuable variety that can be grown in the entire State. Is of superior growth with him, hardy, exceedingly productive, and a very fine keeper. Those opinions also are confirmed by a sight we had of the orchard of Mr. Slaughter, directly opposite, where the *Lawrence* had been planted for ten years, and had borne for the last four or five, and now was literally loaded down with the rich clusters of fruit. The tree begins to bear in Delaware in three or four years after planting, and continues to increase in productiveness until it excels any variety known. Seckel trees of same age were not yielding more than one-half or two-thirds the same weight or measure of fruit.

Belle Lucrative is the most delicious eating pair on the entire list, yet the tree is subject to blight, and fruit apt to prove variable in size; must be thinned very closely in order to produce fine specimens. It is not of good color, and hence will never be popular in the market, but its exquisite flavor will recommend it to a moderate extent in every amateur orchard.

The *Seckel* is thought highly of by the Dr. It grows freely and bears finely after attain-

ing to the age of six or eight years. Some trees growing in the town of Dover, near the Post-office, and also on the farm of Mr. Morris, were giving a prodigious yield, and always bear a heavy crop year after year. Fruit usually ripens about the middle of September.

The above list of pears are the most prominent selection from Dr. Ridgely's orchard, a few others of minor consequence have proved almost unworthy of mention. The Virgalieu, for instance, cracks so badly as to be thoroughly worthless, and has been grafted over into other varieties. The Beurre Diel is a poor bearer, and Clapp's Favorite rots badly at the core unless picked early. The Onondaga or Swans Orange is a fine healthy grower and good bearer, but fruit is very apt to rot badly. The Doctor's list of varieties, after his experience, would be as follows:

Standards.—Bartlett, Howell, Beurre Clairgeau, Beurre d'Anjou, Lawrence, Seckel.

Dwarfs.—Duchesse d'Angouleme.

Williams Bros., of Dover, have also a fruit farm within the limits of the town, where are growing over forty varieties of pears, and 2,500 trees; also numerous apricots, plums, cherries, peaches, etc. The farm also contains sixteen acres of small fruits. Specimens from young pear trees just coming into bearing, are of extraordinary size and excellent quality. A majority of varieties will not be in bearing until 1871 and 1872. Their list of varieties and preferences is the same as that of Dr. Ridgely.

The grounds of Messrs. Walker and Hilliard contain over 4,000 pear trees, both standard and dwarf, of which the Osband's Summer has been very largely planted. It is an early pear, ripening before the Bartlett; colors nicely, and sells at remunerative prices, except when peaches are abundant, and then the prices of all other fruits are very seriously affected. The Bartlett is the principal favorite as a standard, while the *Duchesse* and *Louise Bonne de Jersey* are of exceedingly successful growth and fruitage. Dwarf trees bear at a very early age, and have never yet failed to produce a fair crop every year. Dwarf trees of the *Duchesse d'Angouleme* have sometimes borne a basket of fruit when only three years planted. The warm early soil of the country around Dover seems especially favorable for pear culture, and save in the selection of some varieties, which have proved liable to blight, all kinds succeed very well. Delaware pears are especially favorably known in the markets for their fine size, color, and superior flavor. Specimens of the *Duchesse* and *Beurre Clairgeau* have been raised averaging over one pound each, and sometimes extra specimens of over two pounds.

At Wilmington, Delaware, we visited the nurseries and pear orchards of Randolph Peters. Here is a large farm of 209 acres gradually being converted into a nursery and experimental grounds. In one field of twelve acres are over 5,000 pear trees, both standard and dwarf. This piece was originally planted in strawberries, but so disastrous have been the effects of strawberries on the trees, stunting them, and almost completing their ruin, that the strawberries have been completely plowed up, and the pear trees were severely pruned back last spring to save them. They are now making a fine growth, and recovering from the effects. Mr. Peters' experience therefore suggests to all cultivators to keep strawberries out of their pear orchards. He says they are fully as destructive to the trees as the worst ravages of the *blight* itself.

A brother of his, who had planted 5,000 choice trees, did not consider the strawberries an injury, but persisted in their cultivation among the trees. To-day he finds strawberries do not pay; and just when his trees ought to be in good bearing, his pears are a total loss. Upon this farm of Mr. Peters is a fine block of 156,000 apple trees, one year from bud, the best quality of stock we have ever seen. A little farther on is his pear nursery, and his collection of budded peaches. These last are of superior growth, short, stocky and healthy.

Twelve miles from this farm he has another at Newark, Del., upon which is growing another pear orchard of 10,000 trees, six and seven years old, and covering between forty and fifty acres; 3,000 of these are Bartletts, and in full bearing. The trees were loaded down to the ground, and all the fruit was of extraordinary size, sufficiently so to be classed of *premium quality*, and such as would gladden the eyes of Dr. Houghton or Mr. Hovey. The entire crop was picked and being marketed in Boston at a net price of \$3 per peach basket, and admitted by Boston commission men the finest ever sold in that market. Upon

single trees Mr. Peters has gathered as high as six baskets, which, at \$3 each, make \$18 income from a tree six years old, or the interest on a valuation of \$300.

The average net price for two years past has been \$3 per basket, although this year much lower than usual. Sometimes as high as \$5 per basket have been realized. Among all the 15,000 trees of Mr. Peters, we discover no signs of blight; not even on the Vicar of Winkfield or Flemish Beauty. This may be due to fortunate soil, or good location upon the hill side, or the cultivation of corn among the trees, and thus tempering the atmosphere. Mr. Peters has cultivated corn among his trees for a number of years, and by giving trees and corn an abundance of manure, has experienced no inconvenience. The cultivation of the ground and the shade of the corn upon the soil have proved of material assistance to the trees.

An orchard of pear trees was pointed out to us as we rode by, which had been conducted on the modern theory of *cultivation in grass*. Our friend Meehan should go to Newark to Prof. — place, and see what is the matter. The orchard is a practical failure.

Mr. Peters rejects the following varieties from his list for general culture :

Onondaga—Fruits well, but rots at the core. Tree however is exceedingly vigorous and healthy, and holds all its leaves down to the end of the season. *Madeleine*—Tree is exceedingly liable to blight, and becomes more subject to it as it grows older. *Flemish Beauty*—Loses its foliage, and among general cultivation is worthless from the blight. *Easter Beurre*—Fruit imperfect, knotty, of little market value; has, however, a fine healthy foliage, and is fairly productive. *Belle Lucrative*—Produces well, but fruit is of variable size, often very small, and tree often blights. *Glout Morceau*—Peculiarly liable to fire blight.

Among the best of his favorites are the Lawrence, Duchesse d'Angouleme, and Beurre Clairgeau. He attaches less importance to the Bartlett than heretofore. The Bartlett is being overdone, and for many years to come will not be as profitable as later varieties. Among them all, none are better than the d'Anjou, Lawrence, Seckel, and Clairgeau. The Clairgeau is an exceedingly showy pear, but in some years loses its leaves and drops its fruit. But the Lawrence we find universally admitted the best and most profitable variety for future cultivation throughout the entire South. It bears early, and becomes in time exceedingly productive. He has orders already from Boston, for all the Lawrence pears on his trees. The Urbaniste and Winter Nelis, so highly recommended as winter pears, are not worth special recommendation, being unproductive.

For the information of our Southern readers we give the following select list of apples, recommended by Mr. Peters as best adapted to the South.

Winter Apples.

Abram, Holladay, Milan, Cullasoga, Limber Twig, Nickajack, Rome Beauty, Shockley.

Our Northern early and autumn varieties are not suitable for the South, and he advises Southern growers to plant more of their own native winter varieties. For Delaware, however, he would advise a few early varieties, such as Early Harvest and Red Astrachan. These are very productive and profitable. Mr. Peters' success in pears is unusual. He attributes it entirely to good cultivation. His orchards are as well taken care of as specimen trees in his garden, and after a comparison of this system and that of "*cultivation in grass*," he finds the one to be a success, and the other a failure in nearly every instance.

Notes for Cottage Gardeners.

Gen. Grant Geranium.

THE severe hot, dry weather of the past summer seems to have developed with more than usual success the good qualities of our favorite—the *Gen. Grant Geranium*.

For bedding purposes, or massing in flower beds, panel gardening, or the like, it is almost unsurpassed. Its immense trusses of brilliant scarlet are exceedingly showy, and we find nothing of recent date better deserving popularity than this well known variety. It has remained with us in constant bloom from the beginning of summer down to the very close—never seeming to suffer from extremes of temperature, and we have noticed in the windows of many ladies we have visited, it is well adapted for in-door culture.

Its price is so cheap as to be within the reach of all; and we know no way more simple or inexpensive to form a flower garden than to cut a circle in the turf of the lawn, about ten or fifteen feet in diameter, and fill it entire with one solid bed of the geranium. We have seen many successful beds of this character, and have often wondered why it was not more generally used for this purpose.

Bulbs for House Culture.

It will soon be time to plant our collection of bulbs this fall in the earth for blooming next spring. The brilliant display of Tulips and Hyacinths, in our garden are ample rewards for all the pains and care we may spend now. Their culture in doors, however, has hitherto been infrequent. Perhaps few have understood the treatment—when to plant, how, what, and where. Our friend Vick, of Rochester (you all know him), has prepared an engraving showing what can be done in a beautiful way at very little cost. He says the



Winter Flowers for the House.

simplest and cheapest form of a Hyacinth glass is shown at D. A form preferred by some is seen at B. The most expensive is F, a kind of triple glass, holding three bulbs. The Due Van Thol Tulips may be grown in ornamental pots, like A, or in baskets or boxes of any form. A very satisfactory arrangement is to obtain a common shallow box, and ornament it with sticks or bark, somewhat like E, then fill it with sandy earth, mixed with moss finely broken up. Then plant a row or two of Crocuses on the outside, and fill up with

Tulips, Narcissus, Hyacinths, etc., making a miniature bulb garden. After planting, the whole can be covered with moss, such as is found on logs in damp woods. The plants will find their way through the moss.

Another very good plan is to have a box, similar to the above, as a kind of little nursery, or reserve. Fill it almost entirely with broken up moss, with a very little sandy soil. Plant this with Crocuses, Hyacinths, etc., and keep it in any convenient, pretty cool room, where it will not freeze. As fast as the plants come into flower you can take them up and place them in glasses of water, and thus keep up a supply for the parlor or sitting room for a long time. The engraving, C, is one of a number of Crocus glasses that we kept supplied in this way for several weeks last season. If preferred, these bulbs, when in flower, can be placed in pots or baskets filled with damp moss. In fact, they can be used in almost any way desired, and will be found to produce the greatest satisfaction, furnishing flowers for a long time. If placed in moss, it must be kept constantly soaked with water, or the flowers will suffer.

If the simple directions we have given are followed, and good bulbs planted, the cultivator will not only succeed, but will be astonished at the wonderful results of a little labor and expense.

Tulips for Fall Planting.

We observe the culture of this favorite flower is rapidly extending; perhaps the greatest hindrance to its popularity is the necessity for planting the autumn previous. It is so easy for gardeners to forget or neglect the little attention necessary to prepare a bed successfully. But the dazzling brilliancy of their spring bloom is a constant reminder to every one of their neglect. The Tulip is such a dashy, showy flower, it is not strange it is so universally popular. The delicate coloring of the flowers, and the beauty of single specimens on the one hand, or the overpowering display of a full bed when grown in masses, produce effects of the finest character, hardly possible of description.

We heard once of an enthusiastic gardener in Brooklyn, a most devoted lover of Tulips, who had a bed of unusually rich specimens of choice varieties, about to bloom. He surrounded the little bed (which was in a city garden) with a circular staging, and opened it as a place of exhibition. This, we believe, is the only Tulip show ever attempted near this city, and although history does not tell us the profits of the undertaking, it does favor us with the fact that the little Tulip bed was for more than a week a living sensation among the neighbors, who were more than delighted with its beauty and tasteful arrangement.

The culture of the Tulip is very simple. Any good garden soil will answer; or, if the soil is poor and sandy, add to it rotted sods, leaf mould, or well rotted manure. Keep the ground well drained, for if the soil is retentive of water, the bulbs will rot and decay. Dig the soil from six to twelve inches deep, and plant in October or November—the latter in the South, the former in the more Northern locations. The *early flowering* kinds should be planted five inches apart, and the *late* varieties seven inches—all bulbs should be covered from two to three inches deep.

Of the *Early Tulips* flowering from the middle of March until the 1st of April, the best is the *Duc von Thol*, a single variety. These are divided into several colors, white, yellow, scarlet, crimson, etc., growing only to a moderate height of about six inches, and form very gay bloomers. They are excellent also for winter flowering in the house.

The *Tournesol* follows the *Duc von Thol* with very large double flowers, and continues in bloom a long time. Colors, usually orange, red, and very fine yellow.

The *Single Early Tulips* (see illustration) flower very early, and continue in perfection a very long time. They contain many very splendid varieties, of which we would name the following as most desirable:

Claremont, gold, fine; Couleur Cardinal, showy red; Cramvisi Royal, splendid crimson; Donna Maria, red and white; Duchesse de Parma, red, edged with yellow; Eleonora, fine purple; Franeiscus I, splendid red and yellow; Grand Duke of Russia, red, deeply edged with yellow; Lae Boutlof, violet and white, variegated leaves; La Reine, beautiful rosy white; Moliere, violet, striped with yellow; Prince of Orange, yellow, striped with orange; Red and Yellow of Leiden, fine red, striped with yellow; Roi Pepin,



The Parrot Tulip.

white and red, fine; Standard Gold, fine gold; Vermillion Brilliant, glittering red; White and Red Bordered, white, delicately mottled with red.

Double Tulips are a fine and choice class, beautifully formed, with delicate shades and stripes of fine yellow, rose, or white colors. The following is a good list:

Comte de Pompadour, red, bordered with yellow, large, early; Crown of Roses, splendid double rose, large, early; Gloria Solis, bronze, orange and crimson, early; Grand Alexandre, yellow, beautifully striped with red, early; Lac Gris de Lin, bluish purple, early; Purple Crown, splendid dark velvety crimson, early; Rose Eclatante, rich crimson, early; William Rex, purple and yellow, fine, early; Xenophon, crimson, striped with yellow, early.

The *Parrot Tulips* are by far the most brilliant group of all kinds. The petals are long, loose and fringed, and most of the varieties have mixed colors, crimson, yellow, orange, or green, mingling upon the same stem. A bed or border of them produces a magnificent display. The varieties usually sold now are—

Belle Jaune, beautiful yellow; Cafe Brun, rich brown; Large Scarlet, large and bright; Perfecta, red striped.

The *Late Tulips*, divided into Bizarres, By-Blooms, and Roses, have large, well-formed, highly colored cups, with tall, stately stems, usually eighteen inches in height. These are the special favorites of the florist, the Bizarres having a yellow ground; By-Blooms a white ground, marked with purple or violet, and Roses have white ground, marked or variegated with rose, scarlet, crimson or cherry; of this class there are over 300 named varieties cultivated in this country. It is hardly necessary to advise each cultivator to keep each class of Tulips entirely in beds by itself. The simplest form of beds is a circle cut in the lawn. Next to that, a good location along the border of the flower garden. Cover them slightly with leaves during the winter, and in the spring brush them aside early. After a bed has been once established it is permanent, and if a good selection of varieties has been made, the cottage gardener can depend upon a constant show of bloom for fully six weeks.

The Chinese Primula.

NO plant surpass in beauty and durability of flowering for winter the varieties of Chinese Primula. The colors are distinct, red, white, crimson, purple, and pink. When placed on a shelf or stand near the glass, in a window with a southern aspect, they will soon convince you they are at home. Unlike most plants, they require a dry atmosphere; consequently the living room is adapted to their cultivation.

The culture is easy. If one wishes them to flower early, the seeds should have been sown the beginning of August, in a pot prepared as follows: Put one-inch broken pots in the bottom; on that put another inch rough, lumpy soil; fill the pot within one inch of the top with sandy soil; sow the seeds, cover lightly, water gently; put a light of glass on the pot and place in a shady spot. In two weeks the plants will make their appearance. Remove the glass when the plants have three or four leaves; pot them into two-inch pots, and place them under glass a few days. When the roots begin to fill the pots, they can then be put into four-inch or flowering pots. For the last potting, add one eighth charcoal dust to the soil.—*Rural New Yorker*.

How to Layer a Rose.

S. O. J. tells her lady readers how to do this nicely: "To 'layer' a rose, the soil must be well stirred up about the roots; then choose a strong shoot, strip off a few leaves, and cut about half an inch through the stem, just below an eye, making the cut in a slanting direction. Press the shoot where it is cut firmly into the ground, fastening it two or three inches below the surface with a forked stick, and cover it with earth. The Chinese are famous cultivators of roses; they select a vigorous shoot at the commencement of August, and cut a slit as directed above; a pebble is placed in the cleft to keep it open, and a handful of fresh green moss is tied around the eye; this is kept constantly moist.



Early Single Tulip.

Roots soon shoot forth into the moss, and the layer can be removed to another location, or potted without removing the moss, and it will make some growth that year. The moss must be planted in the earth when it is applied to the layer, and be kept moist by daily waterings. This is a surer method of layering rare roses than the one first alluded to.

"Of late years the slug has made the culture of roses a disagreeable occupation, and deprived them of all the beauty of their foliage. 'Skeleton leaves,' thus produced, are not desirable. Air-slacked lime is a sure antidote against their ravages. Scatter it in the morning while the dew is on the bush, and they will 'vamose the ranch.' 'It is the early bird that catches the worm,' and it must be sprinkled early if good results are desired. A pinch of salt will also silence them effectually."

How to Make Japan Lilies Succeed.

A CORRESPONDENT of the *Michigan Farmer*, who had some unfavorable experience in the culture of Japan Lilies, thus advises how to avoid mistakes: "Having read that they needed the richest soil and highest culture, I gave them a rich, deep, sandy loam, highly manured. But in spite of this and careful mulching and litter covering for the winter, *Lancifolium* would not thrive. The stalks started freely and made a moderate growth, but some of them died down about June, others gave meagre returns in July or August. But there was nothing grand, nothing perfect. I took up the bulbs and found them more or less rotten. This I laid to a wet season, and replanted in a more friable soil with more stimulus. Worse and worse! But by chance wishing to remove a few bulbs, I buried them for the winter in a spot where the soil was heavy clay. They were not, however, removed in the spring, but remained to set an example to their progenitors. The foliage, stalk, flowers, were all in their glory.

"Finally, therefore, in conclusion, dear lovers of lilies, plant the *Lancifolium* in a strong, well-worked clay; mulch, and let them alone. I have since done equally well in a gravelly clay, in Central New York. Don't be afraid but what you will get good large bulbs in spite of a stout soil."

Floricultural Notes.

New Dahlia.

A NEW *Dahlia* is announced by Messrs. Hubert & Cie., Hyères, France, under the name of *Dahlia arborea*, which they consider superior to the *Dahlia Imperialis*. It is a distinct species, having many points of advantage over the *Imperialis*, its rival. One of these is its dwarfer habit of growth, some six or seven feet high, instead of ten or fifteen; but it forms a branched head, with large leaves, and produces an innumerable number of pretty mauve colored flowers. The *Floral World* adds that these flowers are produced very late, namely, after the end of December.

Lilium Superbum.

F. R. Elliot states, in a late number of the *Rural New Yorker*, that a beautiful specimen of this Lily was grown this year in the grounds of Dr. J. P. Kirtland, at Cleveland, Ohio. On two of the stems alone there were between sixty and seventy flowers each, while the whole cluster would have numbered over 400 flowers in bloom at one time. It is not as showy as *Lilium Auratum*, or *Japonicum*, but its flowers are shown just when *Auratum* has gone and the *Japans* have not come.

Those who plant it should remember that, like all the lily family, its beauty is naturally, by its growth, partially hidden; that because of its innate modesty and intrinsic worth it droops its head, and if it is to be seen to the best advantage, it should be grown on some position where it will be elevated above the observer. A rocky knoll, or bank adjoining the entrance drive into one's grounds, a raised bank in the rear of low growing, hardy flowering shrubs, or a mass of geraniums, are all good positions for the planting of lilies.

The Oregon Lily,

A native, says the *Willamette Farmer*, is most beautiful. Its foliage is very much like that of the choice Japan Lily—its flowers, sometimes a dozen or more in number, on one stalk, are white, sometimes sprinkled with red spots, change to a pink color when they fade, and are exquisitely fragrant. They can be found wild in many parts of Oregon.

Chrystalizing Grasses.

We have seen some exceedingly beautiful bouquets of ornamental grasses, chrystalized in a delicate and artistic manner. One of our exchanges explains the manner in which it is accomplished.

Almost any kind of grass looks well when crystalized, but the long feathery grasses give the most satisfaction, as they are ornamental when only partially covered with the alum, while the others should be covered completely. When you have gathered all you wish and dried them thoroughly, you can either crystalize them before forming them into a bouquet, or make the bouquet first and crystalize it afterwards. If you wish to put the grasses in a vase with everlasting flowers, you must first put them into the alum solution, which is thus prepared:

Pulverize a pound of the best white alum, and dissolve it over a slow fire in a quart of pure soft water. Do not let it boil, and be very careful to keep everything out of the solution that can possibly stain it, for the beauty of the grasses depends on the pure whiteness of the crystals. A new earthen bowl is the best dish for the purpose. When the alum is all dissolved, let the solution cool down to blood heat; meanwhile arrange your grasses in a bowl and pour your solution over them, cover up, and set away twenty-four hours. Then take them out carefully, dry them in the sun four or five hours, and put them in the vase prepared for them. Do not move them for several days. If you form the grasses into a bouquet before crystalizing them, procure a glazed earthen jar, suspend the bouquet by a string from a stick laid across the top of the jar—take care that the tops of the grasses are not bent or doubled over—and then pour on the solution, proceeding as above directed. What remains of the alum water may be reheated, tinged blue, or purple, or scarlet, by a few drops of dye, and used again as before.

Crystalized grasses, when mixed with everlasting flowers, make beautiful winter bouquets. Snowdrops, or wax berries, the seed vessels of wild roses, and asparagus branches covered with their scarlet fruitage, may be used with fine effects. Many bright-colored berries may be gathered from swamps and marshy places to contrast brilliantly with the metallic snowy luster of the alum crystals. Of these none are more showy than clusters of bitter sweet. Many ladies plant flowers in spring for the especial purpose of making winter bouquets. The varieties of *Helichrysum* are beautiful for wreaths, especially the dwarf species. *Anemobium alatum*, or White Everlasting, is very much in use for memorial garlands and crosses to adorn the graves of friends. The varieties of ornamental grasses are also very much in use for this purpose. The florists' catalogues contain a full description of them all, and any of our lady readers who, another year, wish to cultivate this particular branch of adornment, will do well to consult these catalogues.

Double Geranium.

Edgar Sanders, in the *Prairie Farmer*, describes some beautiful flower beds he has had good success with the past summer.

We have a pyramid of scarlets of the single kind, double banded, with the *Centaurea candida*, that to our liking is as pretty a thing as can well be.

It is thus composed: A circle bed is selected, say ten feet over; in the centre of this is a rustic octagon basket four feet over, and placed on an oak support two feet from the ground, the post and basket being both made with the rough bark on.

This basket is planted with a tall scarlet geranium in the middle, with others around, so arranged as to taper as much as possible to a pyramid; around the outside is planted thickly a row of *Centaurea candida*, thus forming a pure silvery white band around the scarlet.

The bed below is so planted that the tallest geraniums come next the basket, tapering again to the ground, which is again edged with the *Centaurea*, thus forming a pyramid over

six feet high of scarlet, white, and green, so symmetrically arranged that it cannot fail of giving a pleasing effect. For small front door yards, such a bed is just the thing, or as starers among a group of flower beds.

Successful Culture of Roses.

To secure good flowers, and a constant bloom, with the Tea, Bourbon, and other perpetual varieties of roses, the *Practical Farmer* says it is only necessary to observe a few plain directions.

1st. All fading and finished blooms should be at once clipped off. Nature seems to tend always to the production of seed, as the object of bloom and fructification. As the amateur florist does not want rose seed, but flowers, allowing the former to remain on is not only unsightly, but is far more exhausting to the plant than profuse blooming.

2d. The rose slug, living on the green part of the leaf till only the skeleton is left, must be removed without delay. This we accomplish very readily by injecting, with a common tin syringe, soap-suds made from carbolic soap in a common watering-pot. The slug works mostly on under side of the leaf, but the carbolic soap, with which the whole bush should be deluged, if it does not kill outright, soon displaces it by its offensiveness peculiarly obnoxious to all insect life.

3d. The soil around the bush having been manured in the spring and preceding fall with stable manure, soap-suds should be applied each wash day, and twice a week about $\frac{1}{2}$ pint of chamber ley to each plant.

By these means, and an occasional shortening in of a too straggling branch, roses may be kept in bloom from early spring till within nearly a month of Christmas.

A slight mulch at the base of the stem, of short grass, hay, or weeds (in case any of these latter can be found), will also be a great advantage. If there are no weeds on the property, perhaps a few can be procured at a neighbor's.

Late Blooming Shrubs.

Hearth and Home says that too little attention is paid to late-blooming shrubs, and many an otherwise fine garden is almost destitute of flowers during the months of July and August. Early flowering species of shrubs are far more abundant than late flowering; hence the importance of planting more of the latter, for the purpose of keeping up a succession of flowers during the summer months. Among the most desirable shrubs that bloom late in the season, we would select the following:

Stuartia pentagyna.—Flowers pure white, and two inches in diameter; an elegant and vigorous growing shrub, blooming in July.

Hydrangea quercifolia, or *Oak-leaved Hydrangea*.—Flowers white, slightly shaded with purple; produced in long, loose spikes, or racemes.

Hydrangea paniculata.—A rather rare shrub, with long, dense spikes of flowers, which are produced in great abundance from July until October.

Azalea viscosa.—A native shrub that is far too generally neglected. Flowers pure white, and deliciously fragrant. This plant should be in every garden. There are many other beautiful, late blooming shrubs, descriptions of which may be found in nurserymen's catalogues.

Abutilon Thompsonii.

Edgar Sanders says that many of the new variegated leaved plants suffer severely in the clearest sunshine, and asserts that this very variegation renders the plant more weakly, and we are the more convinced of this than ever from the beautiful golden blotched *Abutilon Thompsonii*, growing out of doors extremely slow, whereas in the greenhouse it does quite well in summer, provided the glass is partially shaded, and the house kept moist.

We had high hopes of this *Abutilon*, and seeing it in such splendid condition all over England last year, was picturing to ourselves similar objects of beauty here—but its growth is too slow, at least on our hot, sandy soil. It may however be more effective on low, rich soils.

Hanging Flower Baskets.

A very handsome hanging basket is made of the dried burs of the Sweet Gum tree. They are strung together into the desired shape on strong twine, just as beads are, in the

fancy baskets in the stores. The rustic appearance of the burrs is very pleasant to the eye—particularly in houses that have little or none of the charms of rural scenery about them. If dropped, they are not broken or injured in any way; and if the twine breaks and some of the balls are lost, they can be replaced with others picked up in the next walk in the country. The baskets are so simple in construction that any lady can make them.—*Rural New Yorker*.

Plants in Rooms.

The *Rural New Yorker* says not far from New York city is a house with one charming room in it. One of the charms is the border created by two pots of ivy. It has been growing three or four years, and now runs entirely around the room, over the tops of the windows, and is beautiful beyond description. Plants and flowers may be made to furnish a room beyond the reach of satin and rosewood, and at small cost.

New Rose—Felix Genero.

W. F. Radelyffe writes the *Gardener's Chronicle* that the most beautiful Rose, thoroughly proven here on Manetti, without a fault, is Felix Genero. It is first-rate as to form, color, outline, growth, and free blooming. I advise all nurserymen to propagate it largely, and Rosarians to buy it extensively. I have eleven plants of it in bloom now, and I see no difference. It is as good in form as Chabillant, larger, of a better color, and of better growth, foliage and health.

Trade in Violets.

THE little bouquets of violets, which in the spring months are sold by the flower girls in the central streets of London, are the produce of many acres of land at Mitcham and its neighborhood. A short visit to Mr. Steedman's violet farm gives an insight to its workings. There are sixteen acres of land under violet culture. The two varieties of this flower principally grown here are the Russian and the Giant. The first named is darker in color, the latter is the most fragrant. The picking is done by boys and girls, who have a tin can suspended by a strap over the shoulder on one side, and a bunch of short strips of bass on the other. When twenty-five violets are plucked, they are tied together with a strip of bass, and placed in the can. Another "hand" is employed to pick leaves only. In about the centre of the little farm there is a shed or barn. Here the picked violets are brought and placed in heaps, as are also the leaves; but the latter are all thrown into a water vat and swilled, for the purpose of removing earthy rain splashes. In the barn, from ten to twenty pair of nimble fingers are ready to make up the bouquets as soon as the flowers are supplied; this is done by tying two of the quarter hundred bunches of violets together with two or three leaves outside them. This done, they are then packed in symmetrical rings in a small basket or skip. About 3 o'clock P. M. the work is done, and from twenty to eighty skips are put into the van for market. The quantity varies considerably, according to the weather and season.

Mr. Steedman is a true philanthropist and trader, and is as well known in Covent Garden at six o'clock in the morning, in March and the beginning of April, as Rothschild is on the Exchange at three o'clock in the afternoon. Many a poor flower girl, without a penny, gets from him fifty bunches of violets on credit, and at a price something less than half that the public pay for them retail. The girls frequently increase their profits by dividing every bunch of fifty they receive into two of twenty-five; but this is done only very early in the year, or when the flowers are scarce.

There are large violet farms in the south of France (that of M. l'Hermine in particular), of more than 100 acres, near Nice. Last year the season there was so unfavorable that the Paris market could not be supplied from its customary source. In England, on the contrary, the weather was remarkably mild; and violets were so abundant at Mitcham that they were forwarded by the night French mail, and sold freely in the Paris morning market.

The violets are cultivated at Mitcham in single roots, and not allowed to run together. Nothing deteriorates these flowers more than when they become bedded together. They then grow leaves instead of blossoms. The roots require dividing every other year at least.

—*The Gardener.*

Hints on Successful Window Gardening.

From an English Manual, by W. H. B. Angutt.

OF course plants grown in windows require a great deal more attention than those grown in the garden; the reason of which is obvious, but the chief conditions necessary to their remaining in a state of health, are a good compost to grow in, a good supply of air, plenty of light in the day, darkness and coolness at night, cleanliness, and a proper amount of moisture at the roots. There are a few things in reference to plants generally which are grown in windows, a failure to observe which is sure to interfere with the success of many who love to grow their little favorites.

One of the most important points is *the watering*. There should be plenty of cracks in the bottom of the pot, so as to allow the water to pass off rapidly, and thus ensure perfect drainage. This is one of the few rules without an exception, as there is not a single plant I know of, suitable for window culture, which will flourish if the water is allowed to stagnate at the bottom of the pot. Never allow any water to remain in the saucer. How often does one see the window plants of our acquaintances stand in a pool of water in the saucer. When plants require watering, give them plenty, so that the roots have a thorough soaking, but pour away that which runs in the saucer; and if your plants require a great deal of water, give it them often, and don't compel them to suck it up through the hole in the bottom of the pot.

During the day time plants must have *plenty of light* (not necessarily sun-shine, as that may be frequently injurious, and it is better to shade on very hot days), but plenty of daylight, for plants cannot thrive without it. Therefore, let the plants stand as close to the window as possible, and keep the glass rubbed clean; if this is attended to, and the pots turned round a little way every day, you will be able to grow your plants in good shape; but if they are grown at a distance from the light, the points of the shoots and all the leaves will turn themselves toward the window, and thus present a curious, but by no means graceful appearance.

At night they should be in the dark, and kept *cool*. You know that plants in a state of nature are cooler at night than in the day, and therefore those grown in windows should be cooler. But it unfortunately happens that most living rooms are considerably warmer, at least during the early part of the night. This is caused by light, firing, and there being mostly more persons in the room, or *at home*, at night. Consequently the plants stand a fair chance of being injured, and if they must be grown in that room, there is no help for it but standing them down on the floor in such a position that they may be shaded as much as possible from artificial light; when they will be in a cooler position than they would be if they remained on the window sill.

It is these two reasons—*want of light* and *too much heat at night*—which makes town-grown plants so lanky-looking and sickly; but with proper precautions most persons will be able to produce specimens of a natural form and in good health.

Give Plenty of Air.

Those who are fond of rising early in the morning, and taking a walk in the fields and woods, will have frequently noticed the rustling of the leaves in the morning breeze. Everyone has remarked the leaves of the trees on a sultry day, drooping under the heat of the sun, motionless and desponding, but every one has not noticed how totally different their appearance is in the early morning; even when there is not enough wind to feel the least breath upon your face, you may perceive a constant agitation going on among the leaves, making the sunbeams glitter on their bright surfaces, moving to and fro, and dancing and sparkling as though they thoroughly enjoyed their gambol with the zephyr which refuses to woo your own cheek. And they really *do* enjoy it, for the leaves are the lungs of the plant, and therefore a plentiful supply of fresh air is as necessary to keep it in health as it is to a human being. So never be afraid of keeping the window open; but do it as much as possible when the weather is not cold, and it can be done without exposing them to a thorough draft.

Another matter of the utmost importance is *cleanliness*. Persons living in the country can have but little idea at what an astonishing rate dust accumulates in any city or any

large town where there is a large traffic. In fact, the dust is one of the greatest enemies of the city housewife—the dragon with which she has constantly to do battle with duster, scrubbing-brush and flannel. A very short time suffices for the leaves of a plant to get covered with dust, and if not frequently removed they turn brown and wither, for it effectually stops those processes from going on which are equivalent in a plant to breathing and perspiring, by stopping up the pores of the leaf. The best way of removing it is by frequent washings with clean water which has just got the chill off, and a flannel or sponge is the best thing to use for the purpose. This operation can scarcely be performed too often, if done with sufficient care; and it is quite delightful to see how refreshed and invigorated your pets will look after their periodical washings. Whenever an opportunity occurs place them out in mild showers, when they will receive a benefit which can scarcely be imparted to them by any artificial means.

Let us hope that the time is not far distant when every one, be they ever so poor or ever so badly off for want of space, may be able to grow a few plants of their own, and cultivate their window gardens; for although it may frequently provoke a smile of ridicule or a gesture of contempt, to see a poor, long-legged geranium growing on the window sill of some wretched home, in a cracked tea-pot, still it ought to tell the reflecting mind one thing, that in that locality there beats at least one heart who can appreciate the beauties of Nature; that, did more favorable circumstances surround, would revel with as much delight as you do in the joys which are to be found in green fields, shady woods, and flowery lanes. These poor, weak, miserable looking objects are not cherished because of the beauty of their appearance, but because they whisper to them of those enchanting scenes of Nature which it is so seldom their good fortune to witness.

Pears---Abundance of Crop for 1870.

BARTLETT pears have sold the past months of August and September for as low as \$1.50 per crate, or \$2 per bushel, or \$5 to \$7 per barrel. This is the lowest price they have been known to reach for more than ten years. Nearly all other varieties have sold correspondingly low. Duchesse d'Angouleme for \$2 per crate, while Flemish Beauty and Seckel have ruled lower still than Bartlett.

It is possible that these low prices may check for a time the rage for planting pears which seems to have arisen and extended so strongly for two years past. But we find several salutary lessons in this situation. 1st. We must place less dependence upon one exclusive variety. 2d. We must plant more *late varieties*.

Nearly every farmer has hitherto planted early varieties, mostly Bartlett. The trees begin to bear young, and their fruit reaches market about the middle of August. From the large number of trees planted, the produce now begins yearly to pour in in overwhelming quantities. Sagacious cultivators will hereafter give the Bartlett only a medium place on their lists, while the multitude of course will continue to plant it as freely as they have done the Wilson strawberry.

We often notice, on the other hand, what a scarcity of fine pears there is after October 1st, and down through November and December. The most successful growers now plant a *succession of varieties*, from earliest to latest, and they generally find that their latest varieties prove the most profitable. The *Lawrence pear* we esteem not second to the Bartlett, and sometimes far more profitable. The Seckel is so little planted that its fruit always will be high. The *Beurre d'Anjou* is one of our finest late varieties, and the *Beurre Clairgeau* is equally excellent. No one can go amiss in this short list, and of every 500 trees we would choose more than one half Lawrence.

In Virginia, immense orchards of Bartlett and Duchesse pear trees have been planted. One farm alone of 300 acres possesses 100 pear trees on every acre, and we think that for a few years to come Virginia Bartletts will become quite as famous and as cheap as Virginia strawberries and Virginia melons.

We have never discouraged the planting of fruit, but the indications at present show that

it is sometimes slightly overdone; the production is greater than the consumption, and then we have to wait for a period of five or more years for the balance to be restored.

We invite correspondence from our pear growers, as to their experience in pear culture this year, and what varieties they can best recommend, West or South, North or East, for late ripening, and fit for marketing after October 1st.

The Saunders Raspberry.

THIS is one of the new seedlings produced by D. W. Herstine, of Philadelphia, Pa., from the seed of the Allen Raspberry, planted in alternate rows with the Philadelphia. It bears the most desirable characteristics of both, in size, flavor and productiveness, and still is perfectly hardy as far as tested. The fruit committee of the Pennsylvania Horticultural Society, in their report of July 6th, 1870, describe it as follows: "Plant a good bearer, suckering freely; canes, green, shaded with purple; spines, numerous, small and light green; foliage, light green and abundant; fruit, very large, round, of a crimson color, with large grains; flavor, of high character and delicious."

Shade Trees for Streets.

WE have often been asked the question, "What are the best trees for planting on the sidewalks of our cities and villages?" For this purpose people generally demand quick-growing trees with spreading branches, so as to obtain shade for the sidewalk almost as quickly as an awning could be put up; and trees that are free from insects. These requirements have reduced the selection to a very small compass; and as the *Ailanthus* has been the only tree that fulfilled all the conditions, it has been very extensively planted. And what has been gained by it? On account of the sickening odor of its flowers, and its habit of throwing up the flagging and pavement with its roots, those who planted them have been only too glad to cut them down, after losing ten or twelve years of time, and begin again with some other healthier, more beautiful, but slower growing tree. So with the Silver Poplar, which is worse than the *Ailanthus* for destroying the pavement and areas of the houses with its suckers; and the Weeping Willow has such a large spreading top, that when fully grown it shades the house too much.

What are really required for our purpose are trees that do not grow too tall or spread too wide, so as to interfere with the windows of the houses; that are of reasonably rapid growth, and that will not throw up or injure the pavement with suckers. Fortunately some of our native trees are the best adapted for this; indeed, among exotic trees we do not find more than half a dozen that are equally as well suited to it with our own native ones. As for the injuries and annoyances of insects, especially caterpillars, we can easily avoid them by care in destroying them when in their nests, or by picking off the cocoons, or, better yet, by encouraging insectivorous birds to take up their abode in our cities. That this may be done we have abundant evidence in the city of New York. It is true that it may involve the feeding and confinement of vicious boys, now and then, for four or five days in a lock-up; but between the pleasure and comfort of walking under the shade of trees in the hot, sultry days of July and August, and the indulgence of the evil propensities of unrestrained urchins, there should not be much hesitation in choosing. When the English sparrows were introduced here, police regulations were enforced, because the sparrows cost money. Our native birds are now also coming into the city, showing that if they had been protected they would have remained with us.

In planting trees on streets or roads it is absolutely necessary to supply them liberally with good fresh soil; the holes should be dug out four or five feet across, and be from two and a half to three feet deep; all the earth taken out should be thrown away, and the hole, when the tree is planted, filled up with fresh garden soil, or the top soil of an old pasture field, first paring off the sod. No manure or earth from the wood pile should be mixed

The Saunders Raspberry.



with it, as all such materials undergo a fermentative process when mixed in the soil in any quantity; this is highly injurious to the roots of a tree, causing decay in the young roots as soon as they begin to push out. The earth should be firmly trodden down as it is filled in, and care be taken that it is well distributed among the fibrous roots of the tree. The tree should be well staked and braced against the effects of the winds, and the surface well mulched with long stable manure, leaves, or similar material. By a little extra care and expense in planting, two or three years time in the growth of the tree may be gained in the first eight or ten years after planting.

The trees best suited for street planting are the Sugar Maple; the Silver-leaved Maple, of very rapid growth; the Scarlet Maple, also a rapid grower; the European Sycamore Maple, a species with large, deep green foliage and spreading branches, and a rapid grower.

The Catalpa is an elegant, rapid growing tree, of spreading habit, with very large foliage and large pyramidal cluster of white and purple flowers, which appear in July. We have never seen this tree attacked by insects. It comes into leaf rather later than most trees, and retains its foliage very late. It is an especial favorite for this purpose with us.

The Horse Chestnut is an elegant, well-known tree; but in dry situations is apt to have the leaves scorch and dry up in summer; for moist situations we do not know of a finer tree.

The Scotch Elm is a rapid growing tree, of spreading habit, and large foliage. The American White Elm is a superb tree, where room can be allowed for it; but it is not suitable for planting where the houses are built close to the line of the street. The English Elm suckers very badly, and is unfit for street planting.

The Kentucky Coffee-tree has curious looking, stiff, blunt shoots, and light, airy foliage; it is a rapid grower, and very desirable where heavy shade is not wanted.

The Oriental Plane or Button-wood is entirely free from the disease which of late years has so destroyed our native species, and makes a very useful tree for street planting.

The Paulowna is similar in habit to the Catalpa, of very rapid growth, with pyramidal heads of reddish lavender-colored flowers. It is of a spreading habit, with very large foliage; the tree is quite hardy, but in very cold winters the flower buds, which are formed in autumn, are liable to be destroyed. We have never seen it molested by insects.

Our native Tulip-tree, or Liriodendron, makes a very elegant shade tree, but is somewhat difficult to transplant. We have, however, always succeeded with it by puddling the roots as soon as the tree was taken up, and then wrapped them in moist hay or straw. If the roots once become dried, it is almost impossible to make it live.

The Bass-wood or Linden trees, both of the English and American species, make beautiful shade trees; but, unfortunately, they are very subject to the attacks of the borer, especially in large cities. In small towns or villages, where wood-peckers or birds of that class can get access to them, they would be very desirable. The flowers are very fragrant, and the foliage dense, that of the American species being very large. They are all rapid growers.—*Harper's Bazar*.

Ornamental Weeping Trees.

From the "London Gardener's Magazine."

MANY fine breadths of grass in villa gardens are made unsightly, or considerably less attractive than they might be, through the lack of interesting trees and shrubs of a character suitable to the position.

Mistakes are often committed in landscape gardening by planting trees of deep colors and heavy outlines too near the dwelling, for this system almost precludes the use of the lighter and more graceful forms of vegetation, which are suitable chiefly for the foreground, and show their outlines and elegant traceries in better contrast against the heavy masses placed beyond them.

One of the most elegant of lawn trees is the *American Weeping Willow*, which, by its very name and character, may always be much more appropriately placed near water, than on a high dry bank or architectural terrace. Its very appearance reminds the spectator of water, and at first sight of the tree, he may reasonably look around him to discover if he has come unawares to the border of a lake, or the neighborhood of a fountain.

But given the proper accessories, and there is no tree in our garden that can surpass in grace and liveliness of character the true *Salix Americana pendula*, and in the form of a standard it is the most suitable tree that can be chosen for a fountain, while the Kilmar-nock Weeping Willow, *S. caprea pendula*, is equally at home on the margin of a lake or stream.

Leaving the aquatic scenes, and considering what may be called the every-day wants of amateur gardeners, we recommend herewith a few of the most elegant weeping trees, suitable for conspicuous position on lawns, at angles of intersecting walks, and to mingle with the less formal scenery of banks or caves in gardens.

There are several beautiful pendulous varieties of Elm, of which perhaps the most elegant is the *Scampston Weeping Elm*, *Ulmus Montana pendula nova*; a 'great improvement on the better known and much admired *U. Montana pendula*. Of the *Scampston Elm*, there is a variety with variegated leaves, which has a remarkably elegant appearance when placed in a good position on a broad sweep of lawn.

For the fronts of shrubberies, and to beautify a slope or half wild position, the small growing *Ulmus viminalis*, and its variegated form, are admirably adapted; and these may be known by their slender twiggy character and their small leaves, in this respect being distinct from all other Elms known.

Where a single weeping tree is required to "stand upon its own merits," or it is desirable to plant a pair which shall command attention for distinctness and beauty, *Sophora Japonica pendula* has no equal.

This tree is a native of Japan, and belongs to the leguminous order, being closely allied to the Laburnum. It produces dark green pinnated leaves, and when worked standard high, grows somewhat in the form of an umbrella nearly closed, the long branches hanging down all round the stem in an almost perpendicular direction. If we had room only for one pair of weeping trees on a lawn, we are inclined to think our first choice would fall upon *Sophora Japonica pendula*.

Where there is sufficient skill for the task of growing *Wistaria Sinensis*, as a weeping standard tree, it makes a grand feature on the lawn, and blooms so profusely as, in some seasons, to be as densely covered with its purple racemes as a specimen *Cytisus*, or an exhibition *Azalea*. But it must have room; the stem must be supported by a stake, the growth must be led on light supports in the direction necessary to form the proper outlines, and the subsequent growth must be pinched in from the middle of June to the middle of July, or it will soon grow out of bounds, and becomes an almost inextricable confusion.

There are a few other varieties of well known trees which deserve attention for their elegantly pendulous habit. The Weeping Limes, Poplars, Oaks, and Beeches, have their several distinctive characters; but amongst them the palm for distinctness and beauty must be awarded to two Poplars, *Populus canescens pendula* and *P. tremula pendula*, the constant agitation of the leaves of this last named, together with its fine weeping habit, render it a most interesting subject, and its beauty comes out fully when its light tints and graceful outlines are assisted by dark backgrounds of more massive timbers.

Of the Beeches, *Fagus pendula nova* has the most pendulous habit, and is a proper subject for a grand style of planting, but of no use at all for a small garden.

The most distinctly pendulous Oak is *Quercus pedunculata pendula*, a very lively tree, combining grace with majesty. The Weeping Turkey Oak, *Q. cerrus pendula*, is a great beauty.

We are not fond of the Ash, and rarely derive any pleasure from its aspect in garden, but as the Ash has a fame in wood-craft, it is well we can introduce two very elegant weeping varieties, in addition to the well known Weeping Ash of the London gardens.

The common Weeping Ash is *Fraxinus excelsior pendula*, a truly noble tree when well grown, and the best for giving shade to a resting place. It is well worth the care necessary to train out the growth in the formation of a gigantic umbrella of its large deep green leaves and rigid branches.

It is, however, quite surpassed in beauty by two variegated-barked varieties, *F. excelsior argentea pendula* and *F. excelsior aurea pendula*, the one having a silvery, and the other a golden colored bark. The bright colors of the young twigs of these varieties have a very curious effect, as the tracery of the whole of the tree appears to be picked out in bright

lines, and this tends greatly to relieve the stiffness and formality peculiar to the Weeping Ash.

The WEEPING WALNUT, *Juglans regia pendula*, is not to be recommended for choice purposes. It is a noble tree, but should only be planted where it can grow to a large size, and form timber in the proper sense of the word.

Having in view only the best among hundreds of varieties of trees of more or less pendulous habit, we shall name only one more of deciduous habit, and that is the WEEPING THORN, *Crataegus pendula nova*, a very elegant lawn tree, and a proper companion to standard weeping roses, which scarcely need mention, for no one could forget them in calling over the subjects best fitted for embellishing a lawn.

But we must add to all these deciduous subjects, one Evergreen, the WEEPING HOLLY, of which there are two distinct varieties, *Ilex aquifolium pendula*, a variety of the common green holly, truly pendulous in habit, and a very pretty object in winter; and the variegated Weeping Holly, *Ilex aquifolium pendulum variegatum*. The last is the most beautiful evergreen shrub known, and as well adapted for the smallest garden as the largest.

Editorial Notes.

Downer's Seeding Strawberries.

VERY few of the new seedling strawberries yearly produced, ever win a permanent reputation, or more than a local success. It is somewhat gratifying then to a careful horticulturist to find his seedlings making their way surely into the favor of a prudent public, and succeeding so well as to justify their high appreciation. Mr. Seth Boyden was one of the most careful and celebrated of all horticulturists in the production of valuable seedling strawberries, but he has gone, and now there looms up into view, with greater distinctness and higher reputation, the services of Mr. Downer, of Fairview, Ky. Scarcely a garden but possesses some of his famous strawberries, Chas. Downing, Kentucky, Green Prolific, Downer's Prolific or others, and few fruits ever sent out have borne so well the test of time, or added so much honor to the originator, as have these. Mr. Downer's success in new seedlings, and in achieving a high reputation, is really remarkable, and at the same time a great encouragement to future efforts.

Best Selection of Pears for Planting.

Mr. J. J. Thomas, horticultural editor of the *Country Gentleman*, recommends first those varieties which have uniformly proved early bearers. In the order of ripening, the Summer Doyenne must undoubtedly be placed first. Unless the tree is in a very rapidly growing condition, it begins to bear when quite young, and gives profuse crops afterwards. The Bartlett is of course the heaviest bearer of all sorts, both when quite young and after the tree attains full size. After the Bartlett add the Washington, Seckel, Howell, Belle Lucrative, Onondaga, Winter Nelis, and Passe Colmar. The Giffard may be added—and if grafted standard height on some straight and vigorous grower, its feeble and crooked growth may be obviated, and handsome and symmetrical trees produced. There are several other sorts, which, although often giving good crops from young trees, are not so uniformly productive at an early age, such as Bloodgood, Dearborn's Seedling, Rostiezer, Flemish Beauty, Lawrence, Alencon, Columbia, etc. On the other hand, by planting such excellent sorts, exclusively, as the Tyson, Dix, Sheldon, etc., famous as tardy bearers, the young owner may become discouraged before he enjoys the result of his labors.

We observe, on the other hand, Mr. T. T. Southwick, in his record of the success of Mr. Martin's orchard, Mercersburg, Pa., advises this list—

300 Lawrence, 150 Bartlett, 140 Howell, 120 Vicar of Winkfield, 65 Beurre d'Anjou, 60 Seckel, 55 Buffum, 50 Easter Beurre, 30 Clairegeau, 20 Clapp's Favorite, 10 Doyenne Boussock.

As we write this paragraph the fruit markets of New York are supplied with an over abundance of all kinds of standard fruits. Plums are exceedingly low, while Bartlett

pears are selling at but \$2 per bushel, or \$4 per barrel. Peaches are worth only 75 cents to \$1 per basket.

Now, after two seasons' observation of the fruit markets here, we would not advise any pear culturist to grow varieties which will ripen at such times of glut as we usually experience here from the 15th of August to the 15th of September. We would recommend safely any varieties that ripen before August 1st, or after September 15th.

In the cooler days of later September and October, all descriptions of fruit rapidly improve in price, and often sell at remunerative prices. In seasons when peaches are very plenty, they conflict seriously with all other descriptions of fruit, and hence they must suffer. But as fast as the supply of peaches declines, so the value of other fruit improves, and by October 1st peaches are completely over, and pears are the leading supply of the market. Hence we say it is wise for every grower not to plant too largely of early kinds. Every orchard will bear a good number of Bartlett pears; they will always sell for something, and when there are no peaches, will bring astonishing prices; but there is danger in planting out too great a proportion of this variety in many of our new orchards.

In Delaware, successful peach growers divide their orchards into at least six or more varieties, ripening from very earliest down to very latest. They never plant exclusively of one kind. It ought to be the same in pear culture. *More profit* will accrue over a score of years, from a judicious *succession* of varieties of *pears*, than from an exclusive devotion to one variety.

The *late ripening pears* will hereafter yield more remunerative returns than the early varieties, and we bespeak attention to them from our pear growers. The South can now supply us with early pears from Virginia, North Carolina, and Georgia, and in regions like Pennsylvania, Delaware, and New Jersey, there will be considerable interference and competition for this early market.

The selection of Mr. Martin is generally judicious. We would recommend less Lawrence, say 200, and increase d'Anjou, Seckel, and Clairgeau, each to 100. Next to the Bartlett, we esteem the Beurre Clairgeau our most promising new market pear. The Howell should rank next in the list, a beautiful autumn variety, ripening two weeks after the Bartlett, and always a beautiful grower.

Carbolic Plant Protector.

Our experiments with this article (referred to in our July No.) were continued for a period of several weeks, in order to test its efficacy as to the destruction of noxious worms. We found that for the large measure worm, which so often infests our city trees and grape vines, a decoction of the plant protector, sufficiently strong to kill or dislodge the worm itself, was strong enough to scorch and injure the leaves of the vines also. But for bark lice, and more tender worms or insects, it was a most beneficial agent. We think it especially useful as a *preventive* against future attacks of insects. If plants are syringed freely once or twice a week, the odor alone will repel insects, while there is no doubt the eggs of future progeny are destroyed also. Our first application to the grape vines destroyed the worms, but scorched the leaves and retarded the ripening of the fruit. The odor remained in the garden and on the ground for several weeks, and we never had an attack of worms of any description. We also discovered some caterpillars' nests, and a thorough soaking with the solution soon placed them all out of danger.

For clearing the bark of trees infested with *lice* or *scales*, or to keep off worms, borers, etc., we believe it to be excellent. We have seen worms writhe in agony when under the fumes of the acid, and a single touch of the raw substance upon their backs, has killed them in thirty seconds, the effects upon the skin being like that of a red-hot iron, *scorching*.

Our experience is also confirmed by a correspondent of the *Practical Farmer*, who says: "I have tried it upon various species of plants, and it has proved as efficacious in destroying insects and preventing their ravages upon plants, as the whale-oil soap has been when properly applied. When syringed upon the plants, a pound to twelve or fourteen gallons of soft water has proved effective and safe; but to wash the stems of trees, make it doubly strong, say, to trees two inches in diameter, one pound protector to six gallons of water; and tree stems eight inches in diameter, four or five gallons of water to one pound of protector—and so on. I think it an excellent article to syringe plum trees before they expand

their blooms and after the fruit is just set. It will also prove a capital safeguard against the various species of *tree borers* and the peach *cut-worm*; but it must be used with caution, as it is very strong. Cultivators should weaken it well for first trial, and increase its strength gradually until they see its beneficial effects upon different species of plants. Rabbits in winter will hardly attack trees strongly coated with the protector, if they can get any other food. A pound of the protector, dissolved in two gallons of boiling water, makes it white as milk; after that cold water is put in it, enough to give it the proper strength for application upon various kinds of plants.

Early Grapes for New York Market.

We would say, once for all, to Southern grape growers, that there is *no money* made in sending *early grapes* to market. Early grapes to-day (Aug. 24) are selling for five cents per pound, brought from as far south as North Carolina and West Virginia. A leading commission dealer informs us that as long as other fruit—peaches, pears, plums, etc., are found in plenty in the markets, there is absolutely no demand for grapes. And it is not until toward October 1st, when cooler weather comes, and the supply of other fruit declines, that the demand for grapes strengthens and they reach a satisfactory price. We have witnessed entire shipments of good grapes sold this week for three and five cents per pound, which, if they came in October, would sell for ten and fifteen cents readily. We say then to all grape growers, do not raise *early grapes* for *profit* in this market. There will be a loss every two seasons out of three. October is our best grape month.

How to Pack Pears for Market.

We visited Mr. Quinn's orchard, at Newark, N. J., about August 25th last, and beheld the finest collection of standard and dwarf pears, in fruit, we have yet seen. The standard trees were full to overflowing, and the dwarfs were so over abundant as to need supports. Many trees would average from three baskets upward, while some would yield fully three barrels. Mr. Quinn's success in pear culture has been due to three points only:

1st. He cultivates his ground constantly; permits no other crops to grow between, and allows no grass to be seen, but mulches heavily in time of fruiting.

2d. He prunes every summer and winter, carefully, and has thus built up an orchard of trees of splendid shape, healthy limbs, and able to bear any amount of fruit without strain.

3d. He takes especial pains with packing, always using clean new half barrels, assorting into finer grades, and packs solidly and handsomely. The result is that his pears will bring \$3 to \$5 per barrel more than other fruit of same size standing by its side, yet indifferently put up. On this point of packing we fear our orchardists generally are but poorly informed, and hence we repeat Mr. Quinn's directions, recently published in *The Tribune*:

"All choice pears intended for market should be gathered from the tree by hand, and not shaken off, bruising the fruit and breaking the stems. Other things being equal, pears will bring higher prices and always give more satisfaction to the purchaser *when the stems are on*, and practical men are careful that only as few as possible are broken off in gathering the crops.

"It seldom happens that all the fruit on a large tree is equally advanced in ripeness. We go over one orchard three or four times, taking each time all the specimens that show indications of ripeness. The pears should all be sorted at the time of gathering, putting the different sizes by themselves, making say three grades, one, two, and three, and when they are packed label them, writing or marking the name of the fruit and the number, so that the commission man will know the quality of the fruit by the number on the lid or cover of the package.

"Small or medium-sized fruit packed in the same barrel with large-sized specimens spoils the sale of both. For instance, a fancy fruit dealer would willingly give \$15 or \$20 for a barrel of choice pears, when he would not buy mixed or middling quality for any price. The marketman, on the other hand, who seeks for medium-sized fruit, so that he can retail it out at a profit, cannot go beyond what the regular price for such a quality of fruit is worth in market, and therefore the mixed fruit is always difficult to sell, even if the barrel or box contains some fine specimens. The same is true when more than one variety of pears are put in a package.

"The fruit, as soon as gathered, should be taken to the fruit-house or cellar, and there each size placed by itself until packed for market.

"Four or five years ago I resolved never to pack choice fruit in second-hand or soiled packages, and I have never had any cause to regret this step. New barrels, of course, will cost more than old ones, but it is poor economy to save 10 or 15 cents in buying an old barrel, and lose a dollar in the sale of the fruit. This is an every-day incident with fruit men in New York and other markets. Fruit looks better, and will always bring more and meet with a quicker market, when put up in clean new packages.

"In former years baskets were used to forward pears to market, but lately, for the past three or four years, the bulk of the crop has been sent to market in boxes (holding about a bushel), as well as half-barrels. The latter package is a convenient size to handle, and popular in New York market. Although this size package will cost more in proportion to the quantity it holds than the whole, still fruit in half barrels will bring higher prices, and far more than will pay the difference in price paid for the two sizes, the half size costing 45 cents, and the whole 60 cents.

"When the time arrives for packing, the barrel should be turned upside down and the bottom taken out. Then it is well to line the inside of the lid, and a few inches around the body, with newspaper or cheap white tissue paper. Then commence by placing a layer of pears over the lid of the barrel. With fruit in shape like the Doyenne Boussock, or Duchesse d'Angouleme, they will look better by placing the first layer with the calyx end resting on the barrel-lid, and kinds like the Bartlett I place on their sides. A second, third, and fourth layer is then added, and then the pears are put in rapidly without regard to position. The barrel should be shaken gently three or four times while it is being filled.

"When the package is nearly full, the last layer of the fruit should be a trifle above the ground, so that in putting in the bottom it will have to be pressed down with some force into its place. Then the hoops are driven on, and two small nails driven in the last hoop to keep it in place. The barrel is then turned over, and by removing the lid every pear will be found in place, and looking better and more attractive than when packed in any other way, and there is no doubt that the pear will bring higher prices and meet with more buyers. This I can state from experience, and could give many illustrations where a little care in arranging the fruit made a difference of from two to five dollars on a single barrel of pears; and I know that will not make one minute difference in the time of packing pears, in this or the ordinary way of putting the fruit in from the head, instead of the bottom of the barrel. I do not mean to say that poor fruit packed in this way will bring high prices, nor can any cheating be practiced of putting small specimens in the middle of the barrel, and large ones at both ends. This might succeed once or twice, but not oftener, in the same market, before the trick is discovered, and the brand "spotted" among buyers as untrustworthy, and it very soon finds its level.

"Whether fruit is put up in boxes or barrels, it is better to have the fruit uniform in size throughout the package, and if this rule is carried out faithfully, such a brand of fruit will always be bought at an advanced price, even when the market is over-stocked with pears."

Black-Cap Raspberries.

Like many other kinds of small fruits, the markets were over-stocked with Black Cap raspberries the past summer, and even Red raspberries of superior quality touched a very low and unprofitable point. The Black Caps seem to meet with very little favor in New York, and only a few early ones bring a remunerative price. The mass of medium and late fruit hardly averaged six cents per quart, and probably it cost the grower fully that amount to raise it before it left the station for market. In Philadelphia they are a little more popular than in New York, but are declining in desirability and demand, and greater attention is being paid to the red varieties. The prospects for an increased consumption of Black Caps in the future is not flattering, and we hardly know where the millions of vines lately planted in Western New York, New Jersey, and Delaware, will find an adequately profitable market. We would be better satisfied hereafter with corn on the same land than Black Cap raspberries.

Geneva Nurseries.

There are now said to be over 2,000 acres of land in and around Geneva, N. Y., devoted to the nursery business. The soil is of unusual richness and strength, and in pear and other fruit trees the annual growth is very healthy and remarkable, exhibiting a marked contrast with those trees grown on a lighter soil or less favorable a location. Probably no place in the United States has now a greater number of acres devoted to nursery culture than this. Several nurseries cover from 600 to 800 acres, and entire blocks of 50 to 100 acres of pear trees are quite frequent.

Horticultural Criticisms.

We deplore the universal tendency among horticulturists to criticise each other harshly, and sometimes with unnecessary severity. We have often observed the articles of some of our best writers, totally lacking in friendly courtesy, and a mere difference of opinion with them almost amounts to a *casus belli*.

As we do not desire to belong to horticultural rings, nor to flatter any great coats, or wage a war of words, we uniformly refrain from criticizing either our friends or foes, but prefer rather to speak a good word for every one, as far as may be possible. We have constantly pruned horticultural criticisms out of our pages, and our readers will bear witness to our desire always to present practical and interesting information in a uniformly courteous manner.

The Great Balm Tree of Newburgh.

This tree, recently illustrated by *Hearth and Home*, is one of the noblest specimens of tree grandeur in this country. Its circumference, one and half feet from the ground, is 23 feet; at five feet from the ground it is 20½ feet. Its height is about 110 feet, and the spread of its branches is 113 feet. Its age, according to most reliable information, is about 100 years.

Planting Trees along the Highways.

The Legislature of New York, at its late session, amended the act of 1869, in relation to planting trees alongside of the public highway. The amended act reads as follows: "Any inhabitant liable to highway tax who shall transplant by the side of the public highway any forest shade trees or fruit trees, of suitable size, shall be allowed by the overseers of highways in abatement of his highway tax, one dollar for every four trees set out; but no row of elms shall be placed nearer than seventy feet; no row of maples or other forest trees nearer than fifty feet, except locust, which may be set thirty feet apart; fruit trees must also be set at least fifty feet apart; and no allowance, as before mentioned, shall be made, unless such trees shall have been set out the year previous to the demand for said abatement of tax, and are living and well protected from animals at the time of such demand."

The Rural New Yorker.

For more than a year past we have been admiring the enterprise of Bro. Moore and his managing editor, Mr. Bragdon. The *Rural* is spicy, profusely illustrated with engravings, and its literary contents are of careful selection, always interesting and dignified. We esteem it now more than ever the most successful agricultural weekly in America.

The Utah Pomologist.

We receive visits occasionally from this diminutive little sheet—probably the smallest newspaper enterprise in the far West. It is published at St. George, Utah, its first issue commencing with the month of April, 1870. It is a curiosity in agricultural journalism.

The Western Gardener.

We have received the first number (September) of this new magazine, established at Leavenworth, Kansas, by Dr. W. M. Houseley, and J. T. Lockwood, editors. It begins well, is cheap—only \$1.50 a year—and deserves a generous support.

Colman's Rural World.

The change of this journal from the quarto to the folio form, has been an immense improvement. Its appearance is more agreeable, and its contents are more pleasant. We

have observed lately some excellent floricultural and arboricultural articles by *Thompson*, and C. S., which we have highly appreciated.

New Seedling Plum.

R. Bowrie, of Elmira, N. Y., forwards to us a box of seedling plums raised in the garden of W. L. Gibson, of same place. He states that the tree is a fine, vigorous grower, and very productive. The fruit is of medium size, deep amber color, with slight bloom; flesh, sweet, juicy, and good quality, but not spicy or aromatic; skin thick and very acid. We would consider it a good variety, but owing to its bitter skin, not superior to our old fashioned Green Gage.

Grape Test.

EDITOR HORTICULTURIST: In October last a number of gentlemen, members of the Newburgh Bay Horticultural Society, met at Newburgh for the purpose of testing the must of the different varieties of grapes cultivated in that vicinity.

A report of the results of that meeting was published in the January number of THE HORTICULTURIST. It was then determined to appoint another meeting for similar purposes, to be held under the directions of the Horticultural Society in the fall of 1870, and to invite all persons interested in grape culture and wine making to submit their grapes, particularly new varieties, to such test. Messrs. Charles Downing, John Forsyth, Daniel Smith, Henry W. Murtfeldt, James H. Ricketts, and E. H. Clark, were appointed as managing and superintending committee of testing operations.

The committee have named Thursday, October 27th, at Newburgh, corner of Second and Water streets, as the time and place for testing, both with the saccharometer and acidimeter, the must of all such grapes as may be submitted to them. It is desirable that a sufficient quantity of grapes should be forwarded, if possible, to produce at least a pint of must.

All persons interested are invited and solicited to be present, and to submit such varieties of grapes as they may cultivate to this impartial test. Packages or boxes may be expressed to the care of Daniel Smith, Newburgh, N. Y. (express fees prepaid).

The character of the committee is such as to guarantee the most accurate and impartial report. We seek the aid of your valuable Journal to extend this invitation as widely as possible.

D. A. SCOTT, *Secretary Newburgh Bay Hort. Society.*

Horticultural Display at the American Institute.

The horticultural display of fruits at the exhibition Wednesday, September 21st, was the best known in many years. William S. Carpenter exhibited 250 varieties of apples, the largest collection ever offered by any amateur in the United States.

Ellwanger & Barry display over 180 varieties of pears; this, too, being of remarkable size and superior specimens. The Eumelan grape, as usual, took the first premium for flavor.

A superior display of Greenhouse plants was afforded by Isaac Buchanan, of Astoria, and George Such, of South Amboy. Both collections were of superior merit, the former taking prizes for best orchids and largest specimen plant; the latter for best ornamental plants, best forms, and best general collection. A fine display of Gladiolus and Lilies by C. L. Allen & Co., and of Roses and Dahlias by W. A. Burgess, added greatly to the attractiveness of the exhibition. The Premium List of the Institute, this year, is very handsome, and we doubt whether it has been exceeded by any other Fair throughout the country.

Report of the Ohio State Horticultural Society.

The new report for 1869 has just reached us from the hands of the Secretary, Mr. M. B. Bateham, Painesville, O. Detailed reports on Grapes and Strawberries in Ohio; new fruits and statements concerning the annual meeting are followed by the addresses of Robert W. Steele, Dr. John A. Warder, and F. R. Elliott on Home Adornment, and *ad interim* reports, with horticultural notes by the Secretary, giving full notes on the different varieties of small and standard fruits throughout the State. It is of much greater interest than previous reports, and is compiled with unusual care by the Secretary.

Editorial Notices.

Publication Day of The Horticulturist.

IN answer to numerous inquiries, we would state that our publication day is *on or before the fifth of each month*, and with the exception of our last August and September numbers, we have for more than a year past strictly observed it in mailing our copies to Subscribers. Our August number was delayed by the necessity of procuring an additional supply of paper, and our September number was delayed only by the lateness with which advertisers sent in their favors. We hear complaints frequently of the irregularity of the mails, where the Magazine does not arrive until the 12th or 17th, but we cannot help it; we have not this year been beyond the 5th in mailing, save in the above instances. We aim to have the Magazine ready as near the first of each month as possible.

Enmelan Grape Vine.

WE have made arrangements by which any of our Subscribers, old or new, can obtain this as a premium, in the renewal of their subscriptions to THE HORTICULTURIST, for \$1 each, or with one year subscription, for \$3—full value, \$3.50. The same will be presented to each person forming a club of three for \$5, or five for \$7.50. We believe it worthy of general planting, and a very desirable new variety. Its quality and good growth are beyond question.

Reduction of Subscription Terms.

OUR readers, in forming clubs or renewing their subscriptions, will please notice we offer, hereafter, 2 copies for \$3.50 (\$1.75 each). Any Subscriber, old or new, can materially reduce his own subscription by getting *one new name*. In clubs of 3 our rates hereafter are \$5; in clubs of 5 is \$7.50, only \$1.50 each, and a copy free. On trial, 3 months, to any address, 30 cents.

Hinkle's New Book on Building.

WE have received from Messrs. Hinkle & Co., of Cincinnati, a new volume of somewhat different character than the usual architectural publications of the day. It contains above 100 pages, of which the first 42 are devoted largely to manufacturing details, incident to building; also items of information especially useful to the architect or mechanic. There are over 615 plans and illustrations of mouldings, brackets, braces, cornices, etc., and in the last half of the book are 44 more pages devoted to plans of buildings erected in different parts of the West or South, numbering about 200 designs. Many of these designs are of rare beauty and costliness. We may mention especially those of John Shillito, near Cincinnati, O.; of Elias Howe, Jr., near Bridgeport, Ct. (see illustration elsewhere in this No.); of Mr. A. H. Hinkle, Mount Auburn, near Cincinnati, O., and also Mr. Edward Sargent, near same city. Published at \$1, and will be found very serviceable to any who desire to select a tasteful design for a country residence.

The Dychouse Cherry.

OUR readers will notice the announcement of Mr. Harris, in our advertising pages of August and September, with respect to this cherry. In a private letter to us he says that he has no desire for profit, and has procured them for dissemination, solely in response to the numerous unexpected letters he received last spring from the readers of THE HORTICULTURIST. We shall be pleased at any patronage our subscribers may extend him in so worthy an object.

Pear Seedlings.

WE have received from Messrs. T. T. Southwick & Co., Dansville, N. Y., specimens of Pear Grafts and Pear Seedlings of fine stocky growth and excellent quality.

Oil Paper.

THIS is indispensable to all who send plants or roots through the mail or by express. Mr. F. Trowbridge, of Milford, Ct., has furnished us samples of his manufacture, which, on examination, we find to be unexcelled in the entire country.

English Catalogue of Dick Radclyffe & Co.

THE new Catalogue of Dick Radclyffe & Co. is embellished with a large number of fine floral illustrations, and is replete with a tasteful display of fine ornaments or garden implements. This is the best foreign catalogue that has yet come to our notice, for we observe English nurserymen do not usually indulge as much in illustrations as the American horticultural trade does. Office, 129 High Holborn, London, England.



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A Horticultural Trip to California.

The Fruit Markets of San Francisco.

THE fruit markets of the city are large, convenient, and well filled with every delicacy of fruit or vegetable grown within the State. Almost everything is sold by the pound. And this, with "bits" as currency, are the only standard measures of valuation and sale. For instance, when I saw some luscious apricots from San Jose, I inquired the price, the answer was: "*One bit a pound.*" I concluded to take a pound. Behold my surprise when the attendant handed me only three big apricots. *Is this all?* I said. To satisfy me he weighed them, and the average was five ounces apiece. I measured them, and the average was $7\frac{1}{2}$ inches in circumference. Well done, California, the land of *cheap fruit*, where it does not pay the grower to send his fruit to market, and yet where no man can buy a single article for less than ten cents.

I saw a beautiful stand of peaches at one end of the hall, and measured several. The largest weighed nine ounces and measured $9\frac{1}{2}$ inches round; and I observed quite a good many baskets where every specimen would average nearly as well. The flavor differs very little from our own Atlantic peaches. And the only difference perhaps is the fact that the rinds are a little more tough and acrid, and are not as finely colored as our own. Still they are so large and luscious we have no need to make unworthy distinction. The prices at which they were generally sold varied as follows: one pound, 8 cents; four pounds (poor), 25 cents; 3 pounds for 25 cents (good); two pounds, 25 cents (choice). Grapes were offered, but not in great plenty; the retail price being three pounds for 25 cents. Many of the bunches would weigh fully three and five pounds, while the average would be at least two pounds to each cluster.

This I thought was expensive eating, when the very grapes I paid eight cents a pound for did not net the grower hardly three cents, and more often not over two cents.

Plums were usually sold four pounds for twenty-five cents. I measured some six and a half inches round. Blackberries were not plenty, and brought fifteen cents per pound. Strawberries also were offered in little square baskets, said to hold a pound, and really not over two-thirds of a quart. The retail price was ten and twelve cents. The pears in market were not as yet plenty, being too early. The Bartlett's were of a fine yellow color, but small; and Dearborn Seedlings seemed to be the most abundant. Very few tropical fruits were seen, as I observed nothing but oranges, figs, and pomegranates. This last is a peculiar fruit, somewhat like a small melon, colored handsomely like an ornamental gourd, and very seedy and flavorless within. Doubtless we visited the market at an unfavorable season of the year—just after the spring supplies had ceased, and just before the

fall season was at hand, with its luxuriance of pears, apples, etc. I observed very little difference in time of ripening between the Atlantic and Pacific coast. For instance, the Dearborn Seedling was being gathered while I was there, July 31st; and yet this was the precise time it was ripe with us at home. Bartlett pears were ripe from July 15th to Aug. 1st, and so were our Bartlett's that came from Virginia, Maryland, and the South. The only difference that I see in their climate is that their limit of ripening is shorter than with us—*i. e.*, their fruit ripens up more nearly together, while ours is spread over a long time, even down to November, December, and January. Their hot, dry climate would naturally make their late fruits ripen up earlier than with us, and the period from earliest to latest variety would be two or three months shorter.

Grape Culture in the Sonoma Valley.

Almost every one has heard of the famous vineyards of Sonoma, and the labels of "Sonoma Wine" stare us everywhere we go in the East. We determined to visit it, and see how California wine was produced. From San Francisco we take the steamer to Vallejo, about one and a half hours; thence by cars to Napa City, half an hour; and thence by stage to Sonoma, twelve miles.

After passing over a series of hills, with many picturesque views, we reach a little eminence from whence we look over a beautiful valley of eight miles wide, clothed with vineyards from the foot of the hills up their sides; while fields of wheat or widespread farms and substantial houses betoken a degree of comfort and beauty inviting to the traveler. For nearly three miles we drive along the valley road, skirted on either side by orchards and vineyards, before we reach the centre of the town. Here we take private conveyances, and first visit the old Spanish residence of General Vallejo. A small garden surrounds his mansion, filled with fruit trees from the temperate and tropical regions. Here, in front of the piazza, there is a group of trees mingling and twining their branches together in most striking contrast: the orange, from Mexico, the apple, the pear, the fig, the lemon, the lime, the peach, and the English walnut—England, America, and the tropics in friendly harmony. In the General's garden are growing some peculiarly thrifty specimens of vines; for instance, an arbor of about fifty feet square is covered with about twenty five different kinds of grapes, hanging down in great luxuriance, the bunches sometimes over a foot and eighteen inches in length, while single vines of the Black Hamburgh, seven years old, will average from twenty to thirty pounds each. Here is an oleander eight feet high, full of bloom. The orange trees, with their deep green, thick, glossy leaves, are peculiarly beautiful. Here, also, is the olive from Asia and Africa, a tall-growing tree, with long, narrow leaves, whitish underneath. A beautiful magnolia tree, four years old, is also growing there, fifteen feet high, and blossoms nine inches broad. The fig trees are the finest specimens of ornamental habit and foliage we have yet seen on the coast. Here is one only twelve years old, but forty feet high, three feet eleven inches in circumference, which has yielded three crops this year. The leaves are very large, deep green, and, as it is of rapid growth and handsome shape, we think it the finest tree for ornamental planting in villa grounds the Californian can possess. In a corner of the garden is a pomegranate tree, yielding fruit. As the tree is very homely, and the fruit very nauseous, we cannot imagine where it deserves the encomiums travelers have given it. We see also a seedling orange tree, grown from seeds brought from San Francisco, and supposed to have been imported from the Sandwich Islands. It is of superior quality, and is thought will form a variety of far greater value than anything yet grown in the State.

Bordering the General's grounds upon the road is a novel hedge of the prickly cactus, nine feet high. It is impenetrable to any living animal, and has a curious look. I do not know what to compare it with, save some exaggerated pumpkin seeds, one foot each broad, standing up on end, and covered with prickly spines. The English Walnut is a peculiarly thrifty tree all through this valley, and, in fact, in every part of California. There stands a row of them, large, broad, thrifty trees, with narrow, pointed leaves, and very fruitful. The sun is exceedingly hot during the fore part of the day, often reaching from 100 degrees upward; and the day before we arrived it touched 113 degrees, and so warm that the very apples on the trees were burned or scorched. The atmosphere is dry, however, and the people

are able to bear these excessive heats without discomfort, for we rarely or never hear of deaths by sunstroke.

Mr. J. W. Shaw, President of the Fruit Growers' Society of California, has an amateur vineyard here, which we next visit. Here are sixteen acres of bearing vines, containing a large number of choice foreign varieties, devoted almost wholly to the culture of grapes for table use. Special pains are taken in their production to secure choice bunches of superior quality, which are carefully gathered and marketed. This is the reason why Mr. Shaw's prices average better than any other grape-grower in the State. The Black Hamburg and Muscat are all exceedingly productive, bunches often being larger than one's head, and if dropped into a large hat, would more than fill it. The Muscats bring from seven to fifteen cents per pound. The Rose of Peru, an especial favorite of Mr. Shaw, is luxuriant to a fault, yielding twenty pounds per vine, always without disease, better flavored than the Black Hamburg, and at five years old has sometimes borne eighty pounds per vine. It usually sells for seven cents per pound.

The principal fault with the Black Hamburg is, that its foliage burns too easily: hence on the low lands it is not as successful as on the lands just at the ascent of the hills. The lands in the valley are dry, and on very hot days sometimes the grape leaves burn; but usually where the ground is cultivated and soil frequently stirred, they are perfectly healthy. The average weight of bunches for market is two pounds, and the average price about six to seven cents. The Mission grape, so universal throughout California, is a white grape of very large, loose bunch, and medium berry; flavor sweet and pleasant, and you could eat skins and all the whole day without any inconvenience. We observe the absence of the "spirit" or "aroma" of our native Atlantic grapes. Everything here is *good, sweet, pleasant, and agreeable*; but not *spicy, perfumed, or aromatic*. And the same characteristics extends even to the wines and other descriptions of fruit. Their pears are fine eating, large, finely colored, and of good taste; but they have not the overflowing juice of our Atlantic pears—neither the aromatic, spicy flavor which makes some of our fruits so luscious.

Vineyards here are sometimes rented by the proprietors to the viniculturists, at prices varying from one-half in weight of grapes, to one-third of the wine manufactured. Even then it was not very profitable. On inquiry of many growers, I found that the average profit per acre from the Mission grape, to those who raised and sold them to wine makers, was but half a cent a pound, or from forty-five to sixty cents per one hundred pounds; or per acre not far from \$60, as there are 1,000 vines per acre, and an average of six tons production, or 12,000 pounds. This, at half a cent per pound, would bring but \$60. I was surprised at the smallness of the profits. Such a vineyard in the East would be worth nearly \$1,200 per acre. This is, however, only for the Mission grape. Nearly all other varieties do better—for instance, the Frontignac and the Roesling are worth from two to two and a half cents. A variety very valuable for wine, known as the Tokay, from Hungary, is being grown upon the red-clay land about one-third of the height up the sides of the hills. As this soil contains iron, and is of just the character to yield superior wine, we would not be surprised to find, some day, Tokay wine from these lands fully equal to anything ever produced in Europe.

Major D. R. Snyder has a vineyard of forty acres in bearing, where are grown some of the very choicest of the European varieties.

The *Zinfandel*, it is thought, will prove one of the very best. Its clusters are not large, but are long, with medium-sized berries; but the flavor is very delicate, and on rocky hillsides it has a "bouquet" nearly as valuable as in its own native country. It has a great tendency to produce a second crop, and we observed the small bunches just forming for a late crop. Its quality is superior, making the very best red wine of the country, equal to the finest Burgundy, and is a tremendous bearer. The Major has erected a fine wine cellar, and manufactures all his grapes into wine, and keeps it in casks here for four or more years before sale. His desire seems to be to give age to his wines; for the better the age, the better will be the quality and its corresponding price. The casks are immense in size, holding 1,000 gallons each; and he has already in store 40,000 gallons, which should be worth, in a few years, \$1 per bottle, or \$3.50 per gallon. He estimates a low average for the produce of a vineyard at three tons, and from his twenty-five acres expects to gather

14,000 gallons yearly. Some of his vines bear fifty to sixty pounds. He allows fourteen pounds of grapes to make one gallon, and a good average yield is 300 gallons per acre. A gallon of fresh must is worth but forty-five cents; after it has fermented and laid by for a year it is worth fifty to sixty cents, and improves yearly from ten to twenty cents per gallon, except where of superior quality, when the increase in value is much greater. After a few years it is bottled, and marketed at a usual price of seventy-five cents to one dollar per bottle, or two dollars to four dollars per gallon. Here, then, is the true field for profit in California grape culture; not to the mass of growers, but to those who have the capital for manufacturing into wine, for erecting extensive cellars, and an ability to hold until age has given to the wine its proper tone and value. To all such grape culture and wine making will prove immensely profitable.

The Buena Vista Company have about 600 acres, all in one solid body, devoted entirely to grapes; and, standing upon an eminence, I could behold before me over 1,000 acres of grape vines contiguous to each other. This vineyard is believed to be the largest in America, if not in the world. The cellars and buildings are alone of mammoth size, and great curiosities. The wine cellars are dug mostly into the solid limestone rock, in the side of the mountain, and at their entrance is erected a large five-story building, costing \$60,000. Here are stored over 8,000 gallons of brandy, 54,000 bottles of champagne, and nearly 250,000 gallons of other wine. The vaults have a total capacity of over 750,000 gallons in all. The vineyards are generally well kept, and certainly form a beautiful, regular sight. The workmen employed in the field are mostly Chinese, who now receive but seventy-five cents per day. They are excellent laborers, but sometimes stiff on prices, and always ready to leave without a moment's warning for any other place where they can get better wages. They are prompt in demanding their monthly or weekly pay, and if it is not ready on pay-day, they leave *en masse*, and cannot be induced to return.

From here we visit the vineyard of D. W. Craig, on the opposite side of the valley. His land is more fertile than any which we have yet visited, and his vines in much better condition. He raises grapes extensively, and also buys from other growers, usually manufacturing from 25,000 to 30,000 gallons annually, and has 30,000 gallons already in store. His wine is stored in casks made of Ohio oak, and measures from 1,200 to 1,800 gallons each. After being filled, and the wine becomes sufficiently mature, he ships in bulk direct to New York and Boston. His wine is of a superior character—his port, Burgundy, and sherry being of a remarkably good tone and flavor; and, indeed, all the different classes of wine proved to be the best yet produced in the entire valley.

California wines have a peculiar quality; they seem to be not in the least intoxicating, but have a warming or heating effect upon the blood. They are simply a class of *sweet, dry* cordials, very pleasant, and not affecting the head. In this climate there seems to be little or no injurious effects from free use of the wine; although I have no doubt it would be far different in the stimulating climate of our Atlantic States, where to touch only a moderate quantity of wine or spirituous liquor is attended with undesirable consequences.

This entire valley of Sonoma is about twenty miles long and four and a half to six miles wide, and there are about 5,000,000 of vines now under cultivation. From these there will be produced this year not far from 3,000,000 gallons of wine. The entire State is said to contain 28,000,000 of vines, and will yield this year not far from 5,000,000 of gallons. The usual method of planting a vineyard is to select choice cuttings, taken from the bearing wood of some well-established vine, and trim it to one eye, then plant these directly in the vineyard where they are to grow, at a distance of eight feet by eight. Two years after planting they begin to bear. The first year they throw up one single shoot. This is tied to a short stake planted close to the vine, and in the fall they are cut back to two and a half or three feet. This seems to be their utmost height, for they are never permitted to grow upward any further, and shoots from the eyes at the sides are permitted to grow and ramble all over the ground. At the end of the fourth or fifth year the vine has attained a diameter of usually four inches, and sometimes six, and is sufficiently stocky and firm to support itself alone. All stakes, trellises, or arbors, are taken away, and the vines stand upright, their branches left free to run over the entire ground. They bear their clusters close to the main stalk or stem, and the fruit rarely ever touches the ground. The soil is

kept well cultivated, and every vineyard is a specimen of perfect luxuriance and beauty. Our Eastern vineyards can never equal one-half the fine appearance of those in the Sonoma valley.

Within the limits of the valley there are said to be growing every variety of value known to the cultivated world. At least 300 named varieties are found here; and Mr. Harazthy informed me that he, with others, have imported for the past ten years every variety ever seen or heard of in Europe, Asia, or America, until he hardly knows where to turn to find another. And, *strangest of all*, it is an astonishment to find here every variety grows perfectly, without disease or chance of failure. Some attention is being paid to the manufacture of raisins. They can make as fine raisins here as are now imported from the Mediterranean, and the specimens I tasted leave no doubt of this matter. The best kinds for this purpose are the Black Hamburg and Muscat. I see no reason why figs, too, may not be successfully dried. Upon Major Snyder's place they are growing at least a dozen different varieties, which he has taken pains to import from Smyrna and Asia. The Black Fig seems to succeed the best. The Smyrna, Brown Turkey, and Celeste were all fine. He had some specimens already drying on plates in the sun, and believed there was no possible doubt of ultimate success in producing all the figs needed in America for our own consumption. The climate is dry and warm, and every circumstance seems to favor their culture and convenience for successful drying.

On our return from the vineyard we passed a corn-field which had been planted after the rains were over; and now it was nearly ripe, and apparently would average sixty bushels per acre. This, too, was on the same land where the year before another corn crop was raised of sixty bushels also, and from time of planting down to harvest had not received a single drop of rain.

Col. Walton, our escort, also told us that from a vineyard of 7,000 vines seven years old he sold 100,000 pounds of grapes, which netted him just about \$60 per acre. Just think of the small proceeds, only half a cent a pound.

Of the 28,000,000 vines in California, fully 20,000,000 are of the Mission grape, and the balance are divided between the Black Hamburg, White Nice, Rose of Peru, Zinfandel, Reisling, White Frontignac, Chasselas, Muscat of Alexandria, Muscatel, Flame-Tokay and Black Burgundy. Grape culture is only profitable to those who can make it into wine, and this requires a capital of at least \$30,000.

I see no reason to doubt that in a few years California will be able to produce pure native wines of high character and choice quality able to supply all demands for American consumers, and leave us entirely independent of a foreign trade. In fact, an eminent European vine culturist, who had visited this country and examined its resources well, is reported to have said, on his return to Germany: "*America will soon produce all the wine she needs, and as good as we can make here. You cannot depend upon the American trade for more than five years to come.*"

His words of prophecy are fast becoming fulfilled.

H. T. W.

SAN FRANCISCO, CAL.

Riverside Park, Chicago.

ON our return from our trans-continental tour to the Pacific Coast, we visited a number of the Parks in the vicinity of Chicago, of which the new Riverside Park interested us most. It is situated about eight miles from the city, southward, on the line of the Burlington and Quincy R. R., just as it crosses the Aux Plaines River. Boulevards 150 feet wide are already constructed, connecting the park direct with the city, making the distance but six miles from its outskirts. The face of the country here seems to have changed abruptly from the prairie to a well wooded picturesque forest, with here and there some pretty river views. The banks of the river are from 15 to 26 feet high, and as its course is winding through a large portion of the park, it affords, besides scenery, an opportunity for excellent drainage. This is strictly a private park, commenced by an association of Chicago merchants desiring the advantages of a rural residence with a business life in the city, and who have here built their mansions and instituted all the improvements and conveniences so customary in city houses.

Sewers have been dug and water pipes laid. Already there have been thirteen miles of pipes laid, and gas-works are erected to supply the entire property with gas-light. The park contains 1,600 acres, and when completed will have forty-one miles of roads, and about eighty miles of walks; nine miles being finished this year. Of this 1,600 acres, 400 have been devoted to the purpose of public parks, and are carefully laid out in irregular forms over the entire tract. The lots are so arranged that every residence will face a pretty little park of from three to thirty acres, and it is easy to conceive how in the course of time, when fully built up, and the trees and shrubs are well grown, what a delightful suburb of the city it must become. Forty elegant residences have been erected this year; none costing less than \$3,000, and from that upward. Every house must be set back thirty feet from the line of the lot, and in front of this line there are allowed fifteen more feet to the road, in the centre of which strip is the foot-path, with turfed sides. A forest of 160 acres skirts the river, forming one of the most beautiful of natural parks, with a drive of several miles among trees of great beauty. Among the architectural features of the property are the "Water Tower," built over the Artesian well, which is here sunk 738 feet, and affords a flow of several hundred thousand gallons daily. A Refectory has also been erected overlooking the banks of the river at one of its most inviting spots. A Gothic church has been erected of excellent architectural character. Its walls are constructed of uncoursed limestone masonry of a soft and exceedingly agreeable tint, contrasting freely with the rich color of its slate roofs. Large elms standing at either corner, throw a Gothic arch of green over its buttressed gable, in the centre of which are placed the windows of richly stained glass.

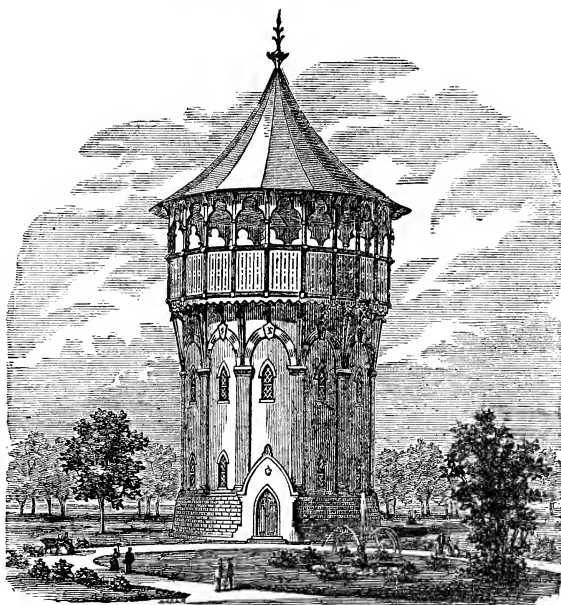


A Gothic Church at Riverside.

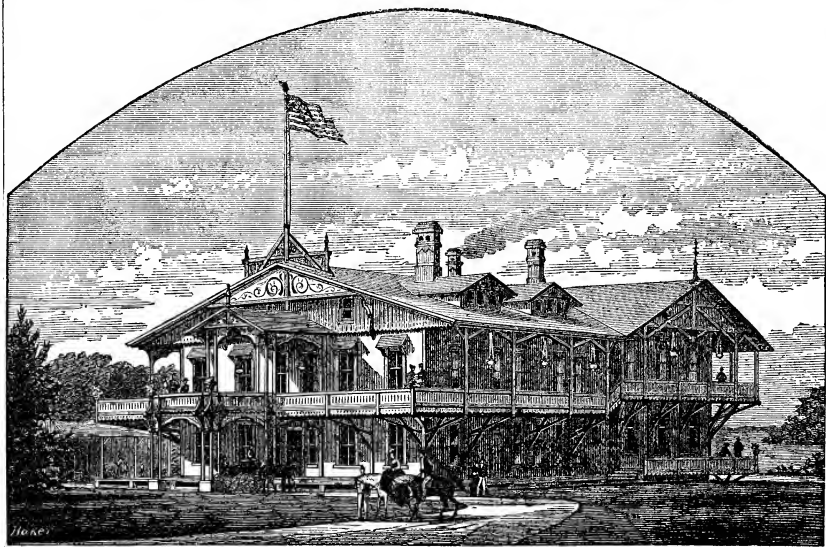
The interior is no less beautiful than the exterior. The ceiling, curved by massive trusses, rises with a Gothic arch to a height of forty-five feet above the floor; while the light, softened by the stained windows, fills the interior with that soft glow so seldom found in modern churches. The interior is about thirty by sixty, and will seat comfortably about three hundred people.

A large area, dotted with fine trees, beautifully laid out, surrounds the church, and perfectly completes one of the prettiest pictures of a suburban church to be found in the West.

We have spoken of it more in detail than is usual of company operations, because it appears to be the most successful enterprise of this character ever started in this country, and contains some elements of success and judicious arrangement worthy the notice of others. With present prospects it seems to combine the long desired object of a home in the country with city comforts, and the advantages of free, pure air, no troublesome neighbors, or heavy assessments; while in front of every residence is a neat little park, or bit of ornamental planting, which will go far to help the formation of a love for objects of rural taste, and add greatly to the cheerfulness of the heart within.



The Water Tower.



The Refectory.

How to Lay Out Cottage Grounds.

THE design for a cottage upon the opposite page affords, in its description, a favorable opportunity to give some useful hints and suggestions regarding cottage grounds and ornamental planting.

The plans for the house, and even for laying out the foot-paths, walks, roads, etc., are necessarily the work of the architect, but the arrangement of the shrubbery, flowers, etc., are far better attended to by the proprietor himself, who can develop his taste, and add, leisurely, here and there some tasteful touch, or some graceful outline, and fill in one after another choice shrubs and climbing vines.

This lot may be located either in the suburbs of the city, or in some country village of considerable population—facing the village green perhaps. It is at the intersection of two streets, and comprises between an eighth and a quarter of an acre, devoted to ornamental purposes alone, the kitchen garden and domestic offices being in the rear, and not included in our present plan.

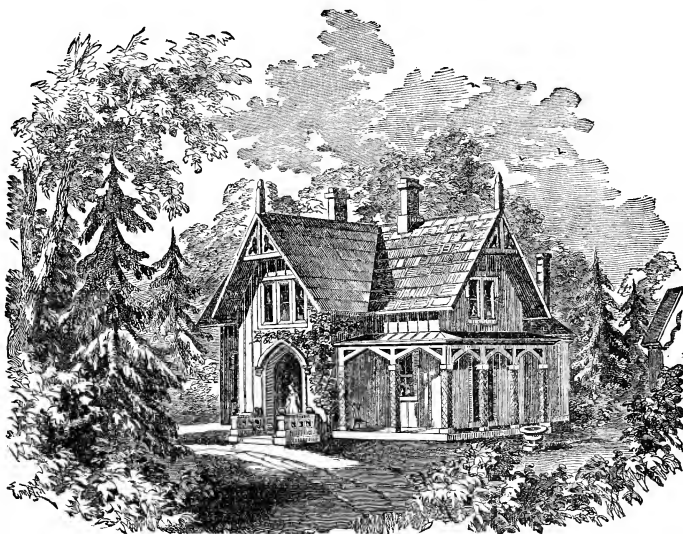
The dwelling stands back thirty feet from the street, on a slightly elevated spot, which slopes gradually away to the boundaries. A foot-path, five feet wide, starting from the front gate, passes the front entrance, and finally terminates in the open yard in the rear. This, with the carriage road, which leads from the side gate to the stable, is the only path we have introduced on the plan; nor is it desirable to traverse the whole lot by graveled walks, tending as they do to diminish its apparent size by bringing the boundaries nearer the eye, and involving a considerable outlay of money and time in making and keeping in order. It is, however, of great importance that what paths we do make, should be made in a thorough manner at the outset. In order to have a perfect road, the soil, in the first place—after the curves have been marked and the lines run—should be excavated from eighteen inches to two feet deep, and all the loam taken away and spread upon some part of the garden; then this ditch should be about half filled with any small stones which may be picked up here and there about the place, and the whole filled up to the desired height with the best gravel that can be procured, taking care to make it a little higher in the center than at the two sides—say a couple of inches in the five feet path—in order that the surface may better shed what water does not soak through into the drain, and finally, the whole may have a finishing coat of blue screened gravel, evenly spread, and well rolled, and with proper care we shall have at all seasons, firm, dry, and clean walks.

The foundation of the ornamental portion is smooth, green lawn, extending to the boundaries on either side, which are hidden by plantations of evergreens and shrubbery, with occasionally a deciduous tree introduced, to produce a variety and give character to the whole. They are mostly arranged in irregular clumps, connected together by other shrubs and evergreens, and planted with a view to obtain as great a diversity of outline as possible, and heavy masses of foliage and flowers, from spring to late in the fall. The clump on the right of the front gate is composed principally of tall growing shrubs and evergreens. In the corner is an American Mountain Ash, the color of whose red berries contrasts well with the heavy green of the two Norway Spruces, one on each side of it. Close to the path is a large, flowering Syringa, and in front some low, bright flowering shrub, such as Rose Weigela, Double Tree Peony, or Double Dwarf Almond, while farther back, near the fence, are a tall Purple Lilac and a Tartarean Honeysuckle. From this clump the range to the stable is as follows: A row of half a dozen evergreen trees of good size near the fence—two or three deciduous trees at convenient distances, and between, and forming the clumps, are Purple and White Lilacs, Altheas, Honeysuckles, Syringas, Hawthorns, and Laburnums, while the foreground is made up of specimens of the Spirea, Rose Weigela, Japan Quince, Pink Mezerium, and Fragrant Currant.

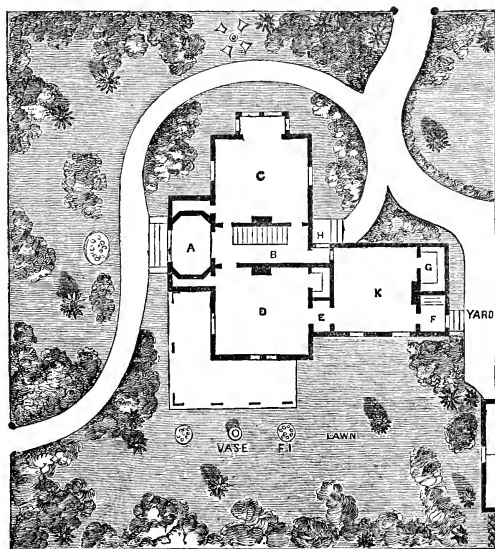
Near the corner of the stable is a group of three or four Evergreens, and between it and the corner of the dwelling house there is a clump made up of a couple of Firs, an American Mountain Ash, and in the shade underneath, heavy plants of the rose-colored Kalmia and Rhododendron.

In the centre of the lawn is a single specimen of the Larch, which will here have ample room to show its graceful form and light, airy foliage, to the best advantage.

Returning to the gate, we have on the left a Sugar Maple, and a Scarlet Flowered Haw.



Design for Suburban Cottage.



Plan of Grounds and First Floor.

thorn, surrounded by a white Persian Lilac, a Rose Weigela, a St. Peter's Wreath, and a Fragrant Currant. Beyond this, and close to the fence, is another specimen of the Scotch Larch, and a little beyond, a Maple or Tulip, or some other deciduous tree of graceful form.

In the corner range, we might have first a Venetian Sumac or Fringe Tree—desirable on account of its brilliant yellow flowers—and near it one or two plants of the Persian Lilac, or white Mezereum. A Tulip tree near the corner, forms the central point of this group, while beyond it, and along the side street, are a Syringa, a red Strawberry tree, a Catalpa, and a mixed Althea, besides a couple of Evergreens and smaller shrubs to fill up the front.

Next comes an area of lawn and flowers, with a view across, into the street, from the bay window, and beyond this, extending to the carriage road, another group is made up of a Larch, a broad-leaved Laburnum, a tall Silver Maple, Persian Lilacs, and a trimmed Arbor Vitæ tree, with a Fragrant Currant and a Double Dwarf Almond in the foreground.

On the opposite side of the road we have a Rose Weigela, a white Japan Quince, a tall Catalpa, and a couple of Evergreens. From this group an Arbor Vitæ hedge extends to the pump, and will in a few years separate and partially hide the kitchen garden from the more ornamental portions. A tall Norway Spruce or a White Pine should be set where indicated on the curve of the road, as a reason for making the curve as prominent as we have.

With this we have completed the arrangement of our shrubs. The following list shows the size, color, and habits of those we have introduced upon our plan:

ALTHEA, *Hibiscus*—Flowers in August; variety of colors, 4 to 12 feet.

CATALPA—Flowers in July; large white flowers, good for groups, 10 to 15 or 20 feet.

HAWTHORN, *Crataegus*—June; white and scarlet, double, 5 to 20 feet.

LABURNUM, *Cytisus*—July; rich yellow, 10 feet and upwards.

HONEYSUCKLE, *Lonicera Tartarica*—May; variety of light color, 5 to 10 feet.

LILAC, COMMON, *Syringa vulgaris*—May; white and purple, 10 to 15 feet.

LILAC, PERSIAN, *Syringa Persica*—May; white and purple, 3 to 5 feet.

SUMAC, VENETIAN, *Rhus Cotinus*—Sometimes called Fringe tree, Aug. and Sep., bright yellow, 8 to 12 feet.

SYRINGA, *Philadelphus*—June and July; white 4 to 8 feet.

The above answer for back-ground shrubs. For the foreground we have:

DOUBLE TREE PEONY, *Paeonia Moutan*—May; red, white, purple, 3 to 4 feet.

DOUBLE DWARF ALMOND, *Amygdalus pumila*—May; beautiful rose, 3 to 4 feet.

JAPAN QUINCE, *Cydonia*—April and May; scarlet and white, 4 feet.

FRAGRANT CURRANT, *Ribes Fragrans*—May; bright yellow, 3 to 4 feet.

MEZEREUM PINK, *Daphne Mezereum*—April and May, pink, 3 feet.

MEZEREUM WHITE, " " *Album*—April and May, white, 3 feet.

SPIREA, DOUBLE, *S. prunifolia plena*—June; white, 4 feet.

SPIREA, DOUGLASS, *S. Douglassii*—August; fine rose, 3 to 4 feet.

ST. PETER'S WREATH, *S. thalicroides*—June, July; small white, profuse, about 4 feet.

ROSE WEIGELA, *W. Rosea*—June; pink and rose color, 4 to 5 feet.

COMMON PRIVET, *Ligustrum Vulgare*—June; thick, close, white, 5 to 6 feet.

The following do well in shady or damp places:

MOUNTAIN LAUREL, *Kalmia latifolia*—June, July; very rich red, 4 to 6 feet.

HOLLY, *Ilex opaca*—June; scarlet berry, slow grower, near the ground.

RHODODENDRON—July; very luxuriant, rose or white, 8 to 10 feet.

All of the above-named shrubs are hardy, easy of culture, and may be procured at any of the nurseries.

If the buildings are already built, or their positions located, finish up the roads and paths, and as much of the lawn as possible, set the hedges, the larger trees, and the principal back-ground shrubs. Let them get well started, and their forms and outlines in a measure determined, and then, by another spring, perhaps, set out the smaller foreground shrubs, so that they may fill up the space left between the others, and thus form, when fully grown, thick masses of foliage and flowers from the trees down to the grass.

Flowers may be cultivated wherever a suitable place offers itself. We have marked the positions of a few of the principal beds. Around the house are four large beds of standard roses, which should be selected so as to offer a variety of color and a constant succession of

flowers throughout the season, and in other spots are figures cut in the turf and filled with attractive flowers. At the right of the verandah are two circular beds, one for mixed petunias and the other for mixed verbenas, and between them is a vase for myrtle. The large oval bed in front of the house may be filled with tea roses, fuchsias, balsams, asters, heliotrope, and mignonette, and the five beds opposite the bay window (one each) with scarlet geraniums, amaranths, feverfews, dwarf coreopsis, and nierebergias, the first named forming the centre bed, and the yellow and purple of the second and fourth, alternating with the white of the third and last; and in other places we may have separate beds of candy tuft, phloxies, portulacaeas, yellow lantana, mignonette, carnations, tulips, ageratum, etc.

For climbers for the verandah posts, bay window, and door lattices, we have the choice of the following:

- CHINESE WISTARIA—a delicate purple, and very luxuriant.
- VIRGINIA CREEPER—very hardy, with beautiful autumnal foliage.
- TRUMPET HONEYSUCKLE—red and yellow, flowers all season.
- PRAIRIE ROSES—beautiful double flowers, and a variety of colors.

The house itself is an example of the simplest rural Gothic style. It is one and a half stories in height, and contains three finished rooms below and three chambers on the second floor.

The vestibule A is approached from the terrace through the pointed arch, and measures eight feet by nine. The hall B is seven feet wide and fifteen feet long, and contains chairs to chambers and cellar. C is the parlor, measuring fourteen by fifteen, the principal feature of which is the bay window on the side opposite the door, overlooking the small flower beds and the side street. The dining or living room D measures also fourteen by fifteen; it connects with the verandah by a mullioned window reaching to the floor, and opening like the French window. A closet is provided at the side of the vestibule in the front gable, and for china, etc., at the other end of the room, furnished with shelves and drawers. The passage E, which is also fitted with shelves, communicates directly with the kitchen K. This room is thirteen feet square, and is well lighted by two windows. At the left of the chimney a door opens into a large store room G, and at the right another leads to the pantry F. We here have a sink and pump, with a closet and shelves for tin ware. A door opens directly into the yard.

On the second floor the two principal chambers measure each twelve by fourteen, and the other, in the gable, ten by thirteen.

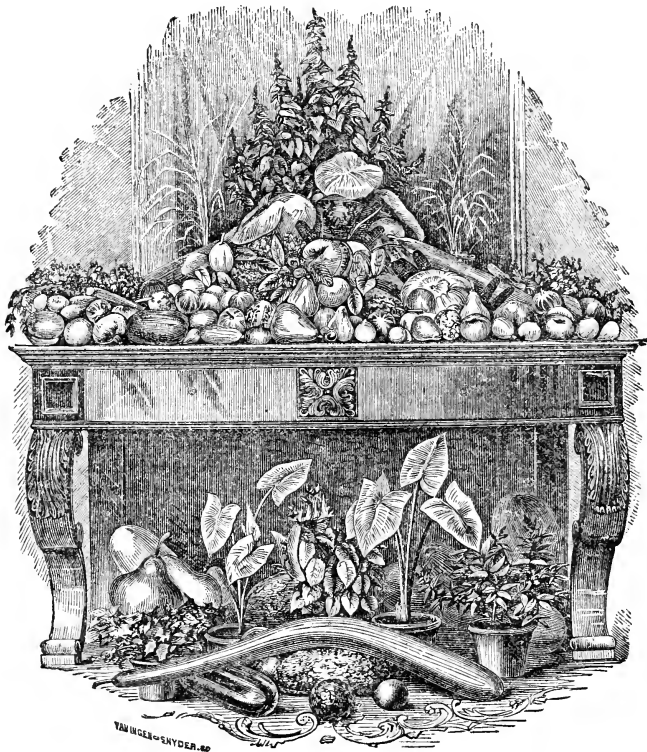
This cottage is designed to be built of wood, covered in the vertical and battened manner, and finished inside and out with moldings of a simple Gothic pattern, and will cost from \$2,500 to \$4,000.

The Rose of Sharon.

THE Rose of Sharon is one of the most exquisite flowers in shape and hue. Its blossoms are bell-shaped, of many mingled hues and dyes, and its history is romantic in the highest degree. In the East, throughout Syria, Judea, and Arabia, it is regarded with the profoundest reverence. The leaves that encircle the round blossom dry and close tight together when the season of blossom is over, and the stock withering completely away from the stem, the flower is blown away at last from the bush on which it grew, having dried up in the shape of a ball, which is carried by the sport of the breeze to great distances. In this way it is borne over the sandy wastes and deserts, until at last, touching some moist place, it clings to the soil, where it immediately takes fresh root and springs to life and beauty again. For this very reason the Orientals have adopted it as the emblem of the resurrection. The dried flower is placed by the Judeans in a vase of water beside the beds of the sick, and if it expands by moisture, the omen is considered favorable. If it does not, the worst at all times is feared.—*Ex.*

Ornamental Gourds.

AT various fairs and exhibitions, this year, we have noticed some excellent displays of Ornamental Gourds. In one place, particularly, more than one person took them for natural fruit, oranges, etc. Very little attention has been paid to them until lately, and we now discover efforts, by amateurs and some of the horticultural trade, to call special attention to the subject. There are varieties without end of the most fantastic shapes and colors, and yet beautiful indeed. We notice that in England special exhibitions have been devoted to them, and prizes of as high as \$150 offered for best display. The *Journal of the Farm*, lately, in a notice of these gourds, remarks:



"Some are distinguished for the highly ornamental character of their foliage; others for the singularity and exquisite symmetry of the fruit, and others for the richness, variety, and peculiarity of coloring. In regard to size, they vary from that of an ordinary walnut to a full sized barrel, or from two ounces to two hundred and fifty pounds.

"The colors range from white to crimson, orange and scarlet, blending and harmonizing with olive green, bronze, and the most beautiful, bright polished, glossy green; others again are striped, spotted, dappled, or variegated in the most remarkable manner; others being self-colored, are distinct and beautiful. The style of growth is as diversified as the

size of the fruit. Some are of the most gigantic structure; others are delicate and slender, and these are invaluable for covering verandahs, trellis work, or fronts of villas or cottages. Where trained round a window, they are very ornamental, while in autumn their rich and parti-colored fruit is exceedingly picturesque. The strong growers are invaluable for training to trees, over summer retreats and arbors, or trailing on rockeries and roteries, sloping banks by the margin of woodland walks, etc.

"The fruit, when dried, form splendid parlor and drawing-room ornaments. This will be seen by a reference to the very elegant design given above, which represents a photographed group of Gourds, chiefly miniature varieties, exhibited by Messrs. Barr & Sugden. Florists, of London, at the great Gourd Exhibition of the Royal Horticultural Society. To this design a first-class certificate was awarded.

"*Cultivation.*—The cultivation of the Gourd is very simple. The French, who cultivate the edible varieties largely, sow the seeds in a hot-bed, under a hand-glass in the month of March, in pots filled with vegetable mould. By degrees the seedlings are hardened by exposure to the air, and by the middle of May, are planted out. The seed may also be sown in the open ground about the middle of April, keeping the plants covered with hand glasses till chance of frost is gone.

"The giant varieties are cultivated thus: The first shoot is cut off above the second or third eye, in order to compel it to throw out strong arms, and when the fruit is set, the shoot on which it grows is stopped two or three eyes beyond the fruit. There are seldom more than two or three of these gourds left to swell on the same plant, usually only two—and if the greatest possible size is desired, then only one is permitted to remain. Sometimes the principal arms are earthed over for a considerable part of their length, when roots are produced abundantly, and the quantity of sap supplied to the plants proportionately increased.

"A warm exposure should be given them wherever practicable, especially for the miniature varieties, as the richness of color greatly depends upon the action of the sunlight. A rich, deep, mellow, sandy loam is best. As the young plants are very tempting food for certain destructive insects, the greatest care should be exercised, and daily examinations made, until they have passed the period of danger."

Strawberry Notes.

I WAS sorely disappointed this summer in the Nicanor. I had as handsome and promising a bed of plants as one could wish to see. They had been grown in hills with great care and on deeply trenched and well manured soil, and they had certainly made a splendid growth. I fully expected to see the best that the variety was capable of doing. The blossom was most profuse, and the show of fruit the most abundant that I ever saw. But when they ripened the berries were so small that they were not worth picking. The largest were about half as large as a lady's thimble. It was not the drouth that dwarfed them, for they were frequently and abundantly watered. Any variety that makes only such returns for such care, I consider worthless.

Charles Downing did finely. The plants grew strongly and gave me fine large berries, though not so many of them as I should have been entirely willing to see. But with better care perhaps they will be more generous. At any rate I shall be more generous to them another year, and feel quite confident that I shall not regret it. I think it one of our most promising varieties.

Barnes Mammoth has shown great vigor of growth, but a wonderful dearth of fruit. Some large stools that ought to have borne at least a pint each, did not show a single berry! But the fruit is very large and fine, and I shall try it another season before discarding it.

Napoleon III gave me the most delicious berries in my grounds, but they were very few. The plants grow finely, and the fruit is very large, so that when you get a few dozen berries they amount to something in outward appearance as well as intrinsic excellence. Another year's trial will determine its fate with me.

The most satisfactory strawberry I have, all things considered, is the Florence. A few plants were sent me two or three years since, by a horticultural friend, with his warmest commendations, but as I heard nothing about them from others, little care was taken of them. They were allowed to multiply and maintain such warfare as they might with the grass and weeds. But this year they have most nobly vindicated their worthiness of better treatment. In the first place they are about a week earlier than Nicanor. In the second place they yield very abundantly and continuously, uniformly large and finely flavored berries. I shall grow some next year in hills, and with good care and culture, for if they have done so well under neglect, it seems to me they must do still better with proper nourishment and attention.

W. H. W.

READING, MASS.

Residence of A. H. Hinkle, Cincinnati, Ohio.

THIS design, from plans by A. C. Nash, architect, was erected at Mount Auburn, Ohio, and throughout has been constructed in the most elegant manner. The most attractive features are the tower, which rises very prominently, and also the piazzas and balcony on first and second stories. The interior is handsomely finished in native woods. This illustration is taken from the new Architectural volume of Hinkle & Co., Cincinnati, and plans are given in detail beneath. Cost, \$120,000.

FIRST FLOOR.—1, Verandah, 11 feet wide; 2, Vestibule, 5 by 10 feet wide; 3, Main Hall, 10 feet wide; 4, Drawing Room, 16 by 30 feet; 5, Library, 16 by 16 feet; 6, Reception Room, 16 by 16 feet; 7, Passage, 6 feet wide; 8, Closet, 5 by 6 feet; 9, Wash Room, 6 by 8 feet; 10, Tower Vestibule, 10 by 10 feet; 11, Family Room, 16 by 24 feet; 12, Dining Room, 16 by 24 feet; 13, Butler's Pantry, 5 by 12 feet; 14, Dish Pantry, 5 by 12 feet; 15, Store Room, 5½ by 12 feet; 16, Hall and Servants' Stairs.

SECOND FLOOR.—17, Balcony, 9 by 11 feet; 18, Hall, 10 feet wide; 19, Siesta, 10 by 11 feet; 20, Guests' Chamber, 17 by 22 feet; 21, Front Chamber, 16 by 16 feet; 22, Closet, 7 by 8 feet; 23, Bath Room, 10 by 13 feet; 24, Arcade, 10 by 11 feet; 25, Chamber, 16 by 24 feet; 26, Chamber, 16 by 16 feet; 27, Dressing Room, 8 by 9 feet; 28, Sewing Room, 16 by 19 feet; 29, Linen Closet, 8 by 10 feet; 30, Bath Room, 8 by 10 feet.

Servants' Rooms, Kitchens, and Laundry, in Basement. Several Bed Rooms in Attic.

Pleasant Thoughts.

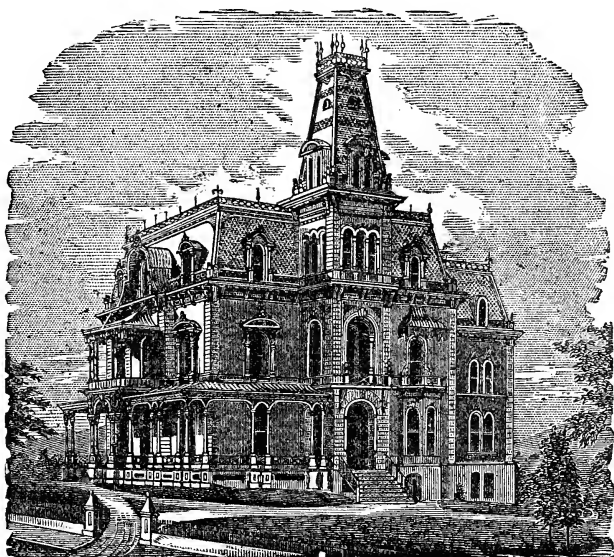
The Pansy.

"There is a little flower that's found
In almost every garden ground;
'Tis lowly, but 'tis sweet:
And if its name express its power,
A more invaluable flower
You'll never, never meet."

THE Pansy was introduced into the floricultural world for special culture, in the year 1812, by Lady Monck. Since then it has passed through many gradations of improvement, so that the contrast between the old sorts and the garden varieties of the present day is most striking indeed; one could hardly see any form of semblance or recognizance.

It has been always a flower fondly loved, and our ancestors have bestowed upon it various endearing names, such as *Three Faces under a Hood*, *Herb Trinity*, *Love in Idleness* and *Kit Run About*. Its most poetic and appropriate name is *Heart's Ease*, for the sentiment of which the above verse was written.

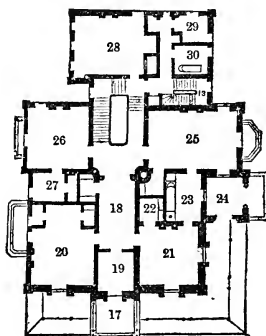
"Are not Pansies emblems meet for thought?
The pure, the chequered—gay and deep by turns;
A line for every mood the bright things wear,
In their soft, velvety coats."



Residence of A. H. Hinkle, Mt. Auburn, Cincinnati, Ohio.



First Floor.



Second Floor.

WHEN Archbishop Whately was engaged one day in his gardening operations, a companion referred, among other matters, to the great revolution in the medical treatment of lunatics, introduced by Pinel, who, instead of the straight waistcoat and other maddening goads, awarded to each patient healthful and agreeable occupation, including agriculture and gardening.

"I think gardening would be a dangerous indulgence for lunatics," observed Dr. Whately.

"How so?" said his friend, surprised.

"Because they might grow *madder*," was the rejoinder.

WHY is a baby like a sheaf of wheat? Because it is first cradled, then thrashed, and finally becomes the *flower* (flour) of the family.

"WHAT flower of beauty shall I marry?" asked a young spendthrift of his miserly governor. To which the governor replied, with a grim smile, "Mari-gold."

WHEN Kate was a very little girl, her father found her chubby hands full of the blossoms of a beautiful tea rose, on which he had bestowed great care. "My dear," said he, "didn't I tell you not to pick one of these flowers without leave?" "Yes, papa," said Kate, innocently, "but all these *had leaves*."

WHY are fortified towns like marrow-fat peas? Because they must be shelled before you can get at them.

Curious Epitaph.

The following is a curious inscription, with floral allusions, in the church of St. Saviour's, Southwark, or St. Mary, Overies, on the tomb of Richard Humble, alderman of London, on which are kneeling himself, in official apparel; his two wives and children, colored and gilded in the manner of Elizabeth and James' time.

"Like to the damask rose you see,
Or like the blossom on the tree,
Or like the dainty flower of May,
Or like the morning of the day,
Or like the sun, or like the shade,
Or like the gourd that Jonah had,—
Even so is man, whose thread is spun,
Drawn out, and cut, and so is done.
The rose withers, the blossom blazeth,
The flower fades, the morning hasteth,
The sun sets, the shadow flies,
The gourd consumes, and man he dies."

The Beauty of Flowers.

Methinks if there were no other proofs in the world of God's goodness, the flowers would supply them in abundance. Answer it to thyself, poor soul, that doubteth of his love, that darest not trust the voice in thine own heart, telling thee that thy Father in heaven is all which that heart can adore. Why has He made those flowers? Why does He send to thee these little joys, as gentle and unnoticed often as a mother's kiss upon a sleeping child? There is not a conceivable reason to be given for the existence of flowers (at least their beauty and perfume), other than the intention to provide for man a pure and most delicate pleasure.

Plant Life and Growth.

I HAVE introduced a subject I know but little about; I wish some one would teach me more about it. Oft have I viewed and contemplated a living tree with wonder and admiration. Behold it waving in the breeze, and basking in the sunlight; a chemical laboratory analyzing the air—extracting such gasses, and excluding such as it chooses; analyzing the sunbeams and placing its green in its leaf, and its other delicate and gay colors in its flowers, and painting its fruits so beautiful and luscious.

Tell us, oh philosophers and book-worms, who have analyzed the heavens and earth, and piled up knowledge for ages, oh tell us of the life and growth of this tree!

A few years ago I was down in the wild wood, by the bank of the little rill, and plucked up some beautiful green moss, carried it home, showed it to my little daughter, and told her they were like the pine forests of California, only smaller; each stalk of the moss looked like a green tree. Near my house were some pine and spruce trees, casting a cool shade over the moist ground; I set the mosses out there. They lived, grew, and spread, and have come up there each year since. Some of them were lichens, spreading a green leaf on the surface of the ground, and rooting along under the leaf. I have observed, in June, both the standing moss and the flat moss put forth beautiful flowers. Probably they would never have been observed by any other than a man of small mind; but to me they appeared most exquisitely beautiful. The flowers were sparkling like stars, and like lilies. On brushing the hand on the flowers, the dust of the pollen went flying off plentifully. I have not examined for the seeds, but no doubt they are produced.

We are told that the young and tender ends of the roots—"the spongioles"—furnish the plant food for the growth of the tree. I have been investigating the first principle of vegetable physiology some, and am of opinion that it is a mistake. When we transplant a tree, we generally deprive it of nearly all its rootlets; or if we save them on the roots, if we examine after the tree begins its growth, we find the smallest of the roots mostly dead; and as the tree grows, new white and tender rootlets appear, and are themselves grown by the parent tree, *and not the new rootlets growing the parent tree!*

When I transplant a tree, if I am very careful to have the moist soil placed firmly in contact with every portion of the roots, the tree is very likely to live, even without any "spongioles." But if I save nearly all the "spongioles," and plant them carefully in the moist soil, and cover the larger roots with dry straw, keeping off the light and exterior air, then the tree is likely to die; the "spongioles" will not save it. The whole root of the tree is a "spongiole," absorbing moisture wherever the moist earth comes in contact with the roots.

The bark of the roots and their wood is far more spongy and porous than the bark and wood above ground. It is not reasonable that the immense quantity of water that a tree takes from the earth, should be supplied by the ends of the roots alone, for the economy of nature is that every part shall work and do all the work it is capable of doing. The young and tender root is not capable of working only to digest the food furnished by the parent, while the larger roots not only are enabled to brace up the tree, but they are constructed with pores to receive the moisture, and moisture does not come in contact with the roots uselessly, but usefully. Remove the earth about the large roots of the tree, and we deprive it of a portion of its plant food and check its growth at once; probably a better practice than root-pruning. This is what Mr. Bliss, of Ill., told us in a Horticultural meeting, that his neighbor practiced to prevent the pear blight, by removing the earth from the large roots. To rightly understand these things is of practical use in transplanting trees and plants, and in regulating their growth.

SUEL FOSTER.

Report on Grapes.

ANOTHER season is now nearly gone, and as peculiar in many respects as any in our Western history. The grape crop usually has been immense, and of fine quality; still in some instances the vines are barren, or nearly so. This I find to be the case in the grounds of Dr. Joseph Hobbins, who has about eighty varieties planted, and forty fruiting this season, though exceedingly sparingly. This the Doctor attributes not to *this* season alone, but dates it back to 1868, when he had an extremely heavy crop—none scarcely equaling it. This was followed by the very wet year 1869, which produced an unhealthy late growth, and vines went into winter quarters in a feeble condition. This year they have resuscitated and gained strength, and though fruiting sparingly, look healthy, and are well prepared for a remunerative yield the coming season. In his grounds I find the Janesville sustaining its reputation for hardiness and climatic changes. Delaware, always good. Northern Muscatine does very well, and can be recommended for this climate, although the fruit falls. Rogers' Nos. 4, 9, 15, and 33, are doing well, and promise to hold a prominent

position as our leading sorts. One thing is noticed in the Doctor's grounds: the white or light colored grapes are usually failures. The Iona was tried by him a number of times, and as often died, till he was almost persuaded it required a charm to make it succeed; but it is now gaining ground and its future looks better.

At the fair here, just closed, the exhibition of grapes was very commendable. From my own experience, and confirmed by exhibitors, I find that Rogers' No. 4 is giving perfect satisfaction, and many growers recommend it above all others; does not mildew, and always bears good crops, escaping disease when most others are attacked; bunches good size and large.

Roger's No. 1 is not satisfactory. No. 2, though large enough to satisfy all, is too poor in flavor. Nos. 19 and 15 rank among the best, and second only to No. 4. The fruit is early, good, and compact.

Iona is everywhere at the West gaining friends. Its good quality recommends it to all, and increases the desire and perseverance for its success. Anna and Allen's Hybrid are not reliable—would not advise the planting of them; some seasons, like the present, they will succeed, but the chances are very much against them, and will not give general satisfaction. Virginia Seedling drops its fruit, and is not very good. Hartford Prolific is only fair this year. Union Village, second rate, though hardy and productive. Rebecca, better this year than common, is not reliable.

Concord holds its own former well deserved praise, and will yet be planted by the million.

Diana is good, but foliage is hurt some in the sun. This is gaining in favor as a wine grape. I tested for the first time the fruit of the Eumelan, and must say I think it is over praised. The vine seems hardy and promises well, but I think we have many superior in quality. Israella has fruited well, and though not the hardiest, is promising.

At the exhibition just closed the show of fruit was good. Among the leading exhibitors were W. Findlayson, with eighty varieties of apples; H. J. Draper, gardener to S. Marshall, thirty-six varieties of grapes; among them, besides thirteen of the Rogers' varieties, and the more common, hardy sorts, were the Salem, Lenoir, Eumelan, Iona, Catawba, Crevelling, etc., all well grown and ripe. G. V. Ott, eighteen varieties, of which the Iona is a specialty. Mr. Ott finds the Delaware "does first-rate on rich soils; but in planting avoid south side hills, or the foliage will burn badly."

O. S. WILLEY.

DANE Co., Wis.

Flowers for Small Gardens.

From the English "Journal of Horticulture."

Asters.

ASTERS like good rich soil; do not be too late in sowing; sow in a cold frame to prevent their spinning up. I know nothing so good for exhibition as Truffaut's and the Dwarf Chrysanthemum-flowered.

Stocks are especial favorites of mine; apart from their beauty, in the dusk of the evening what is half so sweet? Do not be in a great hurry to sow, as it is a pity to see them going off when everything else looks gay. I like the dwarf and large-flowering German the best. I will describe a bed of *Stocks* I had this season, containing 416 plants, the colors being kept separate. I planted eight rows by six of scarlet in the centre, and then arranged rows of different shades all round, with dwarfs at the outside. I never tired of looking at them, and I felt that it was quite a compliment to be told, by both ladies and gentlemen who employ gardeners, that it was the finest bed of *Stocks* they had ever seen, the plants so shrubby, and not one failure.

Another favorite of mine is the *Verbena*, of which I have grown about twenty-six varieties this season. It likes rich peaty soil, and, in a few words, the secret of success is to keep the plants growing, never allowing them to become infested with the green fly, or to be stunted. This season, in cleaning them, I have used nothing but water with a little soft soap, after taking the chill off a little, placing those in pots on the sides of the pots, and giving them a good syringing, as much underneath as possible. Should the plants become affected with mildew, give them a slight dusting with sulphur. For pot culture

choose shrubby growers. Cannell's Beauty of Kent is a very desirable kind for this purpose. For cut blooms, the best I have grown, and those I can recommend, are Geant des Batailles, Warrior, Reine des Roses, King of Verbenas, James Birbeck, and Miss Wimsett.

It cannot be too widely known, that with our cheap postal and railway communication, it is in the power of any one to stock his garden with the most choice plants from nurseries three or four hundred miles off, at a singularly low cost, though, of course, if one can be supplied as well from nurseries at home, by all means I would give them the preference.

The *Pansy* is another old flower that never seems to go out of fashion, though I confess it has such a host of enemies that I have nearly promised to let it grow at the outside of my garden in future. The wireworm seems never so happy as when snugly ensconced in the heart of your favorite Pansy. A troublesome little insect, which I think is the red spider, is quite a pest. Snails and caterpillars have an especial fancy for Pansies. The plant requires plenty of river sand, made rich with sheep droppings. Let your bed be so situated that it will be exposed to the morning sun, and cover it entirely with charcoal, or one half burnt sawdust. Pansies like this, and slugs do not. The only means that I can find of destroying the red spider is, if the blooms are eaten, to pay them a visit at night with a candle, and most likely the depredators will be secured. In judging the quality of a Pansy—say a yellow ground—you must have the eye as small and distinct as possible, the blotch, too, as distinct as possible; the ground or yellow portion all of one shade, with the centre petals touching each other at the top; and the belt as distinct and regular as possible. Having obtained these qualities, you must grow your blooms as large as a crown-piece, and they will be fit for exhibition. In a stand of six, I like to see a good black, a yellow, a white, a yellow ground, a straw-colored ground, and a white ground.

The *Gladiolus*, if good drainage be secured, likes plenty of water, but on no account use it fresh from any spring or deep well. You must secure what no garden ought to be without—a good sized tub, the wider the better, that the sun may have the more surface to act upon, and two or three smaller ones for guano, soot, or any droppings one can collect. Should the spikes at any time show a yellow tinge, give a good drenching of soot and water, which will generally have an improving effect. The grower must not lose heart if they occasionally go wrong notwithstanding all his care and ingenuity. I will give an instance: I had a fine bulb of Stuart Low, which threw up five spikes of a sickly yellow; when four or five inches high I washed and examined the bulb very minutely, and found that whilst the others were filling the pots with roots, in this instance they were not more than an inch long. After washing, I could not detect the slightest trace of any disease or grub; I carefully repotted it, and planted it out with the rest, but the spikes never grew more than a foot high, retaining the same sickly hue until they all died down. On taking it up I found that the roots were entirely decayed, and that it had formed two bulbs of about the size of a horse bean, the old bulb still remaining comparatively fresh. With two or three exceptions, the rest have all done well, and produced a fine collection of bulbs.

I shall now give an opinion of the kinds I think the cottager ought to secure in making his first purchase. I recommend the purchase of four Brencchleyensis, the price being low, and to make almost sure of having one spike in a fit state for exhibition on the day of the show. Occasionally, even where good collections are grown, exhibitors have recourse to this variety early in the season. Buy two bulbs of Penelope, there is seldom a stand without it; one Ophir, one Vesta, one Comte de Morny, and one Velleda, which is one of the very best kinds for opening quickly in hot weather—a great advantage.

Editorial Notes.

A CORRESPONDENT of the *Congregationalist*, Boston, asks the question whether it will pay to cultivate winter pears on an extensive scale, to sell late in the winter or in early spring? and answers his own query as follows:

"At first view it would seem that it would; that the exorbitant prices good winter pears are sometimes sold at, would fully warrant one's going into the business. But there are many obstacles in the way of the profit on the whole crop. Late-keeping winter pears

must be left on the trees late, which of course increases the liability of loss by wind, frost and theft. But these late keeping pears come into eating at an unseasonable time, and of course have not the ready sale that summer and fall pears have. They are bought in small quantities for sick persons, or rich persons—the middling classes cannot afford them; in health do not hanker for them. Accordingly our largest cultivators of pears do not run much to winter pears."

NOTES.—It is certainly amusing to see how much gratuitous advice fruit-growers receive. At one time they are told not to grow many early pears, because they ripen when the markets are glutted; and now they have advice from another quarter not to grow any late pears, because there is little demand for them, and none but the rich can get them. We have been watching the fruit markets closely for three years past, in order to guide us in our own selection of trees for orchard planting, and we came to the conclusion to plant no more early varieties, but to put out as freely as possible all good late sorts. We observe here that when peaches are plenty, there is very little sale for other fruit, and any pears coming to market before September 15th, will hardly average over ten dollars per barrel; but after that date the supply of peaches declines, and other fruits advance. So when we advise pear growers a good list to plant, we invariably say, sorts that ripen after the first of September. The very best field now for planting Bartlett pears, is north of New York, not south of it (for there are too many already planted there to be profitable); while for the South we know of nothing so suitable for general cultivation as the late varieties. We would plant freely, *Beurre d'Anjou*, *Beurre Bose*, *Beurre Clairgeau*, and *Lawrence*—the first and last especially. These varieties will ripen in October, when there is always a healthy demand for pears, and very good prices. There is one fact to be observed: every city has its peculiar features. It is not right to apply to New York the conditions and circumstances that exist in Boston or Philadelphia. We know it has always been profitable to raise late pears for New York and Philadelphia; more so than early ones. And at the same time we know that *early* pears sent to Boston always bring the highest prices of the season. In one single week Bartlett pears rose in New York, this fall, from \$9 per barrel to \$27—because the Southern supply dropped off suddenly, while the Northern one was only limited. If we were growing fruit in Central New York or New England, we would plant Bartletts very freely, for they would not ripen until after peaches and the bulk of Southern fruit were over.

Home Gardening.

In our next volume, for 1871, we are making arrangements for a series of articles of especial interest to those who have small gardens, and are fond of flowers for out-door and in-door culture. In our *Notes for Cottage Gardeners*, we find we have hit a happy vein of subjects, which seems to prove popular, and we shall hereafter devote increased attention to this subject. We are reducing our rates in order to bring *THE HORTICULTURIST* within the reach of all, rich and poor; and we hope "*Home Gardens*" and "*Gardening for Ladies*," will bring us clubs by the basketful and subscribers by the thousands. Every one who *loves gardening can afford* \$1.50 a year for such a journal in clubs.

Pleasant Homes.

What an enjoyable sight to behold all the various members of the family engaged in a labor of love, embellishing their home grounds with climbing vines, arbors, trellises; planting flowers here and there, and digging beds for tulips, gladioli, or flowering shrubs. We have found, from the letters of our subscribers as they write to us, that there is far more delight in that part of horticulture (home adornments) than all the possible profit of fruit culture. How often, when we sometimes pass a beautiful door yard, we say: "*Well! that is charming; I must have something as good,*" and so we are stimulated and incited toward improvement and greater happiness. The association of flowers and gay shrubs or trees, is of a refining character. Did you ever visit a home embowered among roses, weeping trees, and surrounded with a tasteful garden, but found there a genial kindly heart and a cordial welcome. We always have, and we have traveled far. Often we have stood and looked at a poor man's garden, and wondered what sort of people the inmates of the cottage must be; but the door opens and the little children come out ready for a merry gambol, and the

mother takes a loving look at her flowers, we can tell in an instant the heart is pure and has touches of fine taste and home enjoyment. One of our exchanges deplores the general lack of desire among farmers to give their homes a few tasteful touches of this ornamental character.

"If a farmer should devote an acre of land to lawn and pleasure grounds judiciously, (but rather sparingly planted with evergreens,) interspersed with a few cherries, pears, Siberian crabs, or deciduous ornamental trees, and also a few flowering shrubs and climbing vines, such an acre would soon be worth any other ten acres of the farm.

"Children all love flowers and ornamental shrubbery, and above all they love a beautiful grass plat or lawn for a play ground, where toil and labor can be dismissed, and recreation and true enjoyment drawn into their fill. It requires little to induce children to learn to love to decorate home. Give them the opportunity, and with but little outlay, they will soon increase the value of that acre one hundred fold.

"When shrubbery and evergreens are once planted they will need good culture for a few years, and after they get a good start, the plat may be laid into blue grass, and soon a beautiful grass plat and shady lawn will bless the entire household for all their labor and expense.

"Compare this picture with the bleak, bare grounds of nine-tenths of all our farmers' homes, and we should think it would need no argument or inducement to convince all of the almost indispensable necessity of donating at least one acre near the house to that which would give so much pleasure and happiness to his family."

A Sunny Room.

We were delighted when we read this paragraph by the author of "My Farm at Edgewood," as we believe more happiness and good health comes from a plentiful use of sunlight, than all other incidentals put together. Let your houses front the south.

"Such a farm-house as I have described," says the author, "should have, in all northern latitudes, a sheltered position and a sunny exposure. Of course a situation convenient to the fields under tillage, and to other farm buildings, is to be sought, but beyond this no law of propriety, of good taste, or of comfort is more imperative than shelter from bleak winds, and a frontage to the south. No neighbor can bring such cheer to a man's doorstep as the sun. There are absurd ideas afloat in regard to the front and back side of a house, which affect village morals and manners in a most base and unmeaning way. In half the country towns, and by half the farmers, it is considered necessary to retain a pretending front side upon some dusty street or highway, with tightly closed blinds and bolted door; with parlors only ventured upon in an uneasy way, from month to month, to consult some gilt-bound dictionary, or museum, that lies there in state like a king's coffin. The occupant, meantime, will be living in some back corner, slipping in and out at back doors, never at ease save in his most uninviting room, and as much a stranger to the blinded parlor, which very likely engrosses the best half of his house, as his visitor, the country parson. All this is as arrant a sham and affectation as the worst ones of the cities. It is true that every man will wish to set aside a certain portion of his house for the offices of hospitality. But the easy and familiar hospitalities of a country village, or of the farmer, do not call for any exceptional stateliness. The farmer invites his best friends to his habitual living room; let him see to it then that his living room be the sunniest, the most cheerful of his house. So his friends will come to love it, and he and his children to love it and to cherish it, so that it shall be the rallying point of the household affections through all time. No sea so distant but the memory of a cheery, sunlit home-room, with its pictures on the wall, and its flame upon the hearth, and the sunlit window, will pave a white path over the intervening waters, where tenderest fancies, like angels, shall come and go. There is deeper philosophy in this than may at first sight appear. Who shall tell us how many a break down of a wayward son is traceable to the cheerless aspect of his own home and fireside?"

Fall Planting of Fruit Trees.

Most cultivators will have finished their orchard planting by the time this paragraph reaches their eyes. Have they done it well? Did you drain your land before planting? if not, depend upon it you will lose half your trees before they begin to fruit. Excessive

moisture is quite as fatal as the blight. And when the winter rains and snows come down and melt and thaw again, you do not know how many of the roots of your tree will rot, or whether they will start safely in the spring.

Another thing, did you *stake* your trees? It is best to do it for two or three years, until the tree is well set in its place. Strong winds prevail in winter. And often more than one orchard is "inclined" in a way very sore to the eyes of good fruit growers. Then, too, do not omit *some mulching*. First bank up a mound of earth about six inches high for a circle of three feet from the trunk, and then spread over it some rotted manure. This does double duty as a mulch, preventing the ground from freezing too hard and injuring the roots, and also enriches the soil.

Did you trim back the tops of your trees? Do it at once. If your trees are one year old cut back one half; if two year old, with side branches, cut back two-thirds of each shoot, and yearly thereafter one-third of each annual growth. Do this now, as it may be neglected until too late in the spring, when the sap has started too quick for you.

If you are liable to be troubled by worms or borers, take pieces of tarred paper and wrap around the trunks of your trees, three inches below the surface soil, and above it for six or more, and let it remain for a year and then renew. It is not so difficult after all to grow good trees, if one only will take the time and *care for them*.

Complete Reports of Prospect Park, Brooklyn.

We are indebted to Hon. J. S. T. Stranahan and J. W. Taylor, for a complete file of all their reports, from the commencement down to the present time. A wonderful progress and improvement has been made in the old grounds within a few years past. Five years ago we remember it as a vast open field, uncared for and unvisited. To-day it is the pleasure resort of the best classes of Brooklyn residents. And under a careful system of landscape planting, much has been accomplished without a great expenditure of money.

Report of Central Park Commissioners.

The new volume just issued, containing the Thirteenth Annual Report of the Board of Commissioners of the Central Park, has been laid on our table. It contains illustrations of the Mall, the Dairy, the Merchants' Gate, the Cascade, Berceau Walk, Palaeozoic Museum, Statues of Columbus, Humboldt, Auld Lang Syne, with lithographic maps of the present extent and condition of the Park. The number of visitors to the Park for 1869, was **7,350,957**. The largest number of pedestrians entering the Park in any one month was in August, 561,963; the largest number of vehicles was in May, 148,310. The Commissioners are adding every desirable improvement, especially upon the Belvedere, or upper portion of the Park. And under the new "Department of Public Parks" we observe vigorous efforts at improvement of some of the parks lower down, within the limits of the city.

Horticultural Notes.

A GIANT tree, of the Eucalyptus species, was felled lately in the Dandenong Ranges, Australia. At one foot from the ground the circumference was 69 feet; at 12 feet from the ground the diameter was 11 feet 4 inches; at 78 feet, diameter 9 feet; at 144 feet, diameter 8 feet; at 210 feet, diameter 5 feet. The tree was 330 feet high.

Tree Culture of the Grape Vine.

The *Gardeners' Monthly*, for September, advocates it strongly, believing that "a good system of tree culture of the grape would make the fortune of any one engaged in it." That's right: we say ditto. Now give us the system. We always believed in *free room*, and never in *close quarters*.

How to Pack and Keep Winter Pears.

"Pears intended for late winter keeping should not be gathered too early. The time for gathering must be governed by the character of the season; a hot and dry season ripening

the fruit much earlier than a wet and cool one. As a general rule it can remain on the tree until most or all of the leaves have fallen, and it will here keep better than in any other place. If, however, it begins to fall from the tree, or is readily detached by a slight twisting of the stem, it should be gathered at once, and laid away in a cool, dark room. But be careful how you gather, and how you remove it from the tree to the house. You must handle it gently as possible; not throwing it into the basket, but placing it there so as not to bruise it, and in carrying it to the place of deposit, do it with the same care.

"The time between the gathering of winter pears, and the setting in of cold weather, is the most critical time in their whole management. For if during that spell of warm weather, about the middle of October, known as the Indian summer, they are allowed to become warmed through, the ripening process will surely begin, and no subsequent care or skill can prevent or materially retard it. The pears will either ripen prematurely, or they will wither and become of little or no value. It is from want of proper attention at this very crisis, that so many failures occur in attempting to keep winter pears. The fruit room should therefore, all through the fall and early December, be kept at a temperature of 40 degrees, or as near that as practicable, admitting the air only at night or early morning.

"The middle of December will generally be early enough for the pears to go into winter quarters in the cellar. Of course not all will be found, even of the same variety, to be possessed of the same keeping qualities. Some will be fully ripe, others just on the eve of becoming so, others will require a week or two, or a month or two, to come to maturity, while others with due care will go safely through their hibernation and come out in spring a delicious morsel for the most fastidious taste.

"It is a vexed question with fruit growers, whether winter pears are best kept in bulk or in thin layers. Some very careful and successful persons put them in barrels with alternate layers of sound winter apples; others place them in boxes, not more than two tiers deep, with cotton batting between each tier to absorb the moisture. Both boxes and barrels should be kept at a distance from the walls and from the bottom of the cellar, to escape the dampness therefrom.

"Winter pears can at almost any part of the season be brought into eating condition by being placed for a few days in a close, warm temperature, though as a general rule the very choicest specimens are such as ripen off naturally and rather early in the season. Here, as elsewhere, nature herself will accomplish her own work much better than any appliances of art, and it is safest and best to trust her with it.

"Will it pay to cultivate winter pears on a nextensive scale, just as we cultivate winter apples, to sell late in the winter or in early spring?"—*Ex.*

Senasqua Grape.

The *Rural New Yorker* says that it has fruited well this season, and there is now little doubt of the success and value of this variety. The bunches and berries are large and handsome, and for rich sprightly flavor it has few or no equals. It may be too late for extreme Northern localities, but for Central New York and southward, it will ripen early enough.

Walter Grape.

This has been quite a success this year in Pleasant Valley, N. Y., and tests with the saccharometer show it to possess a value for wine making far superior to the Iona or Delaware. In some localities, however, it has mildewed.

The Martha Grape.

Mr. Campbell, of Delaware, O., makes this very candid confession: "The Martha is doing admirably, bearing well, already ripening, perfectly healthy in vine and fruit, and in these respects a perfect success. It has been invariably successful here for six years. Its faults are that it will not keep long after being taken from the vine—not longer than the Concord; it is also foxy, more however to the smell than the taste. It is sweeter and purer flavored than Concord, and has a more tenacious, though thinner skin, and bears handling and shipping better. I believe it the best perfectly hardy and perfectly healthy white variety yet introduced, but *I hope for a better.*"

New Valuable White Grape.

A. J. Caywood exhibited at the Pleasant Valley Grape Exhibition, Hammondsport, N. Y., September 30, some new white grapes of remarkable merit. One in particular, a cross between the Walter and Rebecca; has the productiveness of the former, with same form of bunch, while it retains the color and flavor of the latter. The Rebecca is known to be a very unproductive grape, while the Walter fairly overflows with its clusters of fruit. We were much pleased with the seedling, and trust it may prove what the public have long wanted, "a good, productive white grape for market."

The Salem Grape.

Specimens of this grape were exhibited at the Farmers' Club, N. Y., and at the Prize Exhibition of B. K. Bliss & Sons, and attracted special attention. The fruit is large, deep amber color, rich spicy flavor, little pulp and seeds small. It is a good table grape. It seems to have ripened finely this year, and cultivators, whose vineyards we visited, say it improves yearly. It is somewhat unfortunate that a spurious No. 22 was disseminated, that being wholly valueless, while the other is exceedingly valuable.

Horticultural Exhibition of the American Institute.

The display of fruits and plants at the American Institute, this city, is much superior to their usual exhibitions. Mr. W. S. Carpenter exhibits 250 varieties of apples, and takes every prize. It is the finest display of apples we have ever seen.

Ellwanger & Barry exhibit 180 varieties of pears, of unusually excellent average size, and also take the first prize.

Mr. Isaac Buchanan has a choice display of greenhouse plants, and receives the first premium for best Orchids and Specimen Plant.

Mr. George Such makes the finest display of ornamental foliaged plants, and takes nearly all the prizes for these and for general collection. A special prize is awarded for some new and choice orchids.

C. L. Allen & Co., make a beautiful display of gladiolus and lilies; and Mr. W. A. Burgess exhibits a beautiful collection of new seedling dahlias. Mr. Burgess is well known as the best dahlia raiser in this country.

The other departments of the Institute Fair are well sustained, and in many respects are more interesting than the one held last year.

B. K. Bliss & Sons' Prize Grape Exhibition.

The display of grapes on the tables of Mr. Bliss, 23 Park Place, was certainly the finest ever exhibited in N. Y. Over 120 varieties were represented, and over 500 plates graced the tables. All the old varieties were there, and all the new ones of deserved prominence. The first prize, for best display, \$20, was awarded to John Dingwall, of Albany, N. Y., and the second to John Knox, of Pittsburg, Pa.; for the best seedling (black) never before exhibited, to John H. Ricketts, Newburgh, N. Y., and for white to Dr. Weeks. \$250 were offered in prizes, and the occasion proved a very entertaining and useful one to all visitors. Since New York cannot support a successful Horticultural Society, we must depend upon the liberality of individuals to provide these occasional displays of fruit to gladden the eyes of city "ruralists." Great credit is due Mr. Bliss for his successful strawberry and grape exhibitions.

Trees for the North-West.

C. Andrews, in a communication to the *Western Pomologist*, states that the results of his experience are such, that in planting a place he should, of native forest trees, plant principally the following in the order named. For street rows, White Ash, Elm, and Sugar Maple. For the lawn proper, only such low growing trees as the Mountain Ash, White Birch, Buckeye, White Thorn, Wild Crab (*Pyrus Coronaria*), and very sparingly of the Evergreens, Balsam Fir, Spruce, and White Pine. For the park or pleasure ground, Maple, Linden, Box Elder, Oak, Hickory, and Butternut. For the timber belt, Larch, Ash, Sugar, Maple, Box Elder, White Pine, Walnut, Hickory, and Linden.

Where all of these could not be obtained, plant the Cottonwood, Soft Maple and Willow

for the street; the Sumach, Thorn, Crab, and Linden for the lawn; and the Cottonwood, Oak, Hickory, and Walnut for timber, all of which can be found along nearly every water-course in the West.

The Locust of every kind are "no good," would prefer instead, for tree fences, the Cottonwood or White Willow, which will probably make the best live fence wherever the Osage will not stand. Of the kind of trees that are now being much puffed and planted, be careful of the Chestnut, the Red and White Cedars, and the Lombardy Poplar.

Mrs. S. K. Webb, of Meeker county, Minn., writes that she has grown a splendid shelter belt of Siberian Crab Seedlings, "now ten years old, twenty feet high, which the high winds of Minnesota have never broken, and the fruit on many of these seedlings, though small, is of excellent quality for eating, and superior for cooking." This is certainly killing two birds with one shot, growing firewood, shelter, and fruit at the same time.

Allowing Sheep to Run in Orchards.

A writer in the *Western Rural* says: "Some years ago, in answer to our inquiry through an agricultural journal, one farmer stated that he had pastured an orchard with sheep for several years. When he first turned them in, there was so little growth that he could not cut a graft from the orchard, there being no recent growth of sufficient length and thrift to furnish scions. In three years time the trees improved materially, making from a foot to eighteen inches of new wood every year. Another reported that sheep pastured in an orchard for two or three years, made great improvement in the fruit. Neither spoke of any injurious effect on the flock.

Cultivating Pear Orchards.

John Morse, of Cayuga, N. Y., has found of late years that he gets more pears, and better ones, by keeping the ground cultivated instead of allowing it to run to grass. The corn crop proves one of the best for this purpose, as it represses the growth of weeds, and in this respect is better than potatoes. Lime has been found decidedly beneficial, being first slacked into powder, and then spread broadcast over the ground, at the rate of over 100 bushels per acre. His ground has been perfectly underdrained, and the result of his careful culture is, that his orchards of 3,000 trees now yields an annual income of over \$3,000. So says the *Country Gentleman*.

Floricultural Notes.

Evergreens for Windows.

THE *Gardeners' Magazine* says that the evergreens which thrive best for windows, back yards, etc., are the Aucuba, Rhododendron, Box, Euonymus, Arbor Vitæ, Holly, and Evergreen Privets. All the kinds of ivy are suitable, but the commonest kinds look very well if properly trained from the bottom of the pot outwards, and if allowed plenty of water. If the plants are on the outside window sills, put a little chip or wedge under the pots, so as to keep them level, or else you cannot water them properly; also, fix in the joints of the wall strong nails half way up the plant, then get some thin copper wire and fasten it to the nails from one side to the other; this prevents the wind from blowing them down. The copper wire is easily undone and put back again when required, and will last with care for years. Iron wire lasts only once or twice, as it breaks.

Flowers for the Holidays.

The amount of flowers sold in New York for Christmas and New Year holidays may safely be put down at a valuation of \$150,000. The amount for the whole year is nearly \$1,000,000.

Bedding Pansies.

Those who have never seen Pansies massed, have no idea of their great beauty. They are thorough wet weather plants, *i. e.*, they are not destroyed by wind or rain, as most bedding plants are; and not only that, but they are so easily grown, We planted last season

about 7,000 different violas. One border, about 400 yards long and 24 feet wide, planted with pansies and cerastiums, and having a single row of pyramidal-shaped zonale geraniums in pots, at intervals of ten feet, was the admiration of every one who saw it.—*Cor. Gard. Magazine.*

Flowering Plants in California.

E. J. Hooper, in a series of letters from San Francisco, to the *Ruralist*, Cincinnati, O., speaks of the beautiful spring seasons:

"Some of the flowering shrubs from China and Japan are tall, most beautiful, and, of course, most of them novel to new comers. The yellow Japan acacia, of which there are several species, and of various shades of yellow, with willow-like leaves, are very showy. All our tender flowers flourish in the open air all the year round. Cactus grandiflora is now covered with its rich crimson flowers. The yellow and white sweet-scented jasmines are getting into full flower. Geraniums, twelve feet high, are covered with their large variety of lovely blooms. The finest roses in the catalogue, five or six feet high, not to speak of the true pillar, have a hundred buds and full blown flowers on each.

"The English ivy flourishes here as well as it does in England. The parti-colored purpleish pink and white Japan pea, climbs and covers the highest fences and walls brilliant with its showy blossoms. The wild flowers are very numerous and glowing in their varied coloring, growing in large patches of their different sorts. But there is one cultivated plant here that is very conspicuously brilliant; it is the pendulous, graceful, crimson clianthus, with leaves similar to the locust. The English laburnum is untouched with frost here, though often killed down in Ohio. Fuchsias reach an altitude of twenty feet, absolutely with as many flowers as leaves. But there is no end to the plants in the open ground, all common in California, as well as fruits, except some of the completely tropical. One of the earliest floral objects of my infancy—the London Pride—was one of the first that greeted my loving sight; with the pretty Auricula, Garden Daisy, Nasturtium, Anemone, Primrose, etc.

Summer Roses.

The *Ruralist* talks pleasantly of a few charming roses as the constant stay of our flower garden during the hot, dry days of summer:

"The China, Bengal, and Tea, or Noisette, are our constant bloomers; from early spring until hard frost, they always have their buds ready for us. Some may say we cannot keep them through the winter, as they are not hardy and will freeze out. That is so, if they are left unprotected; but the keeping of them through the winter is easily managed. They can be kept in the ground very well by adopting the following plan: when the frosts have taken most of the leaves off, clean the bush up, trim off the green water shoots and decayed buds, then dig a trench on the side of the bush close to the plant, deep enough to take it well in; put a little straw in the bottom, then bend the plant down, and with some hooked pegs fasten it well down in your trench; put some straw over it, and cover the whole with soil eight or ten inches deep, enough to keep out hard frosts, and you have them safe for spring, when they should be uncovered as early as the weather will permit, and a little well rotted cow manure spaded in around the bush.

Another plan is to take them up carefully in the fall, pot them in a good stiff soil of rotted sod, prepared the spring before; put the soil in dry and give the whole a good watering. Set them away in a cool place, or in a frame, until the new roots show themselves, then turn the pot up, and turn out the ball of earth, and they are ready to take into the room, or will grow, with a slight covering on your frame, until time to set out in the spring. You must carefully watch that the rose does not get too wet, as damp is certain death to it.

"We can not well name all the kinds, and do justice to them here; but of the few that are grown by florists for summer flowers, we name Pactole, Safrano Hermosia, of the old kinds; and Malmaison, Marshal Neil, Gloire Dijon, of the newer sorts; try these, and you will not be disappointed."

Care of Rose Bushes.

The practice of budding and grafting roses on the roots of some strong, growing, wild variety is a common one, and is done because the choice blooming variety is thereby made

to grow more strongly, and give larger and more beautiful flowers. The results are always good if the owner will but remember to watch and cut away every sucker shoot that may spring from the wild roots, and at this season of the year it is more especially a care and observance that belongs to every owner of a budded rose bush. Neglect of this item at this time, is very liable to cause many rose owners to impugn the honesty and truth of nurserymen and commercial florists, when their own inattention and practical labor was the cause of their rose beds being filled with briars instead of hardy monthly roses.

The little slug or worm that appears on the leaves of rose bushes, should be watched, the leaf at once picked off and destroyed. A little daily attention will keep the bushes clean all summer, but if the work is neglected until the worms get abundant, syringe with a solution of strong tobacco water; let it dry, they syringe with clear water, and at once dust with fresh quick lime or flour of sulphur.—*Addi, in Cleveland Herald.*

Floral Window Boxes.

"Nothing adds so much to the ornamental appearance of a room as flowers. They can be procured with little expense, and the few moments required each day in watering and careful training and pruning, are amply repaid by the sweet fragrance and rich bloom. A window box can be very easily and cheaply made of wood, and fitted to the window sill of a south or east window, which can be made very attractive. Ours is made of pine boards; is about five inches deep, and covered with wall paper—it would be better painted, or, still better, made of zinc and neatly painted. The more expensive are made of potters' ware or of tile. Good rich garden soil is suitable for most plants.

"A plant of the German ivy is very pretty to place at either end of the box, and can be trained up the window casing and festooned over the top of the window. The Kennilworth ivy is useful as a border plant on the inner edge of the box, and allowed to trail down over the sides; but it will require severe pruning, or it will cover and crowd out other plants. For the centre, a few plants of verbena, geraniums, or fuchsias, or the more common, but not less beautiful, pansies, double stocks, pinks, camellia-flowered balsams, and wall flowers. There is also the English daisy (*Bellis perennis*), "wee modest crimson-tipped flowers."

"Be careful not to get too many plants; two or three are sufficient, and will grow more luxuriantly than if crowded. Many other plants can be successfully cultivated in the same manner. I have mentioned only those which are in reach of all.

"A Morning Glory came up self-sown in our window-box, and was allowed to grow, only taking care to pinch off the ends of the shoots occasionally; and, common as it is, it has given us much pleasure. The Petunia can be grown as a house plant; and, trained on a trellis, presents a much prettier appearance than in the garden. A very neat trellis may be made of old hoops, forming pieces of them into three circles, seven, five, and three inches in diameter, fastening each circle firmly with the clasps taken from the hoops. (This can easily be done with the aid of a knife and pair of pincers.) Then a fine stick, two feet long, nicely polished, and sharpened at one end, must be put through the circles, first under one side of the smallest, then over the same side of the one next in size, then under the other side of the first, etc., weaving them in and securely fastening the upper side of the largest one with a little wire staple.

"A very neat hanging basket may also be made of old hoops and broom-wire, using these for a form, and lining with moss. Some pretty trailing plant, inside, trained to hang over the sides, gives it a very agreeable effect. I have one in which, after lining half way with moss, I placed a row of Kennilworth ivy, then filling up with moss, a Geranium is placed on the top. These baskets require to be copiously watered. I have found the best way to suspend the basket in about two inches of water, allowing the soil to absorb the moisture, which it will do very readily."



Raspberries at Dr. Hexamer's Place.

DR. HEXAMER, of New Castle, New York, exhibited at the Farmers' Club, in July, a number of baskets of raspberries, and spoke of them briefly. At the outset he remarked that this fruit has never before been so abundant nor so cheap. When Mr. Fuller—who has done more than any other man to encourage the culture of small fruits—advised people to embark in the business, he did not mean that they should push ahead blindly, but that they should use sense and judgment. This has not been done in all cases. If it had, blackcaps would not now be selling for four cents a quart. The crop, however, had better be dried than be disposed of at such rates. Dried, it sells for forty to sixty cents a quart, and four quarts of fresh berries make one of dried berries, while the trouble of drying is offset by the expense of shipping. Blackcaps are also excellent for canning, and besides this make excellent vinegar. Dr. Hexamer then proceeded to speak of the varieties. The Ellisdale is earliest, and though a variety of the Purple Cane, it is much preferable to that in every respect. Next in point of ripening is Davidson's Thornless, which, as its name signifies, is destitute of thorns, and therefore agreeable in the garden. It is three days earlier than the Doolittle, which sort is the most prolific of any. The Garden has more of the red raspberry flavor than either of the blackcaps, but though approved for home use it is not quite suited for market. The Seneca is late, coming ten days after the Doolittle. The excellence of the Mammoth Cluster is, that the berries hold the same good size to the end. Though there are two or three dozen other varieties, these are the chief and most worthy. In reply to a question, Dr. Hexamer said he would advise farmers who wish to cultivate some of this fruit simply for home use, to plant Doolittle for black, and Philadelphia for red.

Girdling Fruit Trees.

DR. HULL remarks, in the *Prairie Farmer* :

"Ringing trees by removing a strip of bark quite around them, will induce fruitfulness. That is, trees disbarked early one season, will produce fruit the next. So will ligatures, ringing or twisting branches, produce the same result.

"Barrenness of tree may generally be attributed to late branch and leaf growth; therefore, any operation retarding top growth tends to fruitfulness.

"All the operations we have mentioned, or any other which for a time sever, or nearly sever the connection between top and roots, are highly injurious to the trees. This will appear when we state, that the roots cannot elaborate plant food. Therefore, soon after the connection is cut between the roots and leaves, then the spongioses, or root hairs, decay; next, roots of smallest growth, then those somewhat larger. Thus, by the time the tree shall re-establish the connection, by healing the wounds made by disbarking, many of the small roots will be lost. If the wounds made by ringing or disbarking, remain for a long time unhealed, then only the larger roots will survive. In this way, long naked roots will occur; these may never again put forth many small roots, except from their ends or at a great distance from the tree."

Cobaea Scandens Variegata.

A CORRESPONDENT of the *Gardener's Record*, published at Dublin, Ireland, mentions this beautiful and wonderful creeper, for beauty of foliage and rapid growth, as by far the best of all our ever-green greenhouse climbers. "I had a small plant in pot, planted inside of a new vinery against end wall, to cover the back wall and part of the roof, the latter as shading to screen the sun from a chair placed at that end, close by where it is planted. And well it has answered that purpose, as it has long since covered the desired surface on the roof—namely, 80 square feet—and on the back wall 187, and taking the end wall into account, 42, making in all 309 square feet; and, more surprising still, the flow of sap to supply all its many thousands of leaves and tendrils, has to pass up a stem

not more than one-third of an inch in diameter. The back wall is not quite half covered, but I expect ere November reaches us it will have accomplished that desired end. It will then have more than double its present leaf surface, and will be worthy the additional name applied to it by old Terry, viz., the Wonderful Creeper."

Blight in Pear Trees.

PARKER EARL, in his address before the Central Illinois Horticultural Society, says, wherever his trees have been affected with blight, he has found a good benefit in his *western soils*, by permitting the grass to run in and fill the ground around them.

Among diseases affecting pear trees I think there is none so damaging as leaf blight—by which I do not mean the sudden blackening of the leaves which we so often see on pear seedlings, but that fall of the leaves in Summer which is caused by a slower growing fungus, and sometimes apparently by a premature ripening of the leaves not connected with fungoid disease. This disease affects most varieties in my neighborhood, where the ground is cultivated in the common way. There are a few of our best kinds quite exempt, however, under the most trying circumstances. This fungus attacks only those leaves having a deficient or weakened vitality. Our pear orchards generally stand in a soil which is systematically kept naked during the entire year, and exposed as much as possible to all the severe changes of temperature. Such a soil becomes intensely hot every bright day in Summer, and radiates heat rapidly at night—a condition of things precisely contrary to all the requirements of physiology and the teachings of nature. Most of our pear trees can't stand it. The debilitated leaves which are constantly exposed to the spores of this fungus, become unable to resist it. This is pretty much all theory of course, but I know that those trees, of varieties most liable to Summer defoliation in our neighborhood, which have been kept in a close grass sod, or in clover, have held their leaves quite perfectly through the Summer.

This leaf blight lays the foundation for wood blight in many, if not in most, cases. Those trees which shed their leaves in mid-summer will generally put out leaves again in a few weeks; a new wood growth is commenced, many of the perfected fruit buds will blossom, and the freezes of early Winter find the tree wholly unripened and unprepared, and all those new adolescent branches are backward with the frost, and the whole tree must be greatly shocked and more or less permanently diseased. That such trees should yield to the blighting fungus seems in nowise strange. The tree has passed through the feverish vicissitudes of Summer, has been often wounded in root and top, and finally has been exposed to severities of Winter while in summer clothing, and it is quite to be expected that the abased and weakened thing should yield to the attack of disease.

Now, whatever will keep the leaves on the trees through the season, whether it be high culture, special manuring, root pruning, mulching, or grassing, is better than any other management which is accompanied with leaf blight. Without giving any opinion as to which of these methods is best, I will state two facts: I planted a dozen Flemish Beauty trees nine years ago; have given them moderate annual culture. They are all alive and in apparent health to-day, but they have been badly defoliated for several Summers past, and never matured many fruit buds, and I have never got a barrel of pears from them all. A neighbor of mine planted a few of the same variety out of the same bundle. He set his trees in ground that he seeded down a year or two after, and which has remained in sod ever since, and he says he has never manured them. His trees are as large as mine, and he has had three or four crops, getting over three bushels to the tree in one season—the pears of fine size. I don't know that the grass was good for them, but I shall try what grass will do for mine. Now, please don't anybody report me as recommending you to plant trees in grass, for I don't make any recommendation. I think it is only the naturally strong and vigorous trees which will ever amount to anything if planted in grass—or anywhere else.

New Water Lily.

THE gardener at Chatsworth, England, has been raising a new water lily, which is a cross between the gigantic Victoria regia and a magnificent crimson water lily named *Nymphaea Devonensis*, specimens of which he is willing to give away to those who have got facilities for cultivating this species of water plant.

Strawberries in Missouri.

SAMUEL MILLER, of Bluffton, Mo., makes the following report of strawberries in the *Western Rural*:

Downer's Prolific, my earliest, and of excellent quality in every respect.

Ida, good, very productive, but rather too small in the winding up of the crop.

Albany, always fine.

Peak's Emperor, large and excellent, productive enough and by no means the same as Agriculturist, as some have seen fit to class it.

Agriculturist will do, but not what was expected of it.

Charles Downing and Boyden No. 30, promise well.

Green Prolific, one of the most reliable, and will stand heat and drouth better than almost any other.

Jucunda, when properly cultivated, is emphatically *the* strawberry for a late crop. It has no fault. This season I had hopes of raising as large berries as have ever been grown; but the birds did not let me get a single fine specimen.

Cat birds, Orioles, Cedars, Quails, and a host of others, all seemed to consider their claims ahead of mine. But in the face of all this, not a gun was fired. But a few more strawberries must be noticed.

Southern Mammoth, Afrique, and Mary Stewart, received from Louisiana the last spring—which, of course, I thought would be early—are now in bloom and fruit, while all the other varieties are past for weeks. These latter may prove valuable for a late crop.

We are now in the midst of the raspberry crop.

Weather very hot, 95 deg. to 103 deg. in the shade for nearly a week past in the middle of the day.

Strawberries in Illinois.

D. B. WIER also reports in the same journal as follows:

"I have at least 50 varieties of strawberries under cultivation, and have tested and am testing as many more; so when speaking of strawberries, I should have a pretty fair knowledge of them. The Wilson was a complete failure in this neighborhood this season. I had a good round acre of them from which I did not pick one quart. My neighbors were in the same unhappy condition. My Wilson's had just the same treatment as the other varieties; yet I sold a good many fine berries and a good many poor ones at a good round price, while my neighbors, who put all their dependence on the Wilson, sold none. My McAvoy's Extra Red produced, as they always have done, let the season be as it may, the greatest amount of fruit; and Nicanor the greatest amount of good fruit, altho' it was cut off by the drouth rather early. These two last seasons show that it is a good thing to have.

"I will now name in succession those other varieties that gave the best crops, or that withstood the drouth best, naming the best varieties first. Those varieties not named may be taken as not producing anything: Jenny Lind (or Iowa), Improved Early Scarlet (these two varieties, like the Nicanor, ripen early), Fillmore, Colfax, Philadelphia, Chas. Downing, Russell, Ida. These are all the varieties on which we found any berries worth gathering. Oh! I forgot! The Mexican Ever-Bearing, the old and young plants from 18 planted last spring, ripened one fine berry on the 20th of May, about the size of a pea, and have matured four since, a little larger. This remarkable feat, and the drouth combined, has about used them up; but if by good care I can get them to squeeze out another berry about the 20th of October, I, for one, will be perfectly satisfied with their enormous productiveness," etc.

"This season shows plainly that it will not do to place our dependence on any one variety of strawberry, be it ever so good in a perfectly good season. I netted more money on my light crop this season, than I did on my great crop last, simply for the reason, that I happened to have many varieties, and some of those that did the best are discarded or unpopular ones. A mixed bed of seedlings gave me the greatest amount of fruit, for the amount of ground occupied. Some of them I hope may be worth preserving."

Root Pruning.

Dr. HULL gives the following directions for doing it successfully: The work is done at any time from November to April. The latter part of winter or early spring is best, and the soil is then easily penetrated by the spade. For trees four inches in diameter a foot above ground, a circle three feet in diameter is cut around them. Large trees have the diameter of the circle enlarged three inches for each increase of one inch in the diameter of the stem. A trench is cut around the tree three feet deep, severing all the lateral roots. The trench is then filled with top soil, and the tree kept well cultivated through the season. The amount of labor required will deter most persons from making the experiment on a scale large enough to give clear and decisive results. On the other hand, tardy bearing sorts will thus be induced to form fruit buds the first season after the roots are cut, and to bear crops the second; and the trees, if desired, may be easily transplanted in consequence of the shortening of the roots.

Madison (Wis.), Horticultural Exhibition.

THE second exhibition of the season was held Thursday evening, August 18, and to those present there was no occasion in asking the use of horticultural societies, as their influence was self-evident in the ninety entries of flowers, plants, and fruits. Especially creditable was the exhibition for so unpropitious a season. Nearly one hundred specimens of house plants in pots; twenty to forty varieties of pinks by single exhibitors; large platters of Verbenas, Zinnias—bouquets and designs—all told the influence of this Society upon the taste of the city yards. Then came the vegetables and fruits, several plates of plums, well ripened, and several large collections of grapes for so early

in the season; Allen's, Delaware, and Iona looking especially well. Then of apples, the show was commendable. Fine specimens of even some tender sorts appearing in prime order. Never saw finer and better grown specimens of bough and early harvest than were on the tables. But the most prominent of any one sort was the Red Astrachan, an average specimen of which I measured, and found it eleven and one-half inches in circumference. I mail it to you, and if you have anything more beautiful to look at (I mean in the fruit line), please advise me. Here it is ranking among our best sorts, as the hardness of the tree to endure the changeableness of the climate, good size and beautiful appearance of the fruit, give it a prominence in every list. And surely it's worthy, as experience proves.

O. S. WILLEY.

Water for Peonies.

Mr. ROULLARD says that all peonies love water, and principally the herbaceous sorts, which ought not to lack it, not only from the moment when the flower buds commence to form till they have perfected their flowers, but also from the beginning of August, continuing until the rains of autumn, to favor the production at the base of the stem, of strong eyes, capable of yielding vigorous flowers the coming season.

The Cherokee Rose.

A CORRESPONDENT of the *Country Gentleman* speaks thus of it, and also the Macartney Rose:

The plant in question is the *Rosa laevigata* of botanists—a strong-growing, rampant running rose, a native of China, introduced many years ago into the South, and employed for hedging to the extent of many thousands of miles. A more thorough barrier than it forms, it would be impossible to imagine in the way of hedge, the only objection to it being its rampant growth. The labor required, however, to keep up an ordinary rail fence, if applied to this hedge, would be quite sufficient to keep it within ample bounds.

When well kept it is a beautiful and striking object in the landscape—a rich, glossy evergreen, studded all over during its lengthy period of blooming in the spring and early summer, with large, snow-white, single, inodorous flowers.

Another similar plant, known with like absurdity as the *Chickasaw*—the *R. bracteata* or “Macartney” Rose—is extensively used in Louisiana and Mississippi. It makes a closer, less rampant growth, and altogether a better and less troublesome hedge; but is, most probably, more tender or susceptible to extreme cold. Its blossoms are somewhat double, and have a delicate banana-like fragrance.

I find that neither of the plants grow with sufficient vigor in our rich, black, hog-wallow prairie lands here in Texas; and infinitely prefer one of the *R. microphyllas*, the double, tea-scented, almost ever-blooming white one, known as “Maria Leonida.” It forms a substantial hedge, a perfect barrier; grows as freely from cuttings as the others.

I am inclined to think that your Virginia correspondent will find the free-growing, hardy, easily propagated rose, known to and largely employed by nurserymen as the “Manettii,” to be the best for his purpose. Half the annual care required by that detestable thing, the “Osage Orange” (*Maclura aurantiaca*), applied to the Manettii rose, will make a better and closer hedge. Checked by the extreme cold of the prairies of Illinois, the Osage Orange may be formed into a hedge. Indeed we are assured that is so. But I have yet the first good one to see. Here, and all over the South, it becomes a tree so quickly, and requires such never-ceasing care, that I greatly doubt if—as the negroes used to say—“the dance is worth the candle!”

Mulching for Currants.

A CANADIAN writer says: “I have for some years past been endeavoring to improve the growth and bearing of red currants. I tried all the ordinary means, such as manuring with old rotten manure, digging it well in, etc., but with little benefit. Our garden is a sandy soil, which suffers greatly in dry weather, and hence I found some more active means must be resorted to. Last year, although the season was so dry during a great portion of summer, I had a most marked improvement in the bushes and crop, and this year completes as full and rank a growth of wood and crop of currants as could be desired. The amendment is due altogether to mulching over the whole surface of the ground with a large quantity of cow manure—ordinary horse manure having, as before stated, had little or no effect. The cow manure was spread about three or four inches thick over the land, and at any time that an examination of the earth underneath the manure was made, the surface and also the soil for some inches deep was always moist and apparently rich looking. Weeds grew, certainly, to any extent, but so did the currant trees. Of course I pruned in the usual manner in the spring, and next year must cut away an immense quantity. I have never approved of cultivating the currant on the single stem principle, but much prefer allowing suckers to grow, having found by experience that any wounds accidentally given to the single stem tree, by hoeing or otherwise, causes almost immediate decay of at least the bearing qualities, and very shortly of all the natural rank growth, without which currant trees will never produce a full crop.

Eumelan Grape Vine.

WE have made arrangements by which any of our Subscribers, old or new, can obtain this as a premium, in the renewal of their subscriptions to *THE HORTICULTURIST*, for \$1 each, or with one year subscription, for \$3—full value, \$3.50. The same will be presented to each person forming a club of three, for \$5, or five for \$7.50. We believe it worthy of general planting, and a very desirable new variety. Its quality and good growth are beyond question.

Catalogues Received.

F. K. PHENIX, Bloomington, Ill.—No. 4, Hyacinths and Fall Bulbs. No. 2, Wholesale Price List.

George P. Kinney, Schuyler, Neb.—Fruit and Ornamental Trees.

Robert Buist, Philadelphia, Pa.—Wholesale Catalogue.

Ferre, Batchelder & Co., Springfield, Mass.—Catalogue of Bulbs.

J. W. Coburn, East Chester, N. Y.—Catalogue Coburn Nurseries.

Blackwell Bros., Titusville, N. J.—Catalogue Fruit and Ornamental Trees.

T. C. Thurlow, Newburyport, Mass.—Catalogue Cherry Hill Nursery—New and Choice Fruits.

The History of The Baldwin Apple.

THE origin of this apple has been generally accredited to the State of Massachusetts, but nothing has been hitherto known as to its early history. We observe a contributor of *The Boston Cultivator* accredits it to England, so that it seems at last, like many other of our most successful varieties, to be not a *native* fruit, but an imported variety.

Much has been written and said about the origin of this valuable apple, and yet no definite point has been reached about it. In 1786, my grandfather, then a young man 28 years old, went from Dedham, Mass., into the woods of New Hampshire, and bought a lot of land then in a state of nature, and after a hard struggle he succeeded in clearing away the forest, and won for himself and family a happy home. After a few years he had a surplus of produce, which he used to bring to Boston market. In one of his many trips, which must have been previous to 1800, as he told me the story, he put up at a tavern in Billerica, Mass. That night another man on his way to market put up at the same tavern; he brought into the bar-room two bags of apples, the night being too cold to leave them out on his wagon.

During the evening he spoke of his apples, declaring that he had got the best apples in the country. A man in the room asked him for an apple, to see how nice they were; he opened his bag and gave each person one, and they ate them and pronounced it a very superior apple. The tavern-keeper said he thought he had some as good; he went into his cellar and brought each man an apple, and, after eating them, they, with the owner of the bags, pronounced them far better.

My grandfather went on and did his marketing, and when he returned he stopped at the tavern and asked for a few scions. The tavern keeper went to the tree and cut him some, which he brought home and set them in a small young tree, and from that they spread through town, and the towns around, and scions went from that tree to Vermont, where large quantities of them are raised. The tavern keeper told my grandfather that the scions in his tree came from England. This is the history of this apple as told me by my grandfather, and if of any use to orchardists, they are welcome to this reminiscence in regard to the history of one of the best market apples grown in New England.

Best Way to Ship Grapes to Market.

THE market demand for grape packages in New York is now yearly tending to smaller boxes. The five pound box is now the most popular, but there is great inquiry for a two pound or three pound box, which, when filled, can be sold for twenty-five cents. We have even seen one cunning little one pound box, which we thought would take as a novelty. But we advise grape growers, as a general rule to try two-thirds of their shipment in five pound boxes, and one-third in three pound packages. We think there must be a radical change in the manufacture of grape boxes, viz., they must be better ventilated.

A Southern shipper says: "When the temperature is as low as 40 deg., tight boxes will do; but when it ranges from 60 deg. to 80 deg., tight boxes are not safe. The best packers now wilt their grapes from four to eight days before closing the boxes for shipment. In a well ventilated box or basket, grapes may be packed direct from the vines, and reach market in good condition, with less expense, and little or no discount from must or mildew."

We must caution grape growers also against choosing any boxes which have flexible sides or ends. It is invariably the case that the fruit is pressed and bunches loosened by the time it reaches market; and more often has fermented and become spoilt.



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No. 294.

The Home of Marshall P. Wilder.

A GENIAL hand grasps ours as it welcomes us to Dorchester, and the home of Mr. Wilder. It is right pleasant thus to meet one of the familiar faces of our living American horticulturists, and set down in one of the easy chairs in the little library so well hallowed in the interests of American Pomology. On all sides are piled up volume after volume of rare and curious foreign books. Here are the Latin agricultural works of Columella and Cato, *Opera Agricolationum Columella, Varronis, Catonisque*, dated only 100 years after the era of the invention of printing. There is a complete file of the *Gardeners' Chronicle*, since 1842, and the *Gardeners' Gazette*. The *Album de Pomologie*, by A. Bivort, 1848, 4 vols. Leroy's valuable *Annals de Pomologie*, with other American publications and newspapers beyond our mention. A dish of new and rare pears graces the centre table, to the discussion of which we are invited, and a pleasant evening is passed away.

Mr. Wilder has all his life enjoyed an enviable public reputation, and held positions of prominence and trust. From 1840 to 1848, he was President of the Massachusetts Horticultural Society; of the American Pomological Society he has been President for over twenty years, and still is at its head, recognized as *its life*, and its ablest representative; of the United State Agricultural Society he was President for six years, and still in all good agricultural and horticultural projects he is a foremost advocate and zealous worker, and delighted as we all are to meet him in public, yet in his home we find the true place to enjoy his conversation and gather wisdom from his rich store of knowledge. The grounds surrounding the house contain about twelve acres, mostly covered with pear trees. On the lawn in the rear of the residence is a *Weeping Birch*, planted by Mr. Wilder himself thirty years ago, and now forty feet high, with a spread of branches fully thirty feet, and a diameter of trunk about eighteen inches. It is a beautiful tree, fit to be portrayed in the most exquisite of engravings.

Upon the same lawn is also a *Purple Beech*, planted by Colonel Wilder over thirty-five years ago, now forty feet high and forty feet broad, while at a little distance is another younger *Weeping Birch*, about twenty-five feet. Says he: "I am now an old man, and my head is covered with the silvery touches of time; but it is a great comfort to stand here in my old age and see the trees which *I planted* with my own hands, and behold how beautiful they have grown. They will live when I am gone, and be my best memorials."

In the flower garden south of the house there are flower borders with six varieties of Coleus, arranged in semi-circles, and edged with Mountain of Snow Geranium. The Achy-

ranthus Gilsonii, a newly introduced variety, with variegations here, Mr. Wilder finds not permanent, and disposed to run back to the old type.

Mr. Wilder has spent many of his years in experiments with Japan Lilies, having often-imported them from Van Houtte, of Belgium, when they were worth a guinea apiece. By crossing them he has obtained some most exquisite shades of color, from lightest to darkest crimson and light buff; many of which are now introduced by florists for the first time as rarities, at five dollars each; and yet the same hybrids have been growing in Mr. Wilder's garden for years. Seedling Coleus, too, he has succeeded in producing hundreds of new varieties, none of which he deemed important enough to introduce; one of them is very like the Aureus Marginatus. Tree Pæonies are a favorite flower with him for experiment, having now twenty-three kinds. One of them, Elizabetha, which he imported eighteen years ago, at a cost of 300 francs, is now being introduced, *for the first time*, by some florists in this country. He crosses the different varieties of the Tree Pæony every year, and has succeeded in getting the real royal *purple*, very deep; the tints in the Pæony being usually violet.

In front of his house is a Magnolia Conspicua, thirty years old; and in another place near the path are his *Camellias*. Most florists know his success in producing seedling Camellias, and some of them have curious histories. In 1839, a Camellia, raised in Union Square, New York, named Floyii, was offered for sale, and, as other competitors were anxious to obtain it, Mr. Wilder bought it for the extravagant sum of \$250, for he could not bear to have it leave the country. It stands now in his yard fifteen feet high, having a thick green skin like leather, some of the leaves being six and three-quarter inches long by three inches wide. From that day to this he has never seen a Camellia of such gigantic stature.

He also bought, twenty years ago, from George Thorburn, a fine Camellia, which then was twenty years old. Now it is fifteen feet high—the trunk measuring twenty inches in circumference and seven inches in diameter. From these he has gone on in the production of seedlings, and has now over three hundred varieties, bearing the names of all the members of his family, and they stand gathered in one compact group together near his greenhouse.

In 1839, he had over 800 seedlings alone in one greenhouse, which took fire, and all were burned, save two. These two were the *Abby Wilder* and the *Wilderii*. The former is white with pink stripe, and threw out a sport, one branch giving a clear *rose colored* flower, which was perpetuated by a graft, and named the *Abby Triforia*, a daughter of the mother.

Curious to relate, still *another branch* sported, giving a flower with a *flesh color*, darker than Lady Hume; that graft too was permanently fixed in same manner as the other, and to it was given the name Grace Sherwin Wilder. This was exhibited at the Massachusetts Horticultural Society, and to it was awarded a silver pitcher. Seventy plants from these sports were sold, and realized \$1,000.

The *Wilderii* was saved by being grafted under a bell glass. One half the leaf was burned off, but the other was saved.

The Monterey Cypress, which is such a favorite in California for ornamental planting, has one representative here. Colonel Wilder has one plant which has stood for twelve years exposed to all kinds of weather, and he thinks it will prove as fine and vigorous an Evergreen here as on the Pacific coast.

As is well known, the pear is a specialty with Mr. Wilder, and we naturally look to him as an authority upon the subject. To him must be given the credit of the introduction of the *Beurre d'Anjou Pear*, thirty years ago, from Paris. It has always grown well with him, is as hardy as an oak, grows on wet land and on dry, never blights, and always bears well after it gets to a reasonable age. Year before last he grafted sixty-eight new sorts, and this year has fruited thirty-two new varieties, which have never borne before in this country.

Upon his twelve acres there are 2,500 bearing Pear trees. Most of them are planted fifteen feet apart, but some of them as close as ten by ten. Nothing is grown between the rows, and the trees shade the ground completely, their branches touching and interlocking with each other.

The *Urbaniste* has always been one of his favorites, a fine healthy tree now fifteen year old, and bears well.

The *Buffum Pear* has borne on one of his trees as high as twenty-two bushels of fruit in one year. This tree is now thirty-eight years old, and thirty feet high, three feet in circumference around the trunk. Last year his *Buffum* pears brought \$4 per bushel.

Beurre Hardy has a tough leaf, and hangs down as if suspended by a thread; holds its foliage well in drouth; good quality; ripe in September.

Vicar of Winkfield doing admirably, in August is big enough to bake, and in winter the best ones will sell for a good price for eating purposes. The tree is always beautiful, and never fails to bear a crop. Usually brings \$10 a barrel.

Henri Van Mons, a curiosity, the tree being fairly overloaded with fruit. One pear tree, close at hand, has thirty-five kinds grafted upon it.

Gustave Burgoyne has long branches, a beautiful drooping habit, and pears hanging in clusters. Is of the same class as *Doyenne Boussock*, and ripens here in September.

The *Doyenne Boussock* forms a fine large head, is a stronger, larger tree than the *Bartlett*, and will bear twice as well. Mr. Berckmans has seen trees in Belgium eighty feet high and six feet in circumference. In September it is the custom usually to go through the orchard and pick off the largest and lay them aside; they ripen up of a fine yellow color, really beautiful.

One of Mr. Wilder's friends, Mr. Vose, is such a lover of the *Vicar of Winkfield*, that he would, for ornamental purposes as well as fruit, replace the *Bartlett* with the *Vicar*. He declares it beautiful in bloom, beautiful in foliage, and beautiful in fruit—as well as profitable.

The *General Tottleben* is a winter pear of excellent quality, very large.

The *Sheldon* produces very well; needs picking and marketing early.

Paradise d'Aulonne forms a fine pyramidal head, and is very productive. Fruit has a good russet color, sells well, and is of good quality; often is mistaken for the *Bosc*, but the tree is from two to three times as large as the *Bosc*.

Charles Van Houten—fruit is as yellow as gold, fair quality, but the trees are very vigorous and productive.

St. Crispin, the largest pear on the place—monstrous; quality good, tree vigorous, ripens in September. There are also seedling pears and new varieties of excellent quality, and a few of fine size and handsome appearance.

Near the pear orchard is his specimen vineyard of forty varieties. All are in excellent fruiting condition, and we have an opportunity of tasting nearly all the best varieties of *Roger's* hybrids. The No. 9 we declare as good as the Delaware. The No. 19 ripens in clusters as beautiful as the *Israella*. While the No. 9 is luxuriant beyond all others.

The gardener shows us two rows of strawberries, one the "Mexican Everbearing," and the other "Monthly Red Alpine," and asks us to point out the difference. As we observe none, we ask him, and he replies that from time of planting down to the fruit he has not discovered a particle of difference sufficient to authorize their being called distinct varieties. The fruit of each proved identical in manner and time of bearing.

Near by is Mr. Wilder's famous hybrids. No. 60, crossed with *Napoleon 3d*, has a *Haut Bois* foliage. The *Triomphe de Gand* and *Haut Bois*, crossed, have the *Haut Bois* foliage. No. 26, a *Haut Bois*, prove pistillate, with the *Haut Bois* foliage.

There are over two hundred of these crosses, presenting a remarkable series of curiosities of fruit and foliage, difficult to understand and account for. Upon the place are also sixty varieties of cherries, the *Downer Late* and *Black Eagle* being regarded the best. Time fails us to describe all that is interesting and useful on Mr. Wilder's place, or in connection with his life of usefulness and honor; but as we close we are reminded of the beautiful poetic thought of his, when, in speaking of the pleasure he has felt in doing some good in the world, in his horticultural zeal, his efforts

"leave no sting in the heart of memory;
No stain on the wings of time."

The Perry Red Streak Apple.

THIS appears to be a new apple from Northern New York, of remarkable beauty. It is of large size, fully equal to the Gravenstine; even more handsomely colored, but more deeply red, and with dry, mealy texture; good quality, but not juicy or spicy, and we should judge also not a good keeper, but a very pleasant eating apple while it lasts. Its principal merit seems to be in its *hardiness*. We received a box of specimens from Dr. J. Carroll, House of Lowville, N. Y., who furnishes us the following information.

"This apple had its origin with a Dr. David Perry, in his fruit orchard here, and has been known to us for some thirty years or over. The habit of the tree is rather spreading, making an open head, with fair growth in turf land, but when given good open culture, it is a vigorous grower and abundant bearer, producing fair crops each year, but having alternate seasons of special productiveness.

"The tree is quite hardy with us—lat. 43° 40' N., and 847 feet above tide water, with an average mean temperature, for twenty years, of about 45°, and the mercury often dropping into the *thirties below zero*, enough to test the endurance of every tree as to hardihood.

"The Perry Red Streak is one of that peculiar kind of apples that needs to be eaten just at the moment of maturity, when it is a *superb one*, but after that it grows pithy, although it will keep sometimes after the point of highest excellence has been attained."

To Western cultivators desiring a handsome apple and hardy tree, this would seem to be very desirable. Lowville is almost up to the Northern border of New York State. This fruit is not described by Downing.

Design for an Italian Cottage.

WE have always admired the Gothic style of Cottage architecture for its beautiful picturesque effects; but for practical convenience in interior arrangement of rooms, as well as great economy, we have yet found nothing more efficient than the Italian style. It admits of architectural embellishments quite as much as the Gothic, but is free from the cramped ceiling and waste nooks so common with the latter. Being also more regular in form and easier of construction, there is less waste of timber, and they can be built in much less time.

The design we introduce here is a fair specimen of this Italian style, but so reduced and modified as to meet the wants of our country and climate, and be suitable to the tastes of most village residents. The reader will also notice the low pitch of the roof, the broad, open character of the trimmings, and the introduction of the round arch for the heads of the windows.

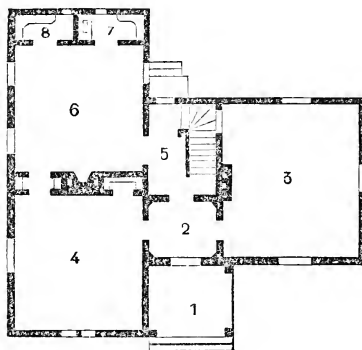
The plan is arranged as follows: From the portico, No. 1, by means of double glazed doors, we enter the vestibule, No. 2. This opens on the left into the dining-room, No. 4, and on the right into the parlor, No. 3. Directly in front a sliding glass door opens into the hall, containing stairs to the chambers and cellar. The living, or dining-room, has a good sized china closet, and connects by means of a small passage on the left of the chimney-breast, with the kitchen, No. 6. This room is fourteen feet square, is conveniently placed and well lighted, and opens directly into the staircase hall, No. 5. No. 7 is a pantry, furnished with a pump, sink, and shelves, and No. 8 is a good sized store closet, with shelves. The vestibule measures 6 feet by 7½ feet; parlor, 15 feet by 17 feet; living room, 14 feet by 15 feet. The second floor furnishes three large chambers, a bathing room, and several closets.

For the interior finish of the rooms the architect recommends something like the following: The wood-work of the vestibule and dining-room to be a wainscoting 2½ feet high, with standing finish to correspond; this, together, with the wood-work of the kitchen, to be oiled and varnished, showing the natural color and grain of the wood. The walls may be papered with some neat, modest pattern of panel paper, and the floor covered with painted oil carpeting of colors to correspond.

The parlor should have a lighter, more cheerful tone than the other apartments. The wood-work painted some pleasing tint; the paper a small, lively figure on a light ground;



Design for an Italian Cottage.



Plan of Rooms.

and the carpet a small mosaic figure on a darker ground; all with the window and table drapery to harmonize in color, and as far as possible in the style of the figures.

Cost.—Built of wood, and covered with clapboards or sheathing, the cost of this cottage in the neighborhood of New York would be nearly \$3,000. In the interior of the country, where good mechanical labor can be hired at less than \$3 per day, and timber is less than \$30 per M, it can be built for \$2,000 or \$2,500.

The Red Grape Currant.

A Distinction that is also a Difference.

THERE has been considerable discussion through the press, for the past four years, in regard to the new currants—whether they are really distinct from the old sorts or not, and, if distinct, whether or not they contain such distinguishing valuable characteristics as to make it an object for those who may already have an abundance of the old red and white Dutch, to get and plant any of the so-called new sorts.

With the view of settling this question definitely, some ten years or more since I commenced to get together and test the new sorts that were being disseminated. The result of these experiments go to show that a great deal of confusion exists in the nomenclature of this class of fruits; that a great many so-called sorts are only synonyms; that among a number of assumed kinds there are only a few really distinct sorts, and among these I have only found one that is really entitled to be greatly exalted above the common Dutch.

I do not claim to be infallible as a committee on synonyms, but I have good reason to think that the currant in question is the true Red Grape, though I have obtained it also as the Victoria, Roby Castle, and under one or two other names.

The valuable and distinguishing characteristic of this sort is the habit of retaining its leaves until late in autumn, while the red and white Dutch, and all other sorts that I have tried, invariably cast their leaves early—often in July, to the great injury of the fruit, which sun-scalds and soon spoils.

The plant of this variety may be known from any other that I have seen, by its more stocky habit and more lateral growth, by the deeper lobes, and peculiar darker green and firmer texture of the leaves, and also by the fruit being a darker red than any other red currant. I have often had currants of this variety for six weeks after all others were gone; not unfrequently as late as September.

The berries are no larger, usually, than the red Dutch, nor are the fruit stems any longer; I think not quite as long. It is, however, remarkably productive, and while the fruit is apparently no better than the old sorts, *while the old sorts last*, I have had people say, towards the last of the season, that it was the best currant they ever tasted, and I have been quite willing to concede the correctness of their opinion.

It is but proper to say that several other sorts that I have tried are really distinct from the red Dutch, such as the Cherry, and two or more other sorts, though of no more value, while the more recently introduced French currants I have not tested.

B. HATHAWAY.

Winter Flowers.

The Camellias

HOLD the first place among winter flowers. The beauty of their foliage, the magnificence and duration of their blooming, the size of their flowers and the variety of their colors, justify the esteem in which they are universally held. There are more than 700 varieties—white, rose, red, variegated; sometimes double, sometimes single; and they always command a high price. No manure is as good for the Camellia as the leaf-mould of the woods. Make use of the last year's accumulations, and do not sift the earth. As the

double flowers do not bear seed, the single *Camellia* is cultivated in order to furnish grafts, slips or seeds. The seed must be sown as soon as ripe. Budding must be done in the spring. Grafting may be done at any age, as the *Camellia* bears this operation well. All these things must be done under glass, as this shrub does not do well in the open air in our climate. It is well to re-pot *Camellias* every spring. The new sprouts begin to show themselves almost immediately afterwards. Towards the end of June expose them to the air, still watering them and keeping the leaves clean with a fine sprinkler. Leave them outside until the end of August, then take them in and keep them at a temperature of 60° of Reaumur, until they bloom. The falling of the buds results equally from insufficient or too great moisture; one must judge of this by the looks of the leaves.

Azaleas.

On account of the multiplicity and delicacy of their flowers, these equally merit a place among the winter Flora. Certain species are robust enough to grow in the open air and ornament the autumn days; but I refer now to those only which flourish under glass. These flowers are generally white, rose-colored, purple or yellow and single; yet there are double ones, as the *Azalea prolifera*. The most beautiful are the single white ones. They like leaf-mould, a partially shaded place, and are multiplied by sowing the seed in the autumn, in a shallow pan, from which the seedlings are planted out the following summer.

Chrysanthemums

Are among the riches of winter, on account of the abundance, the variety, and the duration of their blossoms. There are white, pink, red, purple, brown, and fawn colored ones. Amateurs count a great number of varieties. Sow the seed in a hot-bed. Clean, light earth suits them, and they are multiplied by means of seeds and cuttings for the perennial sorts. They have so little odor that they can be used in the decoration of apartments perfectly well. They require much earth and a good deal of water.

Heaths (Erica).

These are miniature trees, exceedingly beautiful from the elegance of their foliage and the profusely variegated colors of their flowers. It is customary to cultivate them in pots under glass, giving them leaf-mould to grow in. Sow them in April, and multiply the cuttings in July in pans. Water them throughout the year frequently, a little at a time, and give them much air and light. They may be kept in the open air during summer. In the winter a very little heat suffices them.

The Daphne

Furnishes certain species suitable for the greenhouse, and produces during the winter bouquets of rose-colored, white, or violet flowers of a pleasant odor. The *Daphne delphina*, and the *Daphne indica* are the best. This plant grows in clear, moist earth, and is easily multiplied by seed or by graft.

Colt's Foot.

This has been called "Winter Heliotrope," and, though not rare, puts out from among a round bunch of leaves, gray and pink tufts of flowers, exhaling a strong odor of vanilla. It is cultivated in pots filled with earth from the woods; is propagated by seed and loves moisture.

Snowdrop.

This charming little white flower, sometimes double (as remarkable for the hardiness with which it resists frosts, as for its apparent delicacy and tenderness), shoots up from between two narrow leaves, and shaded by any of the taller shrubs, blooms amidst the darkest weather and beneath the most inclement skies of early spring. But it succeeds best under glass. It loves moisture, and is multiplied by dividing the roots or by slips.—*La Semaine Agricole*.

Pears in Delaware.

THE *Bartlett* pear tree alluded to in your October number, is now eighteen years old since planting. It is a thrifty tree, although Downing says they (dwarfs) will not live more than a dozen years.

Louise Bonne has not been, with me, a healthy or productive pear, although it is a great favorite in this vicinity.

The *Vicar* has been a splendid bearer always, both dwarf and standard; keeps always until late in January, but has a most unfortunate tendency to blight.

Flemish Beauty not in bearing for me, but a neighbor has frequent crops of magnificent fruit.

Belle Lucrative has been very uniform in size, a splendid bearer, and delicious in quality. It commences bearing at once, and was one of my prime favorites until this year, but its tendency to blight more than any variety I have, has condemned it.

Beurre Diel has borne this year for the first time as a standard, and I am very much pleased with it. The trees were well loaded and the fruit very uniform in size, remarkably sweet, but a little grainy or coarse. The crop on one tree would average in weight from eight to twelve ounces. One pear, which I selected at random, weighed 11½ ounces.

Onondaga is a splendid bearer, and keeps until January, but its flavor is miserable.

Easter Beurre bears moderate crops. I have kept them until March, and when they do not wither they are very fine.

Washington, in flavor, outranks any pear I have; it is a very profuse bearer, but its size condemns it as a market variety. Were I to plant but one pear tree for my family use, it would be the *Washington*.

Dearborn's Seedling is an elegant little early pear, but often forgets its duty for two or three years in succession.

Duchess is unapproachable as a dwarf. I have had it to weigh twenty-six ounces, and it is said never to be affected with blight. My trees *always* bear heavy crops, and with a row of *Belle Lucrative* in the midst of them nearly ruined with blight, they remain uncontaminated.

Sheldon has not come into bearing for me yet, and can say nothing pro or con.

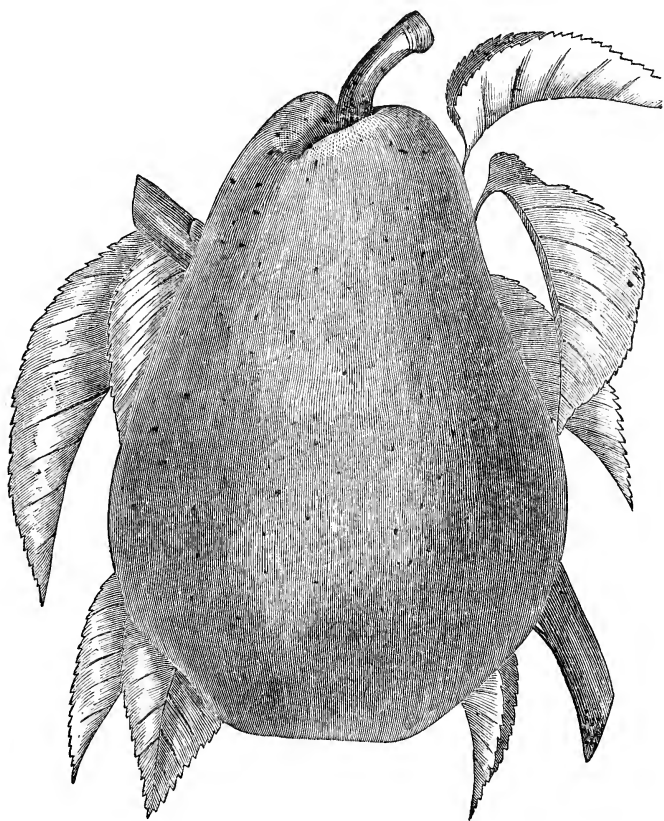
A peach orchard of fifteen acres, in sight of our town, belonging to Mr. Juhr, yielded him this year over \$3,000.

DR. HENRY RIDGELEY, Dover, Del.

The Bartlett Pear.

EVERYWHERE a general favorite; everywhere successful; uniformly free from blight; rarely ever failing to yield a crop, and capable of growing in almost every latitude of our country, we know of no fruit better worthy of its popularity than this. It seems to us now like an old variety, yet in 1833, among our fruit books it was classed as a new variety, although its history runs far back of that date. It was originated in Berkshire, England, about the year 1770, and was introduced by a nurseryman near London, named Williams, (what an honor for a horticultural editor to have this name in his family annals!) and there called *Williams' Bon Chretien*, by which name it is still best known in England. The name *Bartlett*, by which it is now so well known in the United States, was originally given to it in consequence of being imported and first grown here by Enoch Bartlett, of Dorchester, Mass., who had lost the name under which it was originally imported. It was sent to Mr. Bartlett about the year 1799, so that now it is *seventy-one years of age* in its horticultural history here. But just think of its splendid record. Is there now a pear orchard in the country, but this variety still maintains the lead, and is the first on every list. In our fruit markets other pears languish until the Bartletts are gone, and of every hundred thousand pear trees budded and sold by nurserymen, at least sixty thousand are Bartletts.

The minds of planters have so settled down upon this one variety, that it is difficult to induce them to change for any other. They feel it is always reliable. They find it is sure to grow if well treated, and no variety is surer in yielding a good crop. Then, too,



The Bartlett Pear.

Bartlett pears will always sell; oftentimes, perhaps, prices are low, still they never fail of a market.

What is there more delightful to contemplate than a noble variety like this, weathering the wear of time, and every year growing more and more triumphant in its unapproachable career. Every beginner in fruit culture selects it as his main reliance; the ignorant feel they cannot go amiss; the cottage gardener, who wants only *one tree*, is sure to take it, and from Maine to Georgia, it has been planted, until millions of trees testify to its universal popularity.

More singular than all other facts is this, that while our Pomological Associations never fail in their criticisms to find some flaw with all other varieties, yet the Bartlett is invariably passed over without a dissenting word, too successful to draw a word of fault.

The quality of the fruit itself is admirably suited also to the tastes of the multitude. Its flesh is white, buttery, fine grained, overflowing with rich musty juice, and *luscious* in the extreme. Although there are other varieties to suit a more critical taste (such as the Bosc, Belle Lucrative, d'Anjou, etc.), still the Bartlett can never be superseded among market patrons as the best of all eating pears.

It ripens rapidly in the South, from the 15th of August to the 1st of September; in the North from September 1st to 15th. If picked just before ripe, it will keep several weeks and ripen up even more perfectly and handsomely than on the tree, and at the same time can be handled more safely and transmitted to distant markets. If there is a fault in it, we would say that it cannot be kept *long enough*, for it is often desirable to withhold fruit when the markets are glutted. But the Bartlett rots easily and quickly, and ripens at a time before summer heats are gone, hence cannot be well preserved.

The tree itself is a handsome and vigorous grower, and is distinguished by its narrow folded leaves and yellowish shoots. It is also exceedingly productive, bears very young, both on pear and quince stocks. We have planted trees in the spring only two years old, and gathered fruit in less than eighteen months, or in the fall of their third year. Its annual shoots are long, and unless closely pruned they will shoot upward, retarding both the fruit bearing capacity of the tree and the ease of trimming to a good shape. The finest method of growth is that of a pyramid, branching three and a half feet or less from the ground, and pruned back yearly to one-third distance from the old wood. Thus pruned we have the perfection of trees for fruiting or for looks.

It is also a handsome pear, usually bright yellow, with sometimes russet spots, and often tinged with a faint red blush. Undoubtedly its popularity is greatly due to its color, as well as to its flavor. It is without a competitor in its season, and a remarkable instance of the successful adaptation to our climate of a variety of foreign origin.

The Wealthy.

A New Seedling Apple from Minnesota.

LAST winter Peter M. Gideon called on me and said he had raised two seedling apples which were worthy of cultivation, and being natives of Minnesota, and having stood the winters several years, would be a sufficient proof of their hardiness. We made arrangements for me to graft them on shares, and he sent me scions enough to set 1,800 of each, but the severe drouth of last spring and summer killed nearly half of the grafts.

On the first day of October I received by mail from Mr. Gideon, one of the Wealthy apples, and was much surprised at its large and beautiful appearance and very excellent flavor. The history of it, as described by Mr. Gideon, is as follows: (It was described in the *Western Farmer*, of Madison, Wis., last winter.)

"The seed I obtained of Albert Emerson, of Bangor, Maine, nine years ago (1861); got near a quart, and three trees only remain, and one of them not fruited yet.

"The *Molly* is an upright, strong grower; is an annual bearer; bore six years from seed; fair quality; sweet, long keeper; in size and appearance closely resembles the Rhode Island Greening.

"The *Wealthy* is rather a strong grower, a little more spreading; bore at seven years from seed; bears annually in large clusters, and only dropped when crowded out. Size, medium to large, nearly round, largest at base; yellow ground spread over with brilliant red on the sunny side; the whole surface covered with a lustrous polish. The flesh white, with occasionally streaks of red; fine grained, juicy, moderately tart; flavor, very best; season, winter."

When I cut the apple, October 1st, it was ripe enough to be good eating, having been picked some days and carried a long distance in the mail. All our fruit ripened very early this year; many of the Eastern and Northern winter varieties became fall when raised in this latitude here in the West, and South also. It probably will prove to be about the season of the Rhode Island Greening, which is late fall and early winter. I have very little doubt that the *Wealthy* will prove a valuable variety for Northern latitudes—both the seed and its nativity originating far to the North. Mr. Gideon says only three trees from a quart of seed remain. This is about the proportion of seedlings that are hardy enough to stand the climate of Minnesota, or even Northern Iowa, and those trees having stood the climate nine years, they will pass for *hardy*.

SUEL FOSTER.

A Letter from Shirley Hibberd.

STOKE NEWINGTON, LONDON, ENGLAND, Sept. 22, 1870.

EDITOR HORTICULTURIST: Having been on the wing for months, I wanted my quills for locomotion, and could not dare to moisten them with ink again until my flight was over. Once more I sit down in my grassy nest to see the centennial fog fight the soft sloping sunshine, and get the worst of the encounter as the day broadens in beauty and the lark soars up into the hazy blue, as in the pleasant days of spring. "Pleasant days?" Did I not abuse this British clime in all my early letters, and invoke from you, in that interesting communication on American Horticulture, something like a well deserved rebuke, implied, though unspoken. Well, if you can forget how I railed about the coldness of the spring, you may be able to accept my testimony now in favor of this clime as one of the most delightful on the face of all the earth. We have had the grandest summer within my knowledge, and at forty-five, which is my figure, a stay-at-home Britisher has some few meteorological reminiscences. We know enough of the influence of our past, hot, dry, and uniformly enjoyable summer on affairs agricultural, and as my business is with the garden more than with the farm, I shall offer a few notes by way of a report on the horticultural events of 1870.

The long, cold, dry spring was unfavorable to all early sown seeds, and consequently the vegetables that we usually look for about the end of May, were scarcely to be seen until quite the middle of June. In all except the most favored districts, the earliest sown peas perished, or were comparatively worthless when appealed to for a full basket. It was the same with all saladings, and the whole brood of what we call "small seeds," except where local circumstances or extra nursing brought them through the trial. Those things, however, which fought through their hard lot in the early spring did well, for, having a good root-hold, the intense heat of the summer favored full development. Upon the whole, however, the vegetables have been fairly productive, and at this time perhaps the only distinct record of the peculiarities of the season to be found in the kitchen garden, is the absence or the miserable condition of the late sown turnips, which were roasted before they obtained a root-hold. Kidney beans have been more than ordinarily fruitful. Ridge cucumbers and marrows plentiful and fine; potatoes comparatively small, and the crop a light one, but the quality first-rate, and not a speck of disease in the land. Within the past fortnight we have had genial rains, two small visits of frost, which in a few low lying spots has blackened the dahlias; occasional fogs in the valleys, and everywhere an extravagant production of mushrooms. The greenness of the country now is wonderful; in many places the woods are full of new growth, which covers their under-coloring of russet with the tender green of spring, and the indications of the barometer and of the heavens are all in favor of a long, genial, and enjoyable autumn.

The fruit crop has been uniformly good. In the coldest districts there is abundance; in the more favored localities the produce surpasses in quantity anything previously known, even to the old inhabitant. It has been one of my amusements, lately, to toss peaches and nectarines amongst the poultry, after friends all round had been surfeited with them in common with ourselves. The cold, late, dry spring assured the safety of the bloom, and the hot summer matured the fruit, which has not been wanting in flavor or beauty, but in many instances is below the average in size.

The most notable feature of the flower garden has been the complete disappearance of grass from the place where it ought to have been green and bright, to give effect to the flowers. In every hundred English gardens, ninety-nine were without grass throughout the whole of the past summer. I have been wicked enough to laugh at my friends everywhere, because of the worse than worn-out, door-mat appearance of their lawns, and the splendor of their bedding plants—a combination of rags, with purple and fine linen of a most provoking nature.

"What are we to do?" has been the question everywhere; and the reply has been, "give the grass all the water you are wasting on the flowers." It is a fact that watering has in most cases done more harm than good to bedding plants this season, and geraniums and petunias especially, which are never so good as in a blazing summer, are always better without water than with it, provided they are helped a little at first to give them a start. The formation and management of grass lawns has occupied much of my attention, and the past droughthy season has furnished me with additional valuable experiences. My own lawns consist of good mixtures of fine grasses and white clover for the most part, well laid on a deep, moist, heavy loam, which passes into clay at about three feet from the surface. They have been less burnt than any on this side of Loudon this season; all our visitors rating me for having grass when other people had none. The proximity of a stream, combined with the holding nature of the soil, account for its greenness more than any particular treatment; but I ensured this proximity to water by lowering the ground three to five feet, to a dead level, where it formerly rose so much too high, and was cracked and burnt in summer. Henceforth, if I may judge by the behavior of the grass in the late terrible heat, it will never again suffer, for it obtains moisture from below, and needs no artificial irrigation. We have tried on hot, dry banks, where grasses would not live, our Common Yarrow, (*Achillea millefolium*), Common Camomile (*Anthemis nobilis*), and Common Thyme (*Thymus serpyllum*), and the result was eminently satisfactory—a green, close, constant turf, which submitted to both machine and scythe, and never showed a patch of brown in the hottest weather. We have now a new turfing plant of the highest value, which I have baptized "Carpet Camomile," a plant known to our friends the botanists by the very euphonious designation, *Pyrethrum teichochewi*. It will grow in sun or shade, and spread over the ground with extraordinary rapidity, soon forming a dark green felt, which in summer is covered with long white camomile flowers. The machine nips off all the flowers, and keeps it as neat as a carpet, but the scythe will not touch it. So those who make lawns of this camomile, *must* have a mowing machine, or they may just leave it to flower and shed its seeds, and then at a moderate distance its appearance will be that of a field of daisies. So much for lawns for the present, except to say that on my new lawns thistles, docks, and dandelions, showed themselves in great force all the summer. I used to go about, whenever I wanted half an hour's idling, and put about a handful of good guano, by means of a trowel, on every one of the rascally "rustic" plants. The result was a complete obliteration of the great weeds, and the dotting of the lawn with ugly brown patches by no means agreeable to the tasteful eye. But since the blessed autumnal rains fell, the brown patches have become green, and it would need a wizard to find the site of one of them, so thickly has the clover run in where the guano was spread.

As remarked above, Geraniums (that is to say, Zonale Pelargoniums) have done remarkably well, and, strange to say, Calceolarius have not done badly. As a rule, Verbenas have been roasted out of countenance, but Petunias have rejoiced in the heat and drought, and for months past have been "more flowers than leaves." As hot, dry summers are as common with you as they are rare with us, these notes may be useful to somebody. It was a great surprise to lovers of the Dahlia, to find at the Crystal Palace, on the 6th of September, the finest display of that noble flower ever seen by living eyes in this country. We

all said, "Dahlias will be nowhere in such a season as this," and lo! the flowers came in such numbers, and in such glorious perfection, as to make a surprise to our mose case-hardened veterans; it was a Dahlia show, and we had such a snug dinner afterwards as made us forget all else than the kindly feelings and mutual respect we have talked so much about as "inseparable" from floriculture.

Gladioli have been good, but were over earlier than usual. Hollyhocks have been scarcely fine at any time, and very soon over; the plants in many instances being much hurt by the red spider. Phloxes have been grand, never were they better in my time, and now we have such a variety of colors, and the flowers are so large, and in such thumping trusses, that I might venture to say the improvement of this flower has been more marked than any during the past quarter of a century. We owe this to our French neighbors—alas! how they have bled; our hearts yearn towards them, though we cannot justify the war that has discovered their weakness, or their haste in burdening the Republic with the sins begun under the Empire.

Lantanas, in our Battersea Park, have been startlingly beautiful, and all our so-called "sub-tropical" plants have made a wondrous growth. India-rubber, Erythras, Tobaccos, Musas, Wigandias, Ferdinandias, and the rest of the great leafy things which have come into fashion here of late for "sensational" effects, have done all that was asked of them, and I have seen *Mandevillea suaveolens*, and *Tacsonia Van Volxemi*, flowering freely in the open air. A new feature in our out-door decorations now, is that known as "Embroidery" coloring, consisting of leaves only. The plants employed in this work comprise *Alternantheras*, *Coleus*, *Golden Feather*, *Pyrethrum*, *Sedums*, *Sempervivums*, *Santolinas*, and *Cantaureas*, chiefly. If you have not seen a good sample of this new style, it would be waste of time to attempt to convey an idea of its appearance, except by a colored drawing, and that would be but a poor aid. Suffice for the present then, that, as compared with good embroidery, flowers are *nowhere*, NOWHERE, NOWHERE.

SHIRLEY HIBBERD.

The Night Blooming Cereus.

DR. HULL mentions one plant in his possession which really deserves its name as one of the "curiosities of creation."

Most plants delight to open their flowers in the day time; a great portion freely only when old Sol shines forth in splendor—some preferring morning, others mid-day, and some the evening; but this Queen of the Night reverses this order of things, and expands only "when darkness crowns the scene."

We have a young, thrifty plant that grows greatly each year, but so far has not flowered at all, nor will it until older, and this exuberant growth becomes checked. The little tufts that afterwards become the flower are visible many months, but fail to grow much until two weeks before finally expanding, and during that time, more particularly the last few days, the growth is very rapid. Each of these flowers, from the stem to point of flower, was about one foot before the final expansion takes place; and so rapid is this expansion at last, that it was not until three o'clock in the afternoon that we felt sure they would all open the same night. Early in the morning one flower showed signs of the calyx breaking away; about noon the corolla began to show through the same; one after another of each flower followed suit. About four o'clock the corolla was visibly expanding, and by dark nearly full. We watched the flowers until near midnight, when the house was locked up, but we felt sure the flowers would not close until after our rising in the morning. But, alas, by six o'clock, on visiting them, they had closed finally and forever.

In 1856, we watched a flower, which did not close until half-past eight the next morning, when it closed in twenty minutes. M. Forel, director of the royal hot-houses at Lacken, succeeded in getting one to expand in the day time, by placing the plant in an ice-house on the eve of its being ready to open, the cold of which prevented the flower expanding during the night; the next day the plant being carried into a parlor, the blossoms opened with their usual splendor. Buist mentions a plant that flowered in his collection in May, 1830, at 12 o'clock noon, the only instance of the kind he had ever heard or known of.

When fully expanded the effect is very charming, the calyx composed of a great number of leaves, in this instance some sixty or so, outside of which is a sort of brown, while the inside is a yellowish white, all standing out from the corolla, which was composed of sixteen petals of a beautiful white, the said petals being expanded to about four inches, while the calyx stood out fully ten inches wide. The fragrance is very powerful and pleasing. The plant is a native of Jamaica, and was introduced into Britain in the year 1700.

It requires a warm greenhouse, or what is called a hot-house, and very sparingly watered during winter.

Sub-Tropical Planting.

BY ROBERT MORRIS COPELAND.

HORTICULTURAL novelties make the bulk of horticultural advertising, and really stimulate every one to extra efforts every year to make their gardens and grounds as attractive as possible. At present the multitude who have pursued fruit culture with great zeal, are turning more to the production and use of plants conspicuous for some peculiar beauty of color or shape of leaf. The publication of "Robinson's Parks and Promenades of Paris," has given the rising interest a great assistance, and every amateur would do well to study what Robinson says.

After reading the work and recognizing the value of the various plants enumerated, and admiring their curious or picturesque character of foliage and style, the amateur may reasonably enough ask: how are we to get such of those plants as we want, and what is the best way to use and group them, when obtained? How to get them throws us back on our own resources, and on the possibilities of nurseries and commercial greenhouses which profess to supply the wants of customers. To-day an amateur, who should desire a good collection of the sub-tropical or fine foliage plants, would be unable to get his orders filled this side of the Atlantic ocean, because those who sell plants try to provide only such stock as is commonly wanted, any other would load the benches and crowd their glass houses with unsaleable stock. As the demand for variety increases, the supply will follow, and in time it will be as easy to get Caladiums, Cannas, or any other of the list of sub-tropicals, as fancy Roses and Zonale Pelargoniums.

Most of the half hardy plants grow from seed, and by a year's previous preparation a stock can be started. But not every man has all the seed he advertises, for, like the catalogues of stock in nurseries, many seed catalogues are printed for good reading, and seedsmen, when called upon for a supply of what they advertise, would have to go to Europe for them.

Supposing one to be in earnest, he should provide himself with a convenient hot-bed, and order his seeds from a sure source, and then plant them early enough to get a good growth the first year. Some varieties are quite hardy perennials, and are more difficult to kill out than to plant, but others are biennials, or tender or fickle, and must be frequently replanted. It would be a waste of space to give directions here for planting the seeds and cultivating the seedlings; any man of intelligence, by aid of the catalogue and a little common sense, can tell what to do. I will therefore pass on to speak of the methods for preserving a stock of tender or half tender plants when procured. Half hardy plants, like Pampas grass, may be protected in most cases by setting a barrel over the tuft, and filling it with leaves, surrounding the base of the barrel with leaves or litter; but all of the tuberos rooted, like Cannas and Caladiums, should be taken up in the autumn, before they are touched by frost, and set in a warm and dry place until the leaves are withered. When the foliage is dry cut off the stems and leaves near the crown of the roots, and store the roots of Cannas in a cool dry cellar; Caladiums need a warm, dry place, where the temperature rarely goes below 60 deg., and the air is never cold and damp. Colocasia roots may be preserved in a similar place. Dracenas, Musas, Echeveria, Maranta, Chamaecrops, Ferdinanda, Ficus, and all the tree sub-tropicals, can be taken out of the ground and set in boxes in a dry cellar or room where the temperature will not go below 50 deg., and they will require no other care than change of air and very moderate supplies of water as the

roots seem to be getting over dry. Some plants, the Ferns, the *Dracena terminalis*, and all whose colored foliage is persistent, and which are more beautiful as they increase in size, should be kept in pots or boxes all the time, and be plunged in pots in the earth during summer, and removed with their pots to a conservatory or hall in winter. When plunged in pots, the roots will become cramped and pot bound, and it will be necessary to shift them occasionally into larger quarters; but many, like the *Dracena terminalis*, seem to grow in brilliancy of color by a little root cramping.

An amateur wishing to try such plants, need not be discouraged by the trouble of wintering, for he will find as he progresses that it is not by any means a difficult problem, and as it costs but little, where one does his own propagation, to get up a stock, it will be easy to have enough of each kind, and if one is lost now and then by winter or summer misfortunes, the loss will not be felt. Part of the pleasure of having a stock of rare plants is the care they require. One feels more interest in the tender and fragile favorites that must be loved and nursed to thrive, and the more invention and thought are exercised in contriving ways and means, the more closely we bind ourselves to the plants we protect. Cold and damp are generally more injurious to any tender plants than cold alone, and plants decay as often under warm damp influences as by cold. Let every man who would have such plants give as much thought to their growth and protection as to his potatoes, and he will hardly meet with disappointment.

The use of sub-tropicals opens a wide field for thought and experiment, and there are serious differences of opinion as to the best places in which to plant them. If we divide the foliage plants at once into hardy and tender, we reduce the doubts about their value, because we remove a great share of the trouble they cause, and reduce the risk of loss with the tender kinds. The number of persons in America who can and will have and maintain fine country places and grounds, and will decorate and keep them up when once established, are small. The habit of our people is to go to the country for summer only, and therefore the family income having to be divided between two places, it is insufficient to keep up a great deal of detail and superintendence.

Besides the restrictions caused by narrow incomes, the fact is that very few estates remain long enough in the same hands to bring them to very high perfection, is an argument against using expensive plants. The young man who makes money rapidly, and goes into the country to live, finds in time that the burden of educating his children, the toil of travel to business, or the want of excitement, makes the country too distant from the city, and he returns to it at first for part of the year, later for all, and either sells or neglects his country home; or if, perchance, the love of country conquers in the first generation, and the owner dies surrounded by his lawns, gardens, and forests, his children are generally unable to keep up with a divided income the whole establishment, and must sell it to live more economically. Such reasons ought even oftener than they do, to check the tendency to build costly country homes; but when they do not prevent large sums being lavished on buildings, they very often stint the grounds, and we frequently see houses of great architectural pretensions surrounded with grounds of no real merit, and utterly insignificant when compared with the buildings. There are so few country places which are well balanced; and where the grounds compare favorably with the house, that it would be invidious to mention them.

There are along the Hudson river, and elsewhere, many palatial houses and costly gardens, but whilst the houses have been built with all the care of the best mechanics, after designs furnished by the best architects, the grounds have been generally cobbled up by men whose want of education, ideas of refinement, and knowledge of the wants and proprieties of life, make them incapable of comprehending the possibilities or proprieties of a refined home. They are good men to sod, stake out, propagate, plant, and are masters of all the details of good horticultural work, but as they never had even a rudimentary education in art or artistic matters, they can only reproduce, with costly elaboration, a meagre memory of things which they have seen, and which were adapted to a particular case with needless cost and trouble, and which, when completed, are incongruous and unfit to combine with the house or the landscape. No good work can be expected, no free return for the money spent can come, until the men who want beautiful country places learn to believe that their grounds are as important as their houses, and require as much theoretical study

and design. When they believe this, and are willing to employ men who think out and plan before they begin to make their improvements, they will get results which will compare favorably with the best work of other countries, and will cost less and be more beautiful as well as more satisfactory.

But such a radical reform is slow to come, so long as men believe that all the art of making a place is to get a lawn to a uniform grade, an avenue to a given straight or curved line, or a flower garden to glow with colored beds. More than one-half of all the money spent every year is wasted, because the owner believes he can hire all the skill he wants for \$60 a month, and that every dollar paid for general advice is pure waste of money. A truly competent landscape gardener could take any country place now existing in the United States, at its cost, and make it from the outset so as to give more satisfaction and beauty than it now affords, without charge for his services, if allowed to have all he could save, and he would save from each place so treated five times the charge he would have made for planning and directing the improvements. This seems to be a very strong and broad statement, but it is the result of twenty years of observation and experience in dealing with rural improvements. The shrewd man, who does not believe in paying for advice, wants to have all the time of the gardener he employs, can furnish all the theory, brains, and directions himself, and only wants a good man who is honest, steady, and will carry out his ideas, is in the same position with the sea captain who should go to sea without a compass. Men have sailed so, and got to port, and so will he, but when, and where, or what story his account book will tell at the end of his work, time will show.

I have seen many places where \$20,000 have been spent in creating what was not wanted, and in spoiling natural opportunities; places which \$10,000 would have made perfectly charming to every visitor, even of the most refined taste, and which remained, when completed, monuments of expense and overloaded ornamentation.

Pleasant Thoughts.

Gardening as a Recreation.

I WOULD recommend every man, in the autumn of his life, to take to gardening, if he has not already experienced its pleasures. Of all occupations in the world it is the one which best combines repose and activity. It is rest-in-work and work-in-rest. It is not idleness; it is not stagnation—and yet it is perfect quietude. Like all things mortal, it has its failures and its disappointments, and there are some things hard to understand. But it is never without its rewards. And, perhaps, if there were nothing but successful cultivation, the aggregate enjoyment would be less. It is better for the occasional shadows that come over the scene. The discipline, too, is most salutary. It tries one's patience, and it tries one's faith. The perpetual warfare that seems ever to be going on between the animal and the vegetable world is something strange and perplexing. It is hard to understand why the beautiful tender blossoms and the delicate fresh leaflets of my Rose trees should be covered with green flies, and destroyed as soon as they are born. It is a mystery which I cannot solve—but I know that there is a meaning in it, and that it is all decreed for good, only that I am too ignorant to fathom it. And even in the worst of seasons there is far more to reward and encourage than to dishearten and to disappoint. There is no day of the year without something to afford tranquil pleasure to the cultivator of flowers, something on which the mind may rest (using the word in its double sense) with profit and delight. If there is no new surprise, no fresh discovery for you, there is always something to be done.—*The Cornhill Magazine.*

Eve's Apple Tree.

One of the great botanical curiosities of the Island of Ceylon, is "*the forbidden fruit*," or "*Eve's Apple Tree*." Its native name is *Diwi Kaduru*. *Kaduru* signifying "forbidden," and *Diwi*, "tigers." Its botanical name—*Taber memoutura dichotoma*. The flowers of this extraordinary production are said to emit a fine scent. The color of the fruit, which hangs from the branches in a very peculiar and striking manner, is very beautiful,

being orange on the outside, and a deep crimson within; the fruit itself presenting the appearance of having had a *piece bitten out of it*. This circumstance, together with the fact of its being a deadly poison, led the Mohammedans, on their first discovery of Ceylon—which they assigned as the site of Paradise—to represent it as the forbidden fruit of the Garden of Eden; for although the finest and most tempting in appearance of any, it had been impressed—such was their idea—with the mark of Eve's having bitten it, to warn men from meddling with a substance possessing such noxious properties.

Its effects are so poisonous that two European soldiers, shortly after the capture of Colombo, in 1795, being unaware of the nature of the fruit, were tempted by its appearance to taste it, and very soon sickened and died.

The Tulip Mania.

This "*method madness*" is well known in the history of gardening. The gardens of Haarlem are still famous for their luxuriant flowers; but the trade in tulips is not carried on as in the days of the Tulipomania, and one hundred florins is now a large price for a root. Beckman states, on Dutch authorities, that four hundred perits in weight (something less than a grain) of the bulb of a tulip named Admiral Liefkin, cost 4,400 florins, and two hundred of another, named Semper Augustus, 2,000 florins. Of this last, he tells us, it once happened that there were only two roots to be had, the one at Amsterdam, the other at Haarlem, and that for one of these was offered 4,600 florins, a new carriage, two gray horses, and a complete set of harness; and that another person offered twelve acres of land.

It is impossible to give credence to such madness. The real truth of the story seems to be that these tulip roots were never bought or sold, but they became the medium of a systematized species of gambling. The bulbs, and their divisions into perits, became like the different stocks in our public funds, were bought and sold at different prices from day to day, the parties settling their accounts at fixed periods, the innocent tulip never once appearing in the transaction. "Before the tulip mania was over," says Beckman, more roots were sold and purchased, bespoke and promised to be delivered, than in all probability were to be found in the gardens of Holland; and when Semper Augustus was not to be had anywhere (which happened twice), no species perhaps was oftener purchased and sold. This kind of sheer gambling reached at length to such a height, that the government found it necessary to interfere, and put a stop to it.

The Poetry of Trees.

The trees, as living existences, form a peculiar link between the dead and us. My fancy has always found something very interesting in an orchard. Apple trees and all fruit trees have a domestic character which brings them into relationship with man. They have lost in a great measure the wild nature of the forest tree, and have grown humanized by receiving the care of man, and by contributing to his wants. They have become a part of the family; and their individual characters are as well understood and appreciated as those of the human members. One tree is harsh and crabbed, another mild; one is churlish and illiberal, another exhausts itself with its free-hearted bounties. Even the shapes of apple-trees have great individuality, into such strange postures do they put themselves, and thrust their contorted branches so grotesquely in all directions. And when they have stood around a house for many years, and held converse with successive dynasties of occupants, and gladdened their hearts so often in the fruitful autumn, then it would seem almost sacrilege to cut them down.—*Nathaniel Hawthorne.*

Floricultural Notes.

Success in Window Gardening.

A CONTRIBUTOR of the *Western Gardener* advises all cultivators of window flowers, in window gardens, to observe the few following plain directions:

1. Get good healthy plants to begin with; that is, such as have been prepared for winter blooming by giving them rest during the summer, or, in other words, not kept blooming for two or three months previously to removing them to the house.

2. Keep only a few plants, so they will not be crowded in the window, or be setting two or three thick on top of each other.

3. Keep the soil in the pots rather dry than wet, and the foliage of them moist by frequent syringing.

4. Keep a uniform temperature, as near as possible from 60 to 70 degrees in the daytime, and 45 to 50 degrees in the night.

5. Give them air freely on mild days, but take care that the air does not come directly on the plants before being tempered, which can be done by letting down the top sash, thus admitting the cool air above the plants.

6. Select different varieties of plants for different places; for instance, roses, geraniums, etc., delight in a temperature from 45 to 55 degrees, in a sunny window, while begonias, coleuses, cissus discolor, want a much warmer place, 60 to 70 degrees or more, and but very little or no sun, while heliotropes, bouvardias, and fuchsias want all the sun possible, with a temperature of from 60 to 75 degrees, the latter during the daytime.

7. Keep a close watch on insects. The green fly and red spider are very troublesome, for which use plenty of soft water (of the temperature of the room) in which has been soaked tobacco stems, in the proportion of one pound to the gallon, and syringe the plants with it about every fortnight, whether there are any insects on your plants or not, and you will not be troubled with them.

Planting on Graves.

Graves may be made to look very neat and pleasing by planting an edging, within the stone coping, of a small dark green ivy, such as the smallest leaved helix, or the purple-leaved variety, called *minima* in our classification, but in trade catalogues *Helix minor donerailense*. Any other small leaved ivy would answer nearly as well. In the angles, right and left of the point where graves meet, small Irish yews or Chinese thuja would be appropriate. With the ivy edgeings plant some neat tufts of double white and double yellow primroses, with tufts of crocuses and *Scillas ibirica*, between; but polyanthus are too coarse.

Also plant a few hardy herbaceous plants, as it so frequently happens that those who plant graves live too far away to take proper care of them, and in such cases ivy and hardy herbaceous plants are invaluable, because a little weeding comprises pretty well all that is needed afterwards, and this can soon be done, when the graves are visited, as a labor of love.

The best herbaceous plants for the purpose are the following: Double white, double yellow, and double crimson primroses (single ones are not good enough, and, besides, are coarse); *Saxifraga pulchella* and *S. hypnoides*; the early Forget-me-not, *Myosotis dissitiflora*; the Starry Sandwort, *Arenaria cespitosa*; the Pink Thrift, *Armeria dianthioides*; the (so-called) Purple Alyssum, *Aubrietia grandiflora*; the white and blue varieties of *Campanula carpatica*. More plants might be named, but no one can want more than half a dozen sorts for this purpose.—*Floral World*.

Floriculture at Erfurt, in Germany.

A correspondent of the *Evening Post* thus speaks of the immense horticultural establishments in Erfurt, Germany:

Erfurt has been given the name of the "Garden City of Germany," and, according to recently published statistics in Upper Consistorial Councillor von Tettau's "Erfurt—Past and Present," she well deserves the title. The area devoted to horticultural purposes in and around the city is over 2,000 Prussian morgens (.65 of an acre). About 600 morgens of this are devoted to market horticulture; 220 morgens of the latter again are devoted to the production of flower seeds, and 210 morgens to vegetable seeds. The houses for the culture of exotic plants, and the hot and cold beds, possess glass covering to the extent of 250,000 square feet.

There are 36 independent horticulturists, of whom 27 do only a wholesale trade, besides 120 market gardeners, altogether employing over 500 assistants. The vegetable and seed trade depends almost entirely upon the larger cities of Germany. Over 300,000 catalogues and price lists are annually printed for the wholesale producers, at a cost of \$10,000; 50,000 of these are wholesale catalogues, and half of the latter are prepared for England

and America. The amount of postage paid on these catalogues, some of which are pamphlets, and on the letters containing seeds, is very great.

For the transmission of these seeds a vast number of linen and paper bags and paper are required, involving an annual outlay of over seven thousand dollars. Both these articles are manufactured in the surrounding villages, giving employment to a great many poor people. As all these bags must be provided with the name of the dealer, a great amount of printing is also required. An incredible number of boxes and baskets are needed for packing purposes; the latter are made by the poor people in the neighboring villages; the former are made in the Thuringian forest. Many poor families do nothing else during winter but make wooden tickets and stocks for the flowers.

A number of little Thuringian villages are almost upheld by the manufacture of flower-pots for Erfurt alone. About 600,000 are planted yearly with about 3,600,000 stock-gilly flowers. These placed in a single row would reach nearly fifty miles! In the year 1863, 150,000 pots were planted with 1,550,000 gilly flowers for seed, and these brought in an income of nearly fifty thousand thalers. The production of the gilly flower in sixteen varieties and over two hundred colors, established the horticultural fame of Erfurt ever since 1810.

Of the seeds, fifty-eight per cent is sent to Austria, twenty-four per cent to Germany, and eighteen per cent to other parts of Europe, to England and America. A large trade in dried flowers is also carried on. In some of the gardens it is very difficult to get even a single bouquet.

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Sounds of Trees.

THE sounds and motions of trees constitute subtle but important elements of pleasure. It is not enough that a tree shall have a comely form as a whole; that it cast a dense shade in the sultry days of summer, and that, perhaps, it yield a nut or fruit; and finally that, when it falls before the inevitable axe, its prostrate trunk shall furnish good timber. Besides these uses of bodily comfort and of economy, a tree, like a rich-hearted person, has a hundred harmless ways, which we hardly stop to analyze; but which, if they were suddenly taken away, we should miss.

The murmuring of trees is profoundly affecting to a sensitive spirit. In some moods of imagination one cannot help feeling that trees have a low song, or a conversation of leaves. They whisper, or speak, or cry out, and even roar. No one knows this last quality so well as those who have been in old Oak forests in a storm, with violent winds. A dense forest opposes such a resistance to the free passage of the air, that the sound is much deadened. But in a park, or Oak opening, where spaces are left for the motion of the air, and among open-branched trees, a storm moves with such power and majesty that not even the battles of thunder clouds are more sublime, and under certain circumstances it becomes terrific. At the beginning of the tempest the trees sway and toss as if seeking to escape; as the violence increases, the branches bounce back; the leaves, turning their white under sides to the light, fairly scream. The huge boughs creak and strain like a ship in a storm. Now and then some branches which have grown across each other are drawn back and forth, as if demons were scraping infernal base-voils. Occasionally a branch breaks with a wild crash, or some infirm tree, caught unawares in a huge puff of the storm, goes down with crashing as it falls, and with a thunder-stroke when it reaches the ground. I would go further to hear a storm concert than any music that man ever made. No one who is familiar with forest sounds but is sure, when he hears Beethoven's music, that much of it was inspired by the sounds of winds among trees.

There are milder joys, however, in tree converse. Only this morning I awakened to hear it rain. That steady plash of drops which a north-east wind brings on, is not easily mistaken. I flatter myself that my ear is too well trained to all the ordinary sounds of nature to be easily deceived! I rise and throw back the blinds, when lo! not a drop is falling! It is the wind in my Maple trees. I had thought of that, and listened with the most discriminating attention, and was sure that it was rain.

Twice in our lives we lived in houses built on the edge of the original forests. These had been thinned out and recesses opened up. It happened in both cases that an Ash and Hickory had been left, which shot up, without side branches, to a great height. The trunks were supple and tough. Whenever the winds moved gently, these long and lithe trees moved with singular grace and beauty. As there was no perceptible wind along the ground, their movement seemed voluntary. And yet there was in it that kind of irresolution that one sees in sleep-walking. But as soon as the breath became a breeze, the wide circles through which these rooted gymnasts moved were wonderful. They seemed going forth in every direction, and yet surely and quickly springing back to position again. And in every motion, such was their elasticity, they manifested the utmost grace. The sighing of winds in a Pine forest has no parallel sound except upon the seashore. Of all the sounds of leaves it is the sweetest and saddest, to certain moods of summer leisure.

The Pine sings, like the poet, with no every-day voice, but in a tone apart from all common sounds. It has the power to change the associations, and to quicken the poetic sensibility, as no other singing tree can do. Every one should have this old harper, like a seer or a priest among trees, about his dwelling. Under an old Pine would naturally be found the young maiden, whose new lover was far across the sea. In the sounds that would descend she could not fail to hear the voices of the sea—the roar of winds, the splash of waves running in upon the shore. A young mother, whose first-born had returned to God, who gave it, would at twilight go to the Pines; for, to her ear, the whole air must needs seem full of spirit voices. They would sing to her thoughts in just such sad strains as would soothe sorrow. Nor would it be strange if in the rise and fall of these sylvan syllables, she should imagine that she heard her babe again, calling to her from the air.

Every country place should have that very coquette among trees, the Aspen. It seems never to sleep. Its twingling fingers are playing in the air at some arch fantasy almost without pause. If you sit at a window with a book, it will wink and blink, and beckon, and coax, till you cannot help speaking to it! That must be a still day that does not see the Aspen quiver. A single leaf sometimes will begin to wag, and not another on the whole tree will move! Sometimes a hidden breath will catch at a lower branch, then shifting, will leave them still, while it shakes a topmost twig. Though the air may move so gently that your cheek does not feel it, this sensitive tree will seem all of a shudder, and turn its leaves upward with shuddering chill! It is the daintiest fairy of all the trees. One should have an Aspen on every side of his house, that no window should be without a chance to look upon its nods and becks, and to rejoice in its innocent witchcraft. I have seen such fair sprites, too, in human form. But one does not get off so easily if he takes too much sport with them. The Aspen leaf makes no wounds. Its frolics spin no silken threads which one cannot follow and will not break.

The musical qualities of trees have not enough been considered in planting around our dwellings. The great-leaved Magnolias have no sound. Willows have but little. Cedars, Yew trees, and Lombardy Poplars are almost silent. It is said that the Lombardy Poplar is the male tree, the female never being brought over. It is very likely. It is stiff enough to be an old bachelor. It spreads out no side branches. Its top dies early. It casts a penurious shadow.—*Henry Ward Beecher.*

Editorial Notes.

January Number.

IN our January number we shall give our readers a good surprise, showing what we *can* do for 1871, if our subscribers will but give us a handsome list of new names and clubs for next year. There will be no less than ten fine illustrations, engraved in an elegant manner, printed on entirely new and superior paper, with new type, leaded, and a great improvement in the size and arrangement of the pages, etc. We intend that this number shall be the *finest not only in the history of THE HORTICULTURIST, but of any horticultural journal ever issued in America.* We will not boast more at this early date, but we invite all to wait anxiously for its appearance. It will not pay a single one of our present

readers to miss it, and we recommend all to wait for its appearance. Unless, therefore, we receive orders to stop the Magazine, we will continue it to all present names on our list, so that all may be witnesses to the improvements for 1871.

Lima Beans.

A year ago Lima beans were worth \$10 and \$15 per bushel, and in 1869 hundreds of gardeners rushed into their culture. Before the close of the year they were as low as \$3 per bushel, and often glad to get the offer. This year a number have relinquished this branch of gardening, and prices have slightly advanced, being now worth but \$6 to \$7. But even at these prices they are hardly a profitable crop. We have grown them now for three seasons, and have not succeeded in getting over ten shelled bushels per acre, while a friend of ours, a seedsman, tells us it won't pay him to grow them for less than \$10. So we see *horticultural prizes of high prices* are often more costly than the same labor bestowed in other directions.

The Beurre d'Anjou Pear.

Shall we grow it as a standard or as a dwarf? Mr. Quinn says:

"The Beurre d'Anjou is only a moderate growing tree, and with us has done very much better when planted as a standard. This is the case wherever I have seen this variety growing. I would not advise any one to plant the Beurre d'Anjou for market purposes as a dwarf. It will bear sooner when planted as a dwarf, and on this account, when only a few trees of this kind are wanted for family use in the garden, the dwarf will answer the purpose better than standard."

We believe this is also the testimony of pear growers in Central New York; but, on the other hand, Dr. Ridgely's orchard at Dover, Del., proves that the d'Anjou there as a *dwarf* is successful enough to suit the most fastidious.

We are probably right in the surmise that the farther South the d'Anjou is cultivated, the better it grows both as a dwarf and as a standard also. In our notes of Mr. Wilder's place, it will be seen we speak very highly of it as a standard. It requires age before it will produce heavily, yet it is such a delicious variety we can afford to wait for it. It is also a late variety, ripening in October, and a good keeper. We have never known of Beurre d'Anjou pears selling less than \$20 per barrel.

A Successful Pear Crop.

Mr. Quinn's pear orchard of Duchesse d'Angouleme trees has yielded this year a net return of over \$6,000. The ground occupied in producing trees is less than ten acres, but it has taken over ten years to grow them.

American Blackberries.

Mr. Robinson says: "Never have I tasted a more desirable addition to our fruits, or one in which the juices were better combined to refresh and satisfy, without in the least cloying the palate. Sugar seems to be used with them; to me they seem to be more agreeable without it, and they may be eaten *in puris naturalibus* better than any small fruit that I know of—being without the acidity of the currant, the rough and thick skin of the gooseberry, the flatness and uncertainty of the raspberry, and superior to the gooseberry, except when in its best condition, while every particle can be agreeably consumed. The American cultivated blackberries are quite distinct specifically, from the poor mawkish-flavored European blackberry."

Good News for Californians.

California horticulturists have been much depressed with the unremunerative character of their fruit crops, and have felt completely discouraged. One gentleman, whose farm of 3,000 acres, containing over 150 acres of orchard, says its expenses have absorbed all its receipts, and draws largely from a business income. We think the trouble with California fruit growers is the attempt to do *too much*. A more diversified form of industry would yield far more encouragement. There is not yet sufficient population on the coast to warrant an increase in fruits, but there are other things which have excellent promise for the future. The French war has completely spoiled the wine interests of France and the

Rhine, and our principal supplies, hitherto imported, must now come from home sources, and California by far has the largest share. Then, too, California wheat has advanced in price, in view of the probable demand from European districts whose crops have failed, while the silk business also receives an impetus from the demand for California eggs to go to Italy and lower France. The opening of the new line of Davis' Refrigerating cars to Chicago, will afford the outlet for a large supply of California fruits, and ere long we may expect to see rates reduced, and California at last have a cheap and easy breathing vent for her numerous excellent productions.

Fruit as Food.

Health journals are now advocating the use of fruit as a prevention and cure of bodily sickness. An eminent French physician says that the decrease of dyspepsia and bilious affections in Paris, is owing to the increased consumption of apples; a fruit, he maintains, which is an admirable preventive and tonic, as well as a very nourishing and easily digested article of food. The Parisians devour one hundred million of them every winter. In corroboration also of these facts we can state, from our own editorial knowledge, that the use of fruit is often an effectual preventive against chills and fever, so peculiar to malarious localities. The inhabitants of the State of Delaware, especially in its middle and lower portion, often suffered severely from the fever and ague, and typhoid fever, but since the general cultivation of fruit has commenced, and people have learned to eat it as well as to grow it for profit, there has been a marked advance in the healthfulness of every district. It is now a source of frequent remark, that there is less fever and ague than formerly, and in many localities does not appear at all. The free use of fruits ministers a cooling, healthful effect to the system. We doubt not if our city fashion lovers could be induced to substitute choice apples, pears, and canned goods, for the present abominable pastry and candies, we would hear less of *wasted systems* or *dyspeptic frames*. Instances are numerous where fresh fruit has checked immediately bilious tendencies. And all know how comforting and acceptable fruit is ever in the sick room. We think, then, if the press will but teach our city livers to use fruit more as a means of health, then the fruit grower will have added encouragement in an increased and healthy demand in the future for the products of their orchards.

Experience with Tomatoes.

The drouth this year has interfered materially with the successful culture of tomatoes, still we can report on a few of the most prominent. The Trophy tomato is large, late, smooth, remarkably solid, and has but few seeds. We did not have any large specimens, but are satisfied that even if of average size, it is still exceedingly valuable.

The Lester's Perfected is more productive than the Trophy, and is equally good in quality, although it has more seeds. If obtained true to name, it is one of the very best ever grown, but it is apt to degenerate after two seasons' trial, hence can not always be depended upon.

Model Suburban Architecture.

Mr. G. B. Croff, architect, of Saratoga Springs, N. Y., has issued a new volume of Architectural Design, with the above title, containing forty plates of lithographic elevation and plans in detail. Some of them are very tasteful, and all of moderate cost. We are surprised at the *cheapness* also of many designs, which we know could not be erected here for fully sixty per cent a higher price. One design in particular, marked \$2,500, would cost here \$5,000; and another marked \$4,000, would cost here \$7,000.

The advantages of a life in the country, away from the high expenses and ruinous influence of city laborers, are comforting indeed, when one finds he can save one-third or one-half in the erection alone of his domicile, besides the amount saved in home living and subsequent taxes. The price of this volume is but \$5, much less than the recent expensive architectural books of other publishers, which we believe are too high to be popular.

Hanging Flower Baskets.

I have a hanging basket before me which I wish to recommend for the coming winter. A general fault in the preparation of these baskets is the putting of too many rapid growing plants in them. The basket I wish to describe has but four varieties. First the surface is

covered with the creeping, moss-like, succulent "pilea muscosa." This plant will stand any amount of dry air in winter, and still preserve its Lycopod look. Secondly, drooping over the edge of the basket, is "Torrenia Asiatica," an old plant, but a charming creeper, and produces its blue velvety flowers in profusion if allowed heat enough. Third, in the centre of the basket is a plant of the charming dwarf coleus, "Beauty of St. John's Wood," which I have already described. Fourthly, the wires are occupied by the delicate "Maurandia Barclayana." This arrangement will make the most charming basket—much better than so much rank-growing "Parlor Ivy."—*W. F. Massey, in Country Gentleman.*

Bouvardia Vreelandii.

Specimen blooms of this new variety have been sent to us by S. B. Vreeland, of Greenville, Hudson Co., N. J., which are certainly of a valuable character. It was originated by Mr. Vreeland from the Bouvardia Hogarth, which it resembles in hardness, vigor of growth, and profuse blooming. The flower trusses are very large, and we believe it to be one of the best white varieties of this class of charming winter flowering plants.

Subscription Agency List.

Our revised list of Subscription Periodicals, appears on our last advertising page this month. It has been found of great convenience to many already, and we are perfectly willing its benefits should be widely extended to thousands of readers throughout the country. The amount of money lost by sending bills loosely in envelopes through the mails, seems to be as great as ever, and there is absolutely no safety except in the use of P. O. money orders, checks, drafts, or registered letters. Our agency here is a mutual convenience to publishers and subscribers, and is now the oldest and best established of any in the city. So we invite all who desire to protect themselves against losses through the mails, to select their journals from our list, and remit a draft for the necessary amount, and we will order all as safely and as soon as possible. There is also a very material saving of price in thus clubbing journals together, sufficient to form a strong inducement to accept our offer. One of our recent patrons selected a list of journals recently to the amount of \$18.75. He found that by accepting our offer he gained not only *THE HORTICULTURIST* free, but also one additional journal. This system also reduces the price of *THE HORTICULTURIST*, and brings it within the means of every one who is able to maintain a garden or a fruit farm.

Tuberoses.

Mr. Taplin, gardener to Mr. George Such, South Amboy, N. J., says in a letter to the *Gardeners' Chronicle*:

"A million of roots are grown in the neighborhood of New York, and as that is about the northern limit of successful cultivation, except for the flowers, we can imagine that there is also a large quantity grown farther South. The flowers are used at all seasons for making up wedding bouquets and funeral wreaths, as well as for decorating churches and perfuming restaurants. They may be obtained from a single flower in a scented geranium leaf or a sprig of lycopod, for the button-hole, to a dish two feet in diameter, filled with the blossoms set in sand, and can be purchased from the flower girls in Broadway, New York, all the year round.

I saw during the last winter a house 300 feet long, filled with Tuberoses planted out. We have had forty-seven flowers on a stem, and one of our customers informed me that he had as many as sixty-nine on one. The bulbs, when dry, should be kept warm—the temperature less than 50 deg.—or the flower germ will decay. A place where Caladiums keep well is first-rate for Tuberose Bulbs."

The Next Horticultural Fever.

The Pear fever, Strawberry fever, and likewise that of Blackberries, are over, and the interest in Grapes is revived only with great difficulty. But the greatest interest now centres in Asparagus. We are credibly informed that in New Jersey, Delaware and Virginia, and in fact all over the country, cultivators are preparing to plant largely of *Asparagus*, any kind and every kind. Colossal, if they can get it; if not, then any other big kind. This will be good news to all who have plants to sell, and we may expect smiling faces

among our seedsmen for several years. We must remind all who plant roots to choose one year old, well grown. Plant not less than four feet apart, and expect to spend from \$25 to \$50 worth of manure per acre every year, if they wish to realize best results.¶

The race hereafter will furnish prizes only to those who *get the biggest* shoot, not the most. A safe estimate to any one intending to start an Asparagus bed, is to allow three years and an expenditure of \$200 per acre before a bed comes in bearing, and afterwards a fair ratio of profit will be not over \$200 annual income per acre.

Editorial Notices.

Elgin Watches.

AN Elgin Watch has been in constant use with us for over three years. It is one of the most beautiful and perfect specimens of exquisite mechanism and adjustment we ever witnessed in American watches. Its works, its metal, its execution, are all so superior to machine-made watches of customary manufacture, that we may be pardoned for referring to it here with special appreciation.

We had the pleasure of a visit to the works of the Elgin Company on our recent excursion to California, and can bear testimony to all that has been said in favor of their excellence and honorable record as triumphs of American skill and ingenuity.

Eumelan Grape Vine.

WE have made arrangements by which any of our Subscribers, old or new, can obtain this as a premium, in the renewal of their subscriptions to THE HORTICULTURIST, for \$1 each, or with one year subscription, for \$3—full value, \$3.50. The same will be presented to each person forming a club of three for \$5, or five for \$7.50. We believe it worthy of general planting, and a very desirable new variety. Its quality and good growth are beyond question.

Reduction of Subscription Terms.

OUR readers, in forming clubs or renewing their subscriptions, will please notice we offer, hereafter, 2 copies for \$3.50 (\$1.75 each). Any Subscriber, old or new, can materially reduce his own subscription by getting *one new name*. In clubs of 3 our rates hereafter are \$5; in clubs of 5 is \$7.50, only \$1.50 each, and a copy free.

Catalogues Received.

- Pratt & Co., Geneva, N. Y.—Descriptive Catalogue, Nursery Stock.
 B. K. Bliss & Son, New York city.—Autumn Catalogue and Floral Guide.
 Hoopes Bro. & Thomas, Westchester, Pa.—Fruit Department Catalogue.
 C. L. Van Dusen, Macedon, N. Y.—Catalogue Fruit and Ornamental Trees.
 S. H. Martin, Marblehead, Mass.—Autumn Circular, Bulbs and Seeds.
 Wade & Henry, Philadelphia, Pa.—Price List of Fine Bred Fowls.
 Otto & Achelis, Westchester, Pa.—Trade List, Autumn 1870.
 Hargis & Sommes, Quincy, Ill.—Star Nurseries Catalogue.
 Storrs, Harrison & Co., Painesville, O.—Wholesale Trade List.
 James Vick, Rochester, N. Y.—Illustrated Catalogue of Hardy Bulbs.
 H. E. Hooker & Bros., Rochester, N. Y.—Descriptive Catalogue, Fruit and Ornamental Trees.
 Wholesale Catalogue, Autumn 1870.
 Gould Bros., Rochester, N. Y.—Wholesale Catalogue, Autumn 1870.
 W. S. Little, Rochester, N. Y.—Wholesale Catalogue, Autumn 1870.
 S. Boardman & Co., Rochester, N. Y.—Wholesale Catalogue, Autumn 1870.
 T. C. Maxwell & Bros., Geneva, N. Y.—Wholesale Trade List, Autumn 1870.
 Merrell & Coleman, Geneva, N. Y.—Descriptive Catalogue, Nursery Stock.
 Chas. Black, Hightstown, N. J.
 Mahlon Moon, Morrisville, Pa.
 Hovey & Co., Boston, Mass.
 Geo. T. Fish, Rochester, N. Y.
 D. L. Hall, Alton, Ill.
 Henry K. How, New Brunswick, N. J.

